## State of New Mexico Oil Conservation Division

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

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

| Incident ID    | nAPP2109537667 |
|----------------|----------------|
| District RP    | 1RP-0124       |
| 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.

Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office

| Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)  Description of remediation activities  I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD ru and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible part does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.  Title: Remediation Supervisor  Signature Camille Bryant  Title: Remediation Supervisor  Telephone: 575-441-1099  Date: 6/7/2021  Telephone: 575-441-1099  Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the respons party of compliance with any other federal, state, or local laws and/or regulations. | must be notified 2 days prior to liner inspection)  |   |
|---|---|---|
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| remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the respons  | Received by:  | Date:   |
|   | remediate contamination that poses a threat to groundwater, sur   | face water, human health, or the environment nor does not relieve the responsible   |
| Closure Approved by: Date:  | Closure Approved by:  | Date:   |
| Printed Name: Title:  | Printed Name:   | Title:  |



## REMEDIATION SUMMARY AND SITE CLOSURE REQUEST

**Monument 18** 

UNIT LETTER D, SECTION 7, TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM

N 32.591869° W 103.298961°

LEA COUNTY, NEW MEXICO

NMOCD Reference #1RP-0124

NMOCD Incident # nAPP2109537667

SRS #: TNM Monument 18-Known

Prepared for:

Plains Pipeline, L.P.

333 Clay Street, Suite 1600 Houston, Texas 77002

Prepared by:

TRC Environmental Corporation 10 Desta Drive, Suite 150E Midland, Texas 79705

June 2021

Senior Project Manager

Jonathan P. Repman, P.G. Midland Office Practice Lead

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#### 1.0 INTRODUCTION AND BACKGROUND

On behalf of Plains Pipeline, L.P. (Plains), TRC Environmental Corporation (TRC) has prepared this *Remediation Summary and Site Closure Request* for the historical crude oil Release Site known as Monument 18 (SRS: TNM Monument 18-Known). The Release Site is located approximately three (3) miles southwest of Monument in Lea County, New Mexico in Unit Letter D, Section 7, Township 20 South, Range 37 East, NMPM. The Release Site GPS coordinates are N32.591869° W103.298961°. The Release Site is located on property owned by Jimmie T. Cooper of Monument, New Mexico. No information with respect to the Release date or volume of crude oil released and recovered is available, as the Release occurred while the pipeline was operated by Texas New Mexico Pipe Line Company (TNMPLC). A copy of New Mexico Oil Conservation Division (NMOCD) Release Notification and Corrective Action (Form C-141) is provided as Appendix D. A Site Location Map is provided as Figure 1. Photographic documentation is provided as Appendix A. Please reference Appendix B for NMOCD and New Mexico Environmental Department (NMED) correspondence.

The Monument 18 Release Site is a ground water Site, as well as a soil remediation Site and the static ground water levels within the nine (9) on-site monitor wells are approximately twenty-nine (29) feet below ground surface (bgs). There are no surface-water features located within a 1,000-foot radius of the Site.

Based on the depth to ground water at the Monument 18 Release Site, the *NMOCD Closure Criteria for Soils Impacted by a Release* are the most stringent closure criteria listed. <u>Please note, past and recent laboratory analysis of Total Dissolved Solids (TDS) and chloride in ground water indicates ground water at the Monument 18 is non-potable and non-abatable. Please reference Table 1 for a summary of TDS and Chloride in Groundwater. Please reference a letter dated August 16, 1991 from the New Mexico Environmental Department (NMED), Hazardous and Radioactive Materials Bureau provided as Appendix B. Please reference the New Mexico Administrative Code 20.6.2.3103.</u>

Based on the NMOCD Closure Criteria for Soils Impacted by a Release, the Closure Criteria for the Monument 18 Release Site are as follows:

- Benzene 10 mg/kg
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) 100 mg/kg

<u>Please note</u>, NMAC 20.6.2.3103 sets forth the maximum allowable concentration of contaminants in ground water exhibiting a TDS of less than 10,000 mg/L. Based on the analysis of concentrations of TDS in past and recent ground water samples, the ground water beneath the Monument 18 Release Site is non-potable and non-abatable under the standards set forth in NMAC 20.6.2.3103.

#### 2.0 SUMMARY OF REMEDIAL ACTIVITIES

From March 9, 1997 through July 15, 1998, four (4) soil borings (B18-1, B18-A, B18-B, and B18-C) were advanced at the Release Site. In addition, eight (8) monitor wells B18-3 (MW 18-

1), B18-2 (MW 18-2), B18-4 (MW 18-3), and MW 18-4 through MW 18-8, were installed at the Release Site. Please note, monitor wells MW-1, MW-2, and MW-3 were initially advanced and sampled as soil borings.

**On May 2, 1997,** following the installation of monitor wells MW-2 and MW-3, "wet chemistry" analysis was conducted on the monitor wells. The analytical results of Total Dissolved Solids (TDS) concentrations indicated TDS concentrations ranged from 16,300 mg/L in monitor well MW-2 to 17,200 mg/L in monitor well MW-3. The analytical results of chloride concentrations indicated chloride concentrations ranged from 757 mg/L in monitor well MW-2 to 7,680 mg/L in monitor well MW-3.

On September 19, 1997, following the installation of monitor wells MW-5 and MW-6, "wet chemistry" analysis was conducted on the monitor wells. The analytical results of TDS concentrations indicated TDS concentrations ranged from 22,000 mg/L in monitor well MW-6 to 23,000 mg/L in monitor well MW-5. The analytical results of chloride concentrations indicated chloride concentrations ranged from 5,100 mg/L in monitor well MW-5 to 8,600 mg/L in monitor well MW-6.

On August 18, 1998, following the installation of monitor wells MW-7 and MW-8, "wet chemistry" analysis was conducted on the monitor wells. The analytical results of TDS concentrations indicated TDS concentrations ranged from 19,200 mg/L in monitor well MW-7 to 19,900 mg/L in monitor well MW-8. The analytical results of chloride concentrations indicated chloride concentrations ranged from 11,100 mg/L in monitor well MW-7 to 22,600 mg/L in monitor well MW-8.

On November 4, 2004, two (2) additional monitor wells (MW-9 and MW-10) were installed to delineate the Release Site. Soil samples were collected at selected intervals and submitted to the laboratory for analysis. The analytical results of the collected soil samples will not be narrated in the text of the document, the analytical results are summarized in Table 2 (Concentrations of BTEX and TPH in Soil). The associated laboratory analytical reports are provided in Appendix C. Please reference KEI's *Comprehensive Assessment Report* dated September 9, 1997, KEI's *Subsurface Investigation Report* dated March 26, 1998, and KEI's *Subsurface Investigation Report* dated October 29, 1998 for additional details.

Additional collection of ground water samples in 2016 and 2017 appears to confirm the presence of concentrations of TDS and chloride which exceed the New Mexico Water Quality Control Commission (NMWQCC) level of 10,000 mg/L for abatable water. Please reference Table 1 for Concentrations of TDS and Chloride in Ground water. Laboratory analytical reports are provided in Appendix C. Please reference a letter dated August 16, 1991 from NMED, Hazardous and Radioactive Materials Bureau provided as Appendix B.

**On September 13, 2005,** monitor well MW-2 was plugged and abandoned by a New Mexico licensed water well driller as approved by the NMOCD.

On April 12, 2013, A Remediation Summary and Proposed Soil Closure Strategy (Work Plan) dated March 2013 was submitted to the NMOCD. The Work Plan proposed soil remediation activities intended to progress the Site toward an NMOCD approved soil closure. Please

reference the Work Plan for additional details.

On April 22, 2013, Plains received approval from the NMOCD to commence the activities outlined in the Work Plan. Please reference the NMOCD correspondence provided in Appendix B.

Prior to commencing delineation activities at the Site, a New Mexico One-Call was placed, and all known pipelines were hand spotted using a hand shovel and/or a hydrovac. Pipelines operated by Plains Pipeline, LP, Southern Union Gas Services (formerly Regency Energy Partners and subsequently Energy Transfer Field Services (ETC)), DCP, Targa Resources, Rice Operating, Kinder Morgan, and Gary Morgan Operating were identified. Plains requested the Operators reroute the pipelines potentially affected by Plains delineation and excavation activities. Regency Energy Partners was unable to comply with Plains request until a later date and consequently, the Regency four (4) inch steel pipeline remained supported on "pipe stands" and a "soil plug" throughout the initial excavation activities. Please reference Figure 2 for an Excavation and Sample Location Map and Figure 3 for an Excavation and Sample Location Map with photographic aerial underlay. Please reference Table 2 for a summary of BTEX and TPH in Soil. Laboratory analytical reports are provided in Appendix D.

On or about July 1, 2013, initial remediation activities commenced at the Monument 18 Release Site. Following the identification of all on-site pipelines, a trackhoe was utilized to begin the delineation of the horizontal extent of the Release Site. Due to safety concerns and per the NMOCD approved 2013 Work Plan, the depth of the excavation was limited to approximately nineteen (19) feet bgs.

Investigation trenches were initially utilized to conduct the delineation activities. The initial investigation trench was located to the northwest of monitor well MW-4 and immediately east and parallel to the pipeline corridor located on the east side of Maddox Road. This area was the inferred release point based the surficially disturbed surface and the absence of mesquite trees. The investigation trench was advanced to a depth of approximately fifteen (15) feet bgs.

On July 12, 2013, a soil sample (North S/W @ 14') was collected from the north sidewall of an investigation trench in an effort to locate the northern extent of impact. The soil sample was analyzed for concentrations of benzene and BTEX using Method SW-846 8021B and TPH using Method SW-846 8015M. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the laboratory Reporting Limit (RL) and NMOCD regulatory guidelines. Based on the analytical results and existence of the Monument 18 ground water site, additional investigation was warranted to locate the surface expression of the Release. Excavated soil was temporarily staged adjacent to the excavation pending analytical results and disposition. Please reference Figures 2 and 3 for an Excavation and Sample Location Map and Excavation and Sample Location Map with photographic underlay, respectively. Table 2 summarizes Concentrations of BTEX and TPH in Soil. Laboratory analytical data is provided as Appendix C.

On July 24, 2013, a soil sample (ESW @ 14') was collected and submitted to the laboratory, the analytical results indicated the benzene concentration was less than the applicable laboratory RL and NMOCD regulatory guidelines. The soil sample exhibited a BTEX concentration of 0.0196 mg/kg and a TPH concentration of 164 mg/kg. Based on the analytical results, additional

excavation activities were warranted in the area represented by soil sample ESW @ 14'.

Soil removed from the excavation was stockpiled in approximately five hundred (500) cubic yard (cy) stockpiles and sampled and analyzed for concentrations of BTEX and TPH.

On or about August 8, 2013, DCP relocated a ten (10) inch diameter polyline from the pipeline corridor to the bar ditch on the east side of Maddox Road.

On August 14, 2013, two (2) five-point composite soil samples (SP-1 and SP-2) were collected from two (2) soil stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for both soil samples. TPH concentrations were 26.2 mg/kg and 22.1 mg/kg for soil samples SP-1 and SP-2, respectively and less than the NMOCD regulatory guidelines. Based on the analytical results, the stockpiles were transported to a bulk stockpile located at the northern extent of the project.

On August 26, 2013, vertical delineation of the Site began to a maximum depth of approximately nineteen (19) feet bgs.

On August 29, 2013, an investigation trench was advanced adjacent to monitor well MW-4 to a depth of approximately twenty-two (22) feet bgs and at approximately twenty-one (21) feet bgs, Phase Separated Hydrocarbon (PSH) was observed in the trench.

On or about September 5, 2013, two (2) PSH recovery trenches (South Trench and North Trench) were installed in the floor of the excavation, extending to approximately two (2) feet below the ground water interface. A "trash pump" was utilized to conduct bi-weekly recovery of PSH and dissolved-phase hydrocarbons from the recovery trenches.

From the third quarter of 2013 through the second quarter of 2014, approximately 1,834 barrels (bbls) of PSH and water were recovered from the north and south trenches and disposed of at an NMOCD approved disposal.

On September 12, 2013, five-point composite soil samples (NE Ramp SP and Central Ramp) were collected from two (2) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for both soil samples. Based on the analytical results, the stockpiles were transported to a bulk stockpile located at the north end of the project.

On September 12, 2013, fourteen (14) sidewall soil samples (ESW-1 @ 18', ESW-2 @ 18', ESW-3 @ 18', ESW-4 @ 18', SSW-1 @ 18', SSW-2 @ 18', SSW-3 @ 18', NSW-1 @ 18', NSW-2 @ 18', NSW-3 @ 18', WSW-1 @ 18', WSW-2 @ 18', WSW-3 @ 18', and WSW-4 @ 18') were collected from the excavation and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all soil samples. BTEX concentrations were less than the applicable laboratory RL, with the exception of soil samples WSW-1 @ 18', WSW-3 @ 18', and WSW-4 @ 18', which exhibited BTEX concentrations of

0.0386 mg/kg, 0.231 mg/kg, and 0.394 mg/kg, respectively. Based on the analytical results, BTEX concentrations were less than the NMOCD regulatory guidelines. TPH concentrations ranged from less than the applicable laboratory RL and NMOCD regulatory guidelines for soil samples ESW-1 @ 18', SSW-1 @ 18', SSW-2 @ 18', SSW-3 @ 18', and NSW-3 @ 18' to 7,540 mg/kg for soil sample WSW-3 @ 18', Based on the analytical results, additional excavation activates were warranted in areas represented by soil samples ESW-2 @ 18', ESW-3 @ 18', ESW-4 @ 18', NSW-1 @ 18', WSW-1 @ 18', WSW-2 @ 18', WSW-3 @ 18', and WSW-4 @ 18'.

On September 12, 2013, eight (8) floor soil samples (Floor-1 @ 19' through Floor-8 @ 19') were collected from the excavation and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all soil samples. BTEX concentrations ranged from less than the laboratory RL for soil samples Floor-1 @ 19' and Floor-2 @ 19' to 58.8 mg/kg for soil sample Floor-5 @ 19'. TPH concentrations ranged from less than the applicable laboratory RL and NMOCD regulatory guidelines for soil samples Floor-1 @ 19' and Floor-2 @ 19' to 7,390 mg/kg for soil sample Floor-6 @ 19', Based on the analytical results, additional excavation activates were warranted in areas represented by soil samples Floor-3 @ 19' through Floor-8 @ 19'.

On October 7, 2013, an NMOCD representative proposed additional excavation be conducted in the floor of the excavation in the area represented by soil samples Floor-5 @ 19' and Floor-6 @ 19'. The floor would be excavated approximately five (5) additional feet and a liner installed in the excavated area. The area would then be backfilled to approximately nineteen (19) feet bgs and a second liner would be installed across the impacted area. In addition, the west sidewall would be draped with an additional liner.

On October 8, 2013, thirteen (13) sidewall soil samples (ESW-2 @ 2', ESW-2 @ 10', ESW-2A @ 18', ESW-3 @ 2', ESW-3 @ 10', ESW-3A @ 18', NSW-1 @ 2', NSW-1 @ 10', NSW-1A @ 18', ESW-4 @ 2', ESW-4 @ 10', ESW-4A @ 18', and ESW-4B @ 18') were collected from the excavation and submitted to the laboratory for benzene, BTEX, and/or TPH analysis. The analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all submitted soil samples. TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all soil samples, with the exception of soil sample ESW-4A @ 18' which exhibited a TPH concentration of 1,470 mg/kg. During excavation activities an additional one (1) foot of soil was excavated from the east sidewall east of soil sample ESW-4A @ 18', and a confirmation soil sample (ESW-4B @ 18') was collected and submitted to the laboratory. The analytical results indicated no additional excavation was warranted.

On November 5, 2013, an investigation trench (W. Trench) was advanced (with Landowner representative approval) on the west side of Maddox Road in Unit Letter A, Section 12, Township 20 South, Range 36 East. The trench was advanced to a depth of approximately eighteen (18) feet bgs. During the advancement of the investigation trench four (4) soil samples (W Trench @ 5' bgs, W Trench @ 10' bgs, W Trench @ 15' bgs, and W Trench @ 18' bgs) were collected and submitted to the laboratory for analysis. The laboratory analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL

and NMOCD regulatory guidelines.

From the third quarter of 2014 through the fourth quarter of 2014, approximately 7,205 bbls of PSH and water were recovered from the trenches and disposed of at an NMOCD approved disposal.

**During the first quarter of 2014,** excavation activities were on hold, due to Landowner representative negotiations.

On June 16, 2014, Plains representatives met with a representative of the NMOCD in the NMOCD – Santa Fe Office. The Plains representatives submitted and received NMOCD approval for the "Interim Remediation Summary and Amended Proposed Closure Strategy" (2014 Work Plan) dated June 11, 2014. Please reference the 2014 Work Plan for details.

On June 26, 2014, Plains representatives and the Environmental Bureau Chief, Oil Conversation Division, met with Mr. Jimmie B. Cooper (Landowner representative) at the Site. The Plains representatives verbally presented the details of 2014 Work Plan to the Landowner representative. The Environmental Bureau Chief, Oil Conversation Division, was present to answer the Landowner representatives' questions, concerns and provide regulatory guidance. The Environmental Bureau Chief, Oil Conservation Division indicated excavation to the west, into Maddox Road would not be required.

On conclusion of the meeting, the Landowner representative requested the excavation continue to the ground water interface. To differentiate initial excavation activities (surface to nineteen (19) feet bgs) from additional Landowner representative requested excavation activities (nineteen (19) feet bgs to approximately one (1) foot below the ground water interface), the excavation activities which commenced on July 23, 2014 will be referred to as "Stage 2 Excavation Activities".

On July 14, 2014, remediation activities resumed at the Release Site. The Regency, now ETC four (4) inch pipeline and the "soil plug" supporting the pipeline were removed after the pipeline was re-routed by ETC and placed above-ground in the Maddox Road east bar ditch. TRC personnel noted the soil plug exhibited a heavy hydrocarbon odor. Following the removal of the pipeline from the excavation, the pipe was stockpiled on the east side of the project footprint pending disposal.

Due to the depth of ground water (approximately twenty-nine (29) feet bgs) at the Site, excavation equipment could not excavate to the ground water interface from the ground surface. As an alternative, ramps were cut into the excavation sidewalls to allow excavation equipment to conduct the Stage 2 Excavation Activities from the excavation floor at approximately nineteen (19) feet bgs. Excavation activities continued on the east and north side wall of the excavation. Excavated soil was blended, mixed, and segregated based on the area excavated prior to the collection of the soil stockpiles.

On July 21, 2014, a trench was advanced vertically from the existing floor (approximately twelve (12) feet bgs) of the excavation and located approximately twelve (12) feet north of the existing south side wall. The trench was advanced to the ground water interface at approximately

twenty-nine (29) feet bgs. Excavated soil was evaluated using visual and olfactory techniques and at approximately eighteen (18) feet bgs the excavated soil exhibited a strong hydrocarbon odor. Excavated soil exhibiting a strong odor was segregated and staged adjacent to the excavation and the volume of soil was recorded on run tickets prior to being transported to C&C Landfarm. As the excavation continued to the north, an approximately twelve (12) foot wide bench was maintained on the excavation sidewalls at approximately twelve (12) feet bgs.

On July 23, 2014, five-point composite soil samples (SP-3, SP-4, SP-5, and SP-6) were collected from four (4) corresponding stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all soil samples. BTEX concentrations ranged from 0.00351 mg/kg for soil sample SP-5 to 0.00594 mg/kg for soil sample SP-3. TPH concentrations ranged from 89.4 mg/kg for soil sample SP-5 to 3,650 mg/kg for soil sample SP-3. Based on the analytical results, the volume of soil represented by soil samples SP-3, SP-4, and SP-6 was recorded on run tickets and transported to C&C Landfarm located near Monument, New Mexico. Soil represented by soil sample SP-5 was stockpiled in the bulk stockpile located at the north side of the project.

Based on visual and olfactory observations and the analytical results of soil sample SP-3, additional soil samples were not collected from the soil stockpiles generated from the Stage 2 Excavation Activities (depths greater than approximately eighteen (18) feet bgs). The volume of impacted soil excavated from the Stage 2 Excavation Activities was recorded on run tickets and transported to C&C Landfarm concurrent with excavation activities.

On August 8, 2014, a five-point composite soil sample (East Wall Stockpile [SP-8]) was collected from a stockpile and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated the benzene and BTEX concentration was less than the applicable laboratory RL and NMOCD regulatory guidelines for the soil sample. The TPH concentration was 60.3 mg/kg and based on the analytical results, soil represented by soil sample East Wall Stockpile (SP-8) was stockpiled in the bulk stockpile located at the north side of the project.

On August 19, 2014, five-point composite soil samples (SP-9 and SP-10) were collected from the two (2) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for both soil samples. TPH concentrations were 49.9 mg/kg and 66.4 mg/kg for soil samples SP-9 and SP-10, respectively. Based on the analytical results, the stockpiles were transported to a bulk stockpile located at the north end of the project. Excavation continued at the Site, predominately on the east sidewall of the existing excavation. The east and south sidewalls of the excavation exhibit irregularly spaced limited hydrocarbon impact at and just above the ground water interface.

On September 2, 2014, excavation activities shifted to the north sidewall of the existing excavation. Excavated soil not exhibiting hydrocarbon impact was segregated and sampled for concentrations of BTEX and TPH. The volume of excavated soil which exhibited hydrocarbon odor or staining was recorded on run tickets and transported to C&C Landfarm. The north sidewall of the excavation exhibited sporadically spaced hydrocarbon impact at and just above

the ground water interface.

On October 1, 2014, excavation activities shifted to the south sidewall of the existing excavation. Excavated soil not exhibiting hydrocarbon impact was segregated and sampled for concentrations of BTEX and TPH. The volume of excavated soil exhibiting hydrocarbon odor or staining was recorded on run tickets and transported to C&C Landfarm. The south sidewall of the excavation exhibited sporadically spaced hydrocarbon impact at and just above the ground water interface.

On October 6, 2014, an area on the south sidewall at the ground water interface was identified as exhibiting a strong odor and the volume of soil was recorded on run tickets and transported to C&C Landfarm.

On October 13, 2014, five-point composite soil samples (SP-11 and SP-12) were collected from two (2) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for both soil samples. Based on the analytical results, the stockpiles were transported to a bulk stockpile located at the north end of the project.

On October 14, 2014, excavation efforts shifted to the east sidewall at the ground water interface.

On October 16, 2014, an investigation trench, adjacent to monitor well MW-12 was advanced from the south sidewall of the excavation toward the south. The trench exhibited visually non-impacted soil from the surface to approximately eighteen (18) feet bgs. Soil at depths greater than approximately eighteen (18) feet bgs exhibit heavy hydrocarbon staining and odor.

On October 21, 2014, the activities associated with the southern excavation trench were completed and a berm was re-established around the excavation. In addition, the security fence around the Site was repaired.

During and after the completion of the Stage 2 Excavation Activities, PSH was observed on the water within the excavation. A vacuum truck was utilized to periodically remove PSH and dissolved phase impacted water. As of March 31, 2015, approximately 10,206 bbls of water and PSH were removed from the water within the excavation. The volume of PSH recovered from the trenches and excavation cannot be accurately determined.

From the first quarter of 2015 through the fourth quarter of 2015, approximately 3,490 bbls of PSH and water were recovered from the excavation and disposed of at an NMOCD approved disposal.

**On June 5, 2015,** Plains submitted the *Interim Remediation Summary and Revised Proposed Soil Closure Strategy* (2015 Work Plan) dated May 6, 2015, to the NMOCD Office in Santa Fe, New Mexico. The 2015 Work Plan was designed to advance the Monument 18 Release Site toward an NMOCD approved soil closure.

**On November 3, 2015,** the NMOCD Santa Fe Office approved the 2015 Work Plan as written. Please reference the *Interim Remediation Summary and Revised Proposed Soil Closure Strategy* dated May 6, 2015, for additional details.

From the first quarter of 2016 through the fourth quarter of 2016, approximately 2,160 bbls of PSH and water were recovered from the excavation and disposed of at an NMOCD approved disposal.

On October 4, 2016, Plains Representatives met with the Landowner representative to discuss the status of the Project and a timetable for future work at the Release Site. During the meeting, the Landowner representative expressed several requests which extended beyond the scope of the NMOCD approved 2015 Work Plan and were more stringent than the NMOCD regulatory guidelines. The Landowner representative requested the following modifications to the NMOCD approved 2015 Work Plan:

- Concentrations of TPH previously identify in the west sidewall of the excavation would be excavated to the west. Excavation to the west of the existing west sidewall would require encroachment into the Lea County Road 41 (Maddox Road) right-of-way and asphalt roadway.
- Excavate limited hydrocarbon stain at the ground water interface on the central portion of the east sidewall of the existing excavation.
- Excavate limited hydrocarbon stain at the ground water interface along the western half of the south sidewall of the existing excavation.

**On October 31, 2016,** Plains submitted an *Addendum to the Interim Remediation Summary and Revised Proposed Soil Closure Strategy* (Addendum) to the NMOCD. Please reference the NMOCD correspondence provided in Appendix B for the cover letter to the NMOCD.

Please note, during 2017 excavation activities, soil represented by the above samples was excavated per the Landowner representatives' request, with the exception of soil represented by soil samples WSW-1 @ 18' through WSW-4 @ 18'.

From the first quarter of 2017 through the fourth quarter of 2017, approximately 2,300 bbls of PSH and water were recovered from the excavation and disposed of at an NMOCD approved disposal.

On January 10, 2017, remediation activities commenced at the Release Site. Soil previously deemed suitable for backfill material was moved to the northern extent of the project footprint and stockpiled in a bulk stockpile. These activities allowed discrete five hundred (500) cubic yard stockpiles to be located along the eastern flank of the project footprint and analyzed for concentrations of benzene, BTEX, and TPH. Concurrently, soil removed from the excavation was stockpiled on the eastern flank of the project pending laboratory analysis. Discrete stockpiles were not disturbed pending laboratory analysis

On January 20, 2017, five-point composite soil samples (2017 SP-1 through 2017 SP-3) were

collected from three (3) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all three (3) soil samples. TPH concentrations ranged from less than the applicable laboratory RL for soil samples 2017 SP-2 and 2017 SP-3 to 28.9 mg/kg for soil sample 2017 SP-1. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project. A ramp was excavated on the east side of the excavation to approximately nineteen (19) feet bgs to allow excavation to the ground water interface (approximately twenty-nine (29) feet bgs).

Following the analytical results of the January 20, 2017 stockpile sampling event, excavated soil exhibiting significant hydrocarbon odor and/or staining was segregated on a poly liner and the volume of soil was recorded on run tickets and transported to C&C Landfarm. Excavated soil not exhibiting significant hydrocarbon odor and/or staining was stockpiled and sampled. On receipt of the analytical results, soil deemed suitable for use as backfill was pushed into the bulk stockpile and the volume of impacted soil was recorded on run tickets and transported to C&C Landfarm.

On January 24, 2017, five-point composite soil samples (2017 SP-4 through 2017 SP-8) were collected from five (5) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL for all five (5) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On January 27, 2017, Plains verbally requested an amendment to the *Addendum to the Interim Remediation Summary and Revised Proposed Soil Closure Strategy* (Addendum). Please reference the Addendum for additional details.

The previously submitted and NMOCD approved *Interim Remediation Summary and Revised Proposed Soil Closure Strategy* (2015 Work Plan) dated May 6, 2015, referenced the placement of approximately one (1) foot of gravel or equivalent material to be placed on the floor of the existing excavation and the installation of up to three (3) recovery sumps along the west sidewall of the existing excavation. As the Landowner representative requested full excavation of the release source and associated sporadic smear zone within the capillary fringe, Plains maintains the placement of the gravel or equivalent material and installation of the sumps is extraneous. Plains requested NMOCD guidance with regard to the necessity of the gravel and/or recovery sumps.

On January 30, 2017, Plains emailed the request to amend the Addendum and received written approval from the NMOCD. Please reference the NMOCD correspondence provided in Appendix B.

On January 31, 2017, five-point composite soil samples (2017 SP-9 through 2017 SP-14) were collected from six (6) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all six (6) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

**On February 7, 2017,** Plains received an email approval from the NMOCD reaffirming the NMOCD approval of the request to amend the Addendum. Please reference the Addendum for additional details and the NMOCD correspondence provided in Appendix B.

On February 9, 2017, a polyliner was re-installed on the surface of the east side of the project area to allow impacted soil to be staged and the volume of impacted soil was recorded on run tickets and transported to the C&C Landfarm. The emplacement of the polyliner minimized the potential impact to the subsurface soil beneath. Following the emplacement of the liner, excavation of the south sidewall of the existing resumed.

On February 17, 2017, five-point composite soil samples (2017 SP-15 through 2017 SP-17) were collected from three (3) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all three (3) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project. In addition, excavation activities resumed on the northeast sidewall of the existing excavation.

On February 21, 2017, an investigation trench was advanced from the northeast sidewall to the east. Following the advancement of the trench, crude oil was reportedly discovered on the floor of the excavation. Following the discovery of the crude, excavation efforts shifted to the northeast sidewall of the excavation. In addition, a four (4) inch diameter DCP polyline was removed from the east sidewall of the existing excavation. The removal of the DCP polyline was completed under the supervision of DCP field personnel.

On February 22, 2017, sloping of the east sidewall from grade to approximately nineteen (19) feet bgs commenced to allow additional excavation activities in the western and southern sectors of the excavation.

On February 28, 2017, five-point composite soil samples (2017 SP-18 through 2017 SP-22) were collected from five (5) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all five (5) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On March 2, 2017, five-point composite soil samples (2017 SP-23 through 2017 SP-26) were collected from four (4) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all four (4) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On March 10, 2017, in a meeting in the NMOCD Santa Fe Office with Plains representatives and NMOCD representatives, the NMOCD approved the temporary cessation of ground water sampling at the Monument 18 Release Site due to continuing excavation activities.

On March 21, 2017, five-point composite soil samples (2017 SP-27 through 2017 SP-30) were collected from four (4) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all four (4) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On March 27, 2017, a construction crew began rerouting the Rice Operating Pipeline located on the south side of the existing excavation. The Rice Operating crew was able to "Loop" the line to the south of the Monument 18 project and allow additional excavation to the south.

On March 29, 2017, the Landowner representative met with the TRC Field Supervisor and instructed the Supervisor to place impacted soil in Cell "J" of the C&C Landfarm.

On May 4, 2017, five-point composite soil samples (2017 SP-31 and 2017 SP-32) were collected from two (2) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for both soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On June 6, 2017, five-point composite soil samples (2017 SP-33 and 2017 SP-34) were collected from two (2) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for soil sample 2017 SP-34. Based on the analytical results, the soil represented by soil sample 2017 SP-34 was transported to the bulk stockpile located at the north end of the project. The soil represented by soil sample 2017 SP-33 exhibited a benzene and BTEX concentration less than the applicable laboratory RL. The soil sample exhibited a TPH concentration of 293.3 mg/kg and the volume of soil was recorded on run tickets and transported to C&C Landfarm located near Monument, New Mexico.

**On July 5, 2017,** ten (10) confirmation sidewall soil samples (2017 ESW-1 @ 18', 2017 ESW-2 @ 18', 2017 ESW-3 @ 18', 2017 ESW-4 @ 18', 2017 ESW-5 @ 18', 2017 ESW-6 @ 18', 2017 ESW-6 @ 18', 2017 ESW-7 @ 18', 2017 NSW-1 @ 18', 2017 NSW-2 @ 18', and 2017 NSW-3 @ 18') were collected from the existing north and east side excavation sidewalls and submitted to the laboratory for analysis of benzene, BTEX, and TPH concentrations. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all ten (10) soil samples. Based on the analytical results, no additional horizontal excavation was warranted on the north and east sidewalls of the existing excavation.

On July 31, 2017, Plains requested and received written NMOCD approval to modify the current Monument 18 Work Plan. Plains previously requested NMOCD approval to place washed caliche on the floor of the excavation and install a liner above the washed caliche. As a modification to the existing Work Plan, Plains would be backfilling the north and east quadrants of the existing excavation with non-impacted locally purchased soil or overburden soil deemed suitable by analysis for backfill. The existing excavation would be backfilled to approximately

fifteen (15) to eighteen (18) feet bgs. Please reference the NMOCD correspondence provided in Appendix B.

On July 25, 2017, the Landowner representative granted Plains verbal approval to proceed with the activities as detailed above.

On August 10, 2017, through November 30, 2018, backfilling of the north and east sides the existing excavation commenced. Soil contained in the bulk stockpile, and deemed suitable for use as backfill by analysis, was utilized to backfill the subject areas to nineteen (19) feet bgs. Soil utilized for backfill was compacted into the excavation using the rubber tires of the equipment.

On or about May 1, 2018, the Excel Powerlines located on the east side of Maddox Road were relocated to allow for additional excavation activities in the east bar ditch of Maddox Road.

On May 9, 2018, Plains representatives and a DCP representative met on Site to discuss the relocation of a large diameter water pipeline, currently located in the Maddox Road east bar ditch.

On May 14, 2018, Plains received the certified surveyors' plats for the ETC permanent reroute around the Monument 18 excavation and work area.

On or about July 23, 2018, Plains contractors commenced mining caliche from the Cooper Caliche Pit located northeast of Monument. Caliche was transported from the Cooper Caliche Pit for use as backfill material.

On November 7, 2018, Rice Operating rerouted a pipeline which was located to the south of the existing excavation.

On November 27, 2018, a five-point composite soil samples (2018 SP-35) was collected from one (1) stockpile and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene and BTEX concentrations were less than the applicable laboratory RL. The soil sample exhibited a TPH concentration of 358 mg/kg and the volume of soil was recorded on run tickets and transported to C&C Landfarm located near Monument, New Mexico.

From November 30, 2018 through February 21, 2019, Plains suspended work at the Site in anticipation of the relocation of the ETC and DCP pipelines.

On December 3, 2018, a permanent easement on the east side of the Site was executed by all affected parties for the ETC pipeline ROW.

From February 21, 2019 through March 13, 2019, an ETC contractor relocated the natural gas polyline, which had been temporarily relocated to the Maddox Road bar ditch, into a permanent right-of-way (ROW) located east of the project footprint.

On April 5, 2019, a Rice Operating contractor removed pipe located at the southern end of the

existing excavation.

On April 11, 2019, an ETC contractor removed a "dead leg" from the south side of the ETC natural gas pipeline. The removal of the "dead leg" allowed Plains to conduct excavation activities on the south side of the Plains existing excavation. Prior to the removal of the "dead leg", TRC had "stripped out" the ETC steel pipeline and discovered a temporary pipeline clamp.

Plains contacted ETC and notified the ETC environmental group of the apparent release and ETC reportedly remediated the Release, transported the impacted soil off-site and sourced reportedly non-impacted caliche for use as backfill.

On May 14, 2019, five-point composite soil samples (2019 SP-36 through 2019 SP-41) were collected from six (6) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all six (6) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On June 10, 2019, five-point composite soil samples (2019 SP-42 and 2019 SP-43) were collected from two (2) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL for both soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On June 17, 2019, a Rice Operating contractor removed pipe and polyline located at the southern end of the existing excavation.

On June 24, 2019, five-point composite soil samples (2019 SP-44 and 2019 SP-45) were collected from two (2) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL for both soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On June 27, 2019, five-point composite soil samples (2019 SP-46 through 2019 SP-48) were collected from three (3) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL for all three (3) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

On July 25, 2019, five-point composite soil samples (2019 SP-49 through 2019 SP-56) were collected from eight (8) stockpiles and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL for all eight (8) soil samples. Based on the analytical results, the stockpiles were transported to the bulk stockpile located at the north end of the project.

**During the third quarter of 2019,** approximately 960 bbls of PSH and water were recovered from the excavation and disposed of at an NMOCD approved disposal.

On July 30, 2019, a five-point composite soil sample (2019 SP-57) was collected from one (1) stockpile and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for the soil sample. Based on the analytical results, the stockpile was transported to the bulk stockpile located at the north end of the project.

On August 12, 2019, following the excavation activities focused on the south sidewall of the existing excavation, two (2) excavation sidewall soil samples (2019 SSW-1 @ 19' and 2019 SSW-2 @ 19') were collected and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines. Due to the extension of the existing excavation to the south, two (2) additional east sidewall soil samples (2019 ESW-1 @ 19' and 2019 ESW-2 @ 19') were collected and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines for all four (4) soil samples. Based on the analytical results, no additional horizontal excavation was warranted on the south or east sidewall of the existing excavation. Please note, soil sample 2019 ESW-2 @ 19' was collected on August 14, 2019.

On August 14, 2019, a five-point composite soil sample (2019 SP-58) was collected from one (1) stockpile and submitted to the laboratory for benzene, BTEX, and TPH analysis. The soil represented by soil sample 2019 SP-58 exhibited a benzene concentration less than the applicable laboratory RL and NMOCD regulatory guidelines and a BTEX concentration of 8.197 mg/kg. The soil sample exhibited a TPH concentration of 11,060 mg/kg and the volume of soil was recorded on run tickets and transported to C&C Landfarm located near Monument, New Mexico.

On or about August 16, 2019, excavation activities were completed on the south sidewall of the excavation.

On January 14, 2020, following the 2019 excavation, activities focused on the south sidewall of the existing excavation, two (2) excavation sidewall soil samples (2020-WSW-1 @ 18' and 2020-WSW-2 @ 18') were collected from the west sidewall of the existing excavation and submitted to the laboratory for benzene, BTEX, and TPH analysis. The analytical results indicated benzene, BTEX, and TPH concentrations were less than the applicable laboratory RL and NMOCD regulatory guidelines.

Following the collection of the above sidewall soil samples, backfill activities continued utilizing both soils deemed suitable for backfill by analysis and caliche purchased from the Landowner representative.

On or about March 26, 2021, placement of topsoil in upper two (2) to three (3) feet of the excavation and other disturbed areas commenced. On completion of the final backfilling and Site restoration activities, Plains will submit an Addendum documenting the final Site completion activities.

On April 13, 2021, the Rice Operating six (6) inch diameter polyline was re-established in the

original right-of-way, "detector tape" was applied to the polyline, pad sand was used to cushion the polyline and the pipeline trench was backfilled.

A total volume of approximately 40,380 cubic yards (cy) of impacted soil was recorded on run tickets and transported to C&C Landfarm located near Monument, New Mexico. Disposal run tickets are not included in this report and will be submitted on NMOCD request. A total of approximately 30,500 cy of soil was deemed suitable for use as backfill through laboratory analysis.

On April 30, 2021, a TRC Environmental Field Technician gauged monitor wells MW-3, MW-5, MW-6, MW-7, MW-9, and MW-10. Monitor well MW-1 was removed during excavation activities and monitor wells MW-4 and MW-8 could not be gauged due to an obstruction (likely a broken riser) in the monitor wells. The gauging event results indicated PSH was not observed in any of the gauged monitor wells.

On or about May 12, 2021, the large diameter DCP polyline was re-established in the original pipeline corridor by a DCP contractor.

#### 3.0 QA/QC PROCEDURES

#### 3.1 Soil Sampling

Soil samples were obtained utilizing single-use, disposable, latex gloves, and clean sampling tools. The soil sample was placed in a disposable Ziploc sample bag. The bag was labeled. A portion of the soil sample was then placed in a sterile glass container equipped with a Teflon-lined lid furnished by the analytical laboratory. The container was filled to capacity to limit the amount of headspace present. Each container was labeled and placed on ice in an insulated cooler. Upon selection of samples for analysis, the cooler was sealed for shipment to the laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

Soil samples were delivered to Xenco Laboratories in Midland, Texas, TraceAnalysis, Inc. in Midland, Texas, and Permian Basin Environmental Laboratory (Permian Lab) Midland, Texas for BTEX and TPH analyses using the methods described below.

- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO
- BTEX concentrations in accordance with EPA Method SW-846 8021B

#### 3.2 Decontamination of Equipment

Soil sampling tools such as small hand shovels were washed with Liqui-Nox® detergent and rinsed with distilled water between the collection of soil samples.

#### 3.3 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form.

#### 4.0 SITE REVEGETATION

Following backfilling activities, the Monument 18 Release Site will be contoured reminiscent of the surrounding area. The disturbed area will be revegetated with a seed mixture approved by the Landowner representative and the seed will be sown at a time approved by the Landowner representative.

#### 5.0 GROUND WATER REMEDIATION SUMMARY

On March 10, 2017, in a meeting in the NMOCD Santa Fe Office with Plains representatives and NMOCD representatives, the NMOCD approved the temporary cessation of ground water sampling at the Monument 18 Release Site due to continuing excavation activities.

As stated above, the NMOCD approved temporary cessation of groundwater sampling during 2017, please reference the 2017 Annual Monitoring Report for Monument 18 for Historical Groundwater Elevation Data and Historical BTEX Concentrations in Groundwater.

During excavation activities monitor well MW-3 was periodically gauged and ground water was recovered and disposed of at an NMOCD approved disposal.

On September 5, 2018, monitor well MW-3 exhibited a measurable thickness of PSH (0.02 feet) and has not exhibited measurable PSH since this event, comprising approximately ninety (90) gauging and recovery events.

**On November 12, 2019,** monitor well MW-3 was gauged, purged, and sampled for concentrations of BTEX. The analytical results indicated all BTEX constitute concentrations were less than the laboratory RL and NMOCD regulatory guidelines.

On April 30, 2021, a TRC environmental field technician gauged monitor wells MW-3, MW-5, MW-6, MW-7, MW-9, and MW-10. Monitor well MW-1 was removed during excavation activities and monitor wells MW-4 and MW-8 could not be gauged due to an obstruction (likely a broken riser) in the monitor wells. The gauging event results indicated PSH was not observed in any of the gauged monitor wells.

Based on the presence of concentrations of TDS and chloride in excess of the Standards for Ground Water of 10,000 mg/L or less (NMAC 20.6.2.3103), the excavation of significantly hydrocarbon impacted source material, the absence of measurable PSH in existing monitor wells, and the analytical results of a ground water sample collected from monitor well MW-3 on November 12, 2019, Plains requests the NMOCD grant ground water closure status to the Monument 18 Release Site. Concentrations of TDS and Chloride in excess of the NMAC 20.6.2.3103 standard was initially reported to the NMOCD in the 2016 Monument 18 Annual Monitoring Report. On NMOCD approval, plugging permits will be requested from the New Mexico Office of the State Engineer (NMOSE). On receipt of the plugging permits the remaining monitor wells will be plugged and abandoned by a New Mexico licensed water well driller. On receipt of the drillers plugging report, the reports will be forwarded to the NMOCD.

#### 6.0 SITE CLOSURE REQUEST

Based on Standards for Ground Water of 10,000 mg/L TDS Concentration or less (NMAC 20.6.2.3103) the ground water beneath the Monument 18 Release is deemed non-potable and non-abatable. Based on the analytical results of confirmation soil samples obtained from the floor and sidewalls of the excavation, TRC recommends Plains provide the NMOCD a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant Site closure status to the Monument 18 Release Site.

#### 7.0 L IMITATIONS

TRC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

TRC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. TRC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. TRC has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or Plains.

#### 8.0 DISTRIBUTION

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Oil Conservation Division, District 1

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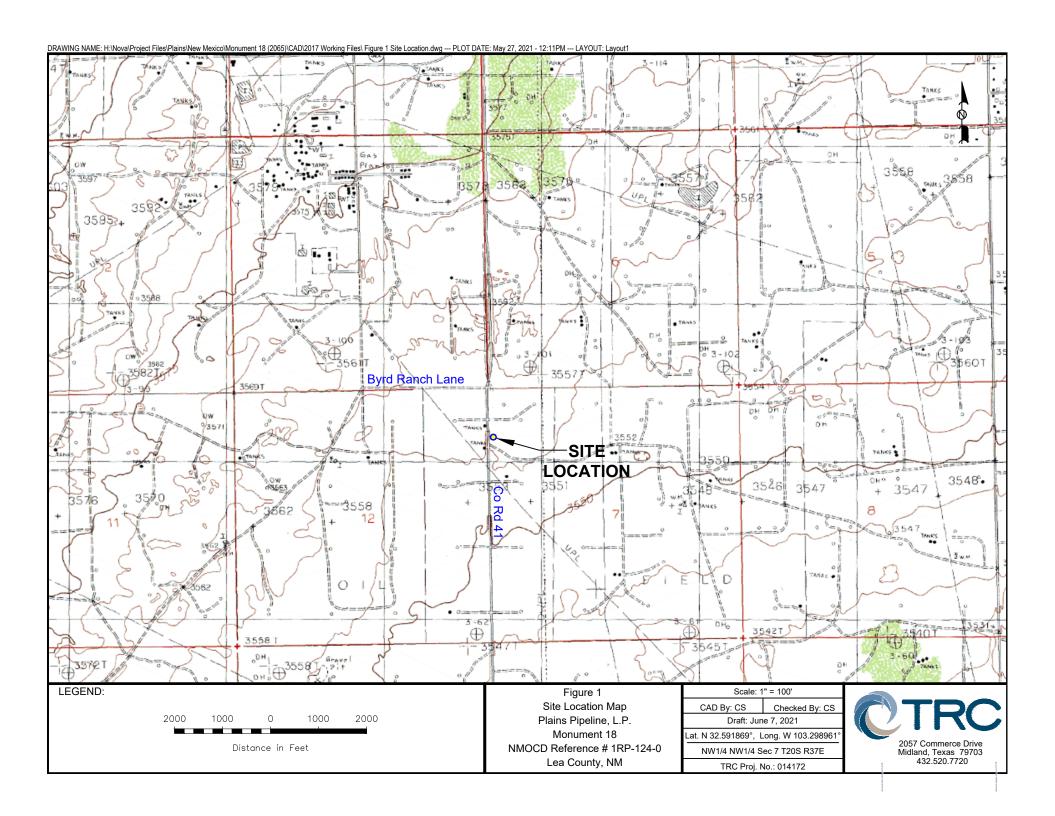
Copy 4: TRC Environmental Corporation

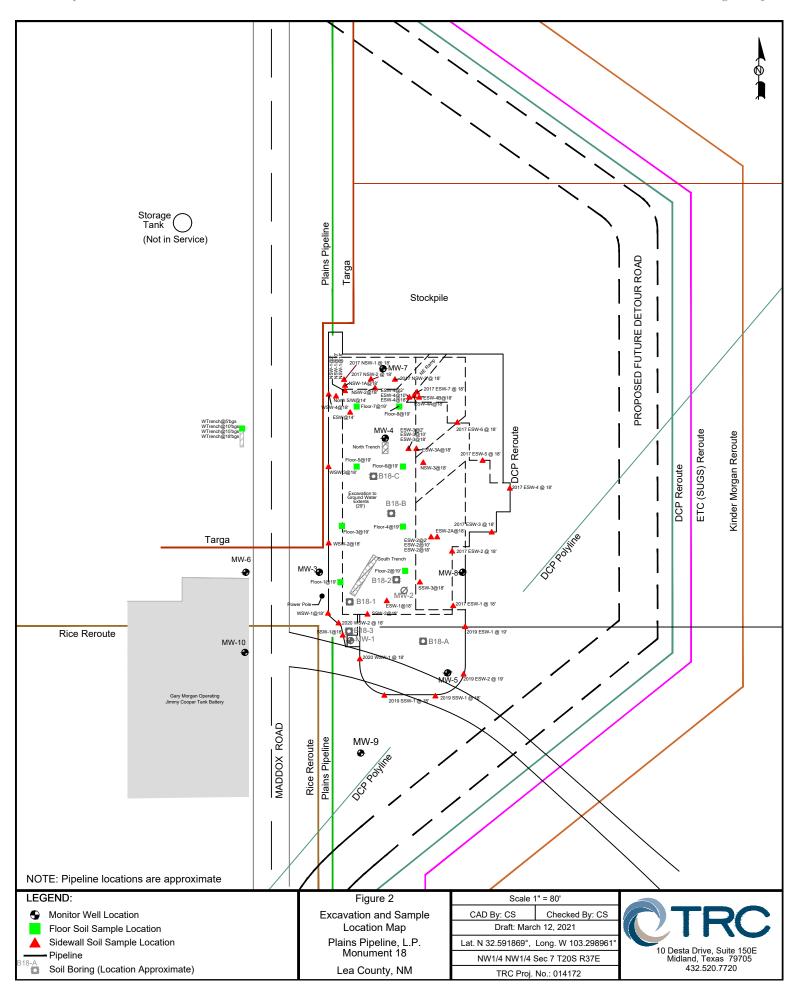
10 Desta Drive, Suite 150E

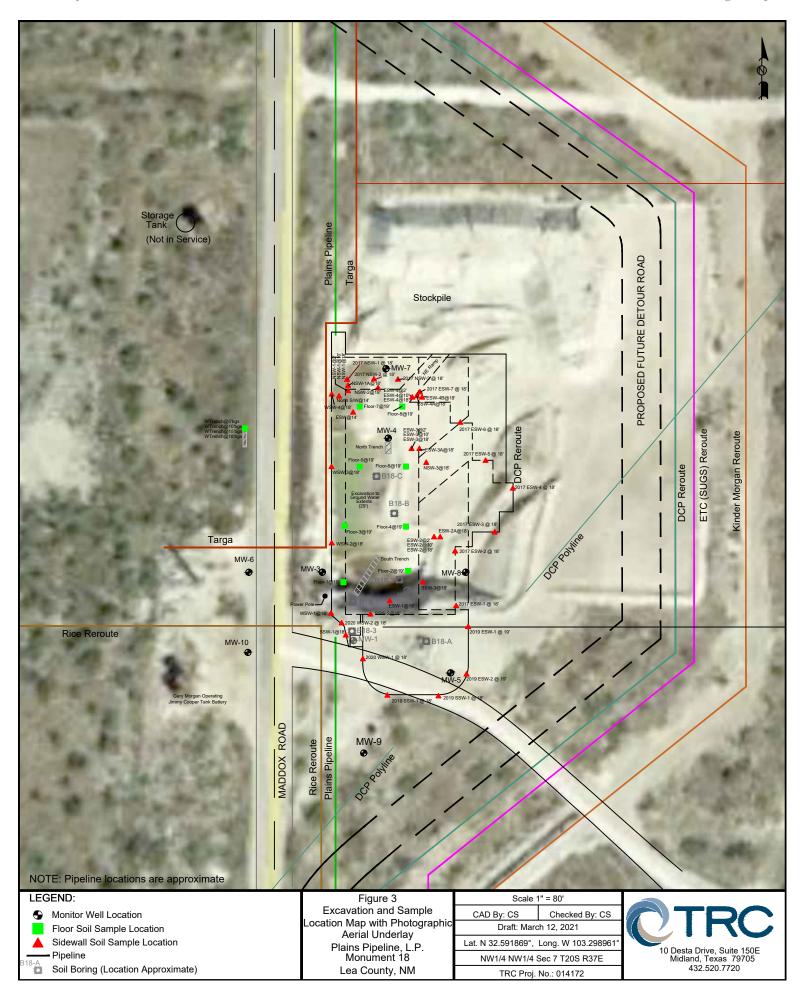
Midland, Texas 79705

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Figures







**Tables** 

TABLE 1

#### TDS and CHLORIDE CONCENTRATIONS IN GROUNDWATER

#### PLAINS PIPELINE, L.P.

#### **MONUMENT 18**

#### LEA COUNTY, NEW MEXICO NMOCD REFERENCE NUMBER 1R-0124

 $All\ concentrations\ are\ reported\ in\ mg/L.$ 

| SAMPLE           | SAMPLE               | EPA 160.1        | EPA 300.0      |
|------------------|----------------------|------------------|----------------|
| LOCATION         | DATE                 | TDS              | CHLORIDE       |
| NMOCD REG        |                      | 10,000           | 250            |
| MW - 1           | 02/01/16             | 13,400           | 7,550          |
| MW - 2           | 05/02/97             | 16,300           | 757            |
| MW - 3<br>MW - 3 | 05/02/97<br>02/01/16 | 17,200<br>14,300 | 7,680          |
| IVI W - 3        | 02/01/10             | 14,500           | 6,910          |
| MW - 5<br>MW - 5 | 09/19/97<br>02/01/16 | 23,000           | 5,100          |
| MW - 5           | 08/02/17             | 12,100<br>13,900 | 6,590<br>7,260 |
| MW - 6           | 09/19/97             | 22,000           | 8,600          |
| MW - 6           | 02/01/16             | 12,900           | 7,070          |
| MW - 7           | 08/18/98             | 19,200           | 11,100         |
| MW - 7           | 02/01/16             | 11,800           | 5,820          |
| MW - 8           | 08/18/98             | 19,900           | 22,600         |
| MW - 9           | 02/01/16             | 12,500           | 6,590          |
| MW - 9           | 08/02/17             | 12,700           | 7,100          |
| MW-10            | 02/01/16             | 12,200           | 6,230          |

|                       |          |                 |                       |                    | Methods: EP | A SW 846-80        | 21B, 5030 |                 |                | Methods:       |                |                      |  |
|-----------------------|----------|-----------------|-----------------------|--------------------|-------------|--------------------|-----------|-----------------|----------------|----------------|----------------|----------------------|--|
| CAMPLE LOCATION       | SAMPLE   | SAMPLE<br>DEPTH | SOIL STATUS           | DENZENE            | TOLUENE     | ETHYL-             | m,p,o-    | TOTAL           | E              | PA SW 846      | -8015M or      | 418.1                |  |
| SAMPLE LOCATION       | DATE     | (feet)          | SOIL STATUS           | BENZENE<br>(mg/kg) | (mg/kg)     | BENZENE<br>(mg/kg) | (mg/kg)   | BTEX<br>(mg/kg) | GRO<br>(mg/kg) | DRO<br>(mg/kg) | ORO<br>(mg/kg) | Total TPH<br>(mg/kg) |  |
|                       |          |                 |                       |                    |             |                    |           |                 |                |                |                |                      |  |
| B18-1                 | 03/09/97 | 1 - 2'          | Excavated             | < 0.050            | 0.348       | 0.865              | < 0.100   | 1.213           | -              | -              | -              | 13500                |  |
| B18-1                 | 03/09/97 | 5 - 6'          | Excavated             | < 0.20             | 4.82        | < 0.20             | 12.46     | 17.28           | -              | -              | -              | 31500                |  |
| B18-1                 | 03/09/97 | 14-15'          | Excavated             | < 0.20             | 1.92        | 0.92               | 8.64      | 11.48           | -              | -              | -              | 10900                |  |
| B18-1                 | 03/09/97 | 34-35'          | Excavated             | < 0.050            | < 0.050     | < 0.050            | < 0.050   | < 0.050         | -              | -              | -              | 929                  |  |
| B18-3 (MW 18-1)       | 03/14/97 | 1 -2'           | Excavated             | < 0.020            | < 0.020     | < 0.020            | < 0.040   | < 0.040         |                | _              |                | 15.5                 |  |
| B18-3 (MW 18-1)       | 03/14/97 | 12 - 13'        | Excavated             | < 0.020            | < 0.020     | < 0.020            | < 0.040   | <0.040          | -              | -              | -              | 13.0                 |  |
| B18-3 (MW 18-1)       | 03/14/97 | 26 - 27'        | Excavated             | 0.348              | 0.880       | 0.660              | 1.974     | 3.862           |                | _              | _              | 2840                 |  |
| B10 3 (MW 10 1)       | 03/14/7/ | 20 27           | Excavatcu             | 0.540              | 0.000       | 0.000              | 1.774     | 3.002           |                |                |                | 2040                 |  |
| B18-2 (MW 18-2)       | 03/14/97 | 0 - 1'          | Plugged and Excavated | < 0.020            | < 0.020     | < 0.020            | < 0.040   | < 0.040         | -              | -              | -              | 29.5                 |  |
| B18-2 (MW 18-2)       | 03/14/97 | 8 - 9'          | Plugged and Excavated | < 0.020            | < 0.020     | < 0.020            | < 0.040   | < 0.040         | -              | -              | -              | 13.0                 |  |
| B18-2 (MW 18-2)       | 03/14/97 | 29 - 30'        | Plugged and Excavated | 2.15               | 2.74        | 8.33               | 6.75      | 19.97           | -              | -              | -              | 12900                |  |
| B18-2 (MW 18-2)       | 03/14/97 | 31 - 32'        | Plugged and Excavated | 1.05               | 1.48        | 3.03               | 2.79      | 8.35            | -              | -              | -              | 3380                 |  |
|                       |          |                 |                       |                    |             |                    |           |                 |                |                |                |                      |  |
| B18-4 (MW 18-3)       | 03/14/97 | 1 - 2'          | In-Situ               | < 0.020            | < 0.020     | < 0.020            | < 0.040   | < 0.040         | -              | -              | -              | 32.0                 |  |
| B18-4 (MW 18-3)       | 03/14/97 | 13 - 14'        | In-Situ               | < 0.020            | < 0.020     | < 0.020            | < 0.040   | < 0.040         | -              | -              | -              | 32.0                 |  |
| B18-4 (MW 18-3)       | 03/14/97 | 26 - 27'        | In-Situ               | < 0.020            | < 0.020     | < 0.020            | < 0.040   | < 0.040         | -              | -              | -              | <10.0                |  |
|                       |          |                 |                       |                    |             |                    |           |                 |                |                |                |                      |  |
| B18-A (5-7')          | 09/11/97 | 5 - 7'          | Excavated             | < 0.050            | < 0.050     | < 0.050            | < 0.100   | < 0.100         | -              | -              | -              | <10.2                |  |
| B18-A (28-30')        | 09/11/97 | 28 - 30'        | Excavated             | < 0.050            | < 0.050     | 0.134              | 0.586     | 0.677           | -              | -              | -              | <9.8                 |  |
| P40 P (7.50)          | 00/44/05 | :               | <b>.</b>              | 0.050              | 0.050       | 0.070              | 0.100     | 0.400           |                |                |                | 1.12                 |  |
| B18-B (5-7')          | 09/12/97 | 5 - 7'          | Excavated             | <0.050             | < 0.050     | < 0.050            | < 0.100   | <0.100          | -              | -              | -              | <143                 |  |
| B18-B (15-17')        | 09/12/97 | 15 - 17'        | Excavated             | < 0.50             | 1.96        | 14.35              | 27.45     | 48.64           | -              | -              | -              | 7760                 |  |
| B-18-C (5-7')         | 09/12/97 | 5 - 7'          | Excavated             | < 0.050            | < 0.050     | < 0.050            | 0.228     | 0.228           | -              | _              | _              | <99.6                |  |
| B-18-C (10.5 - 12.5') | 09/12/97 | 10.5 - 12.5'    | Excavated             | 1.08               | 3.86        | 24.95              | 45.35     | 75.24           | -              | -              | -              | 11400                |  |
| B-10-C (10.3 - 12.3)  | 05/12/57 | 10.3 - 12.3     | Excavatcu             | 1.00               | 3.00        | 24.73              | 43.33     | 75.24           | _              | _              | _              | 11400                |  |
| MW-18-4               | 09/12/97 | 5 - 7'          | Excavated             | < 0.050            | < 0.050     | < 0.050            | < 0.100   | < 0.100         | -              | -              | -              | <206                 |  |
| MW-18-4               | 09/12/97 | 8.5 - 10.5'     | Excavated             | 1.18               | 2.48        | 12.95              | 16.38     | 32.99           | -              | -              | -              | 5590                 |  |
| MW-18-4               | 09/12/97 | 20 - 22'        | Excavated             | < 0.050            | < 0.050     | < 0.050            | < 0.100   | < 0.100         | -              | -              | -              | 5310                 |  |
| MW-18-4               | 09/12/97 | 28 - 30'        | Excavated             | < 0.050            | < 0.050     | 0.376              | 0.776     | 1.152           | -              | -              | -              | 1050                 |  |
|                       |          |                 |                       |                    |             |                    |           |                 |                |                |                |                      |  |
| MW-18-5               | 09/11/97 | 5 - 7'          | Excavated             | < 0.050            | < 0.050     | < 0.050            | 0.111     | 0.111           | -              | -              | -              | < 9.6                |  |
| MW-18-5               | 09/11/97 | 33 - 34'        | In-Situ               | < 0.050            | < 0.050     | < 0.050            | < 0.050   | < 0.050         | -              | -              | -              | <9.6                 |  |
|                       |          |                 |                       |                    |             |                    |           |                 |                |                |                |                      |  |
| MW-18-6               | 09/12/97 | 5 - 7'          | In-Situ               | < 0.050            | < 0.050     | < 0.050            | 0.113     | 0.113           | -              | -              | -              | <10.1                |  |
| MW-18-6               | 09/12/97 | 28 - 30'        | In-Situ               | < 0.050            | < 0.050     | < 0.050            | < 0.100   | < 0.100         | -              | -              | -              | <10.1                |  |
| ) WY 10 Z             | 05/15/00 | 0. 21           | P 4 1                 | 0.020              | 0.020       | 0.020              | 0.046     | 0.046           |                |                |                | 7.0                  |  |
| MW-18-7               | 07/15/98 | 0 - 2'          | Excavated             | <0.020             | <0.020      | <0.020             | <0.040    | <0.040          | -              | -              | -              | 7.0                  |  |
| MW-18-7               | 07/15/98 | 6 - 8'          | Excavated             | < 0.020            | < 0.020     | < 0.020            | < 0.040   | < 0.040         | -              | -              | -              | 10.5                 |  |

|                                |                      |                   |                        |                      | Methods: EP          | A SW 846-80          | 21B, 5030            |                      |                |                |                |                      |
|--------------------------------|----------------------|-------------------|------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------|----------------|----------------|----------------------|
| CAMPLE LOCATION                | SAMPLE               | SAMPLE            | COH CTATUS             | DENGENE              | TOLLENE              | ETHYL-               | m,p,o-               | TOTAL                | E              | PA SW 846      | -8015M or      | 418.1                |
| SAMPLE LOCATION                | DATE                 | DEPTH<br>(feet)   | SOIL STATUS            | BENZENE<br>(mg/kg)   | TOLUENE<br>(mg/kg)   | BENZENE<br>(mg/kg)   | XYLENE<br>(mg/kg)    | BTEX<br>(mg/kg)      | GRO<br>(mg/kg) | DRO<br>(mg/kg) | ORO<br>(mg/kg) | Total TPH<br>(mg/kg) |
| MW-18-7                        | 07/15/98             | 28 - 30'          | Excavated              | < 0.10               | 0.10                 | < 0.010              | 0.11                 | 0.11                 | -              | -              | -              | 369                  |
| <b>N</b> (10.0                 | 07/15/00             | 0.01              | <u> </u>               | 0.020                | 0.000                | 0.000                | 0.040                | 0.020                |                |                |                | 0.1                  |
| MW 18-8<br>MW 18-8             | 07/15/98<br>07/15/98 | 0 -2'<br>8' - 10' | Excavated              | <0.020<br><0.020     | <0.020<br><0.020     | <0.020<br><0.020     | <0.040<br><0.040     | <0.020<br><0.020     | -              | -              | -              | 9.6<br>7.3           |
| MW 18-8                        | 07/15/98             | 28' - 30'         | Excavated<br>In-Situ   | <0.020               | <0.020               | <0.020               | <0.040               | <0.020               | -              | -              | -              | 15.6                 |
| IVI W 10-0                     | 07/13/98             | 28 - 30           | III-Situ               | <0.020               | <0.020               | <0.020               | <0.040               | <0.020               | -              | -              | -              | 13.0                 |
| MW-9                           | 11/04/04             | 10'               | In-Situ                | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | <1             | <50            | -              | <50                  |
| MW-9                           | 11/04/04             | 20'               | In-Situ                | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | <1             | < 50           | -              | < 50                 |
| MW-9                           | 11/04/04             | 30'               | In-Situ                | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | <1             | < 50           | -              | < 50                 |
|                                |                      |                   |                        |                      |                      |                      |                      |                      |                |                |                |                      |
| MW-10                          | 11/04/04             | 15'               | In-Situ                | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | <1             | < 50           | -              | <50                  |
| MW-10                          | 11/04/04             | 30'               | In-Situ                | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | < 0.0100             | <1             | <50            | -              | <50                  |
|                                |                      |                   |                        |                      |                      |                      |                      |                      |                |                |                |                      |
| North S/W @ 14'                | 07/12/13             | 14'               | In-Situ                | < 0.00199            | <0.00398             | < 0.00199            | <0.00398             | <0.00398             | <14.9          | <14.9          | <14.9          | <14.9                |
| 1101til 5/ 11 @ 14             | 07/12/13             | 14                | III-Situ               | <0.00177             | <0.00378             | <0.00177             | <0.00376             | <0.00376             | <1 <b>4.</b> 7 | <b>\14.</b> )  | (14.)          | (14.)                |
| ESW @ 14'                      | 07/24/13             | 14'               | Excavated              | < 0.00100            | 0.00245              | 0.00385              | 0.0133               | 0.0196               | 15.8           | 119            | 29.1           | 164                  |
|                                |                      |                   |                        |                      |                      |                      |                      |                      |                |                |                |                      |
| SP-1                           | 08/14/13             | -                 | Stockpiled             | < 0.000992           | < 0.00198            | < 0.000992           | < 0.000992           | < 0.00198            | <15.0          | 26.2           | <15.0          | 26.2                 |
| SP-2                           | 08/14/13             | -                 | Stockpiled             | < 0.000992           | < 0.00198            | < 0.000992           | < 0.000992           | < 0.00198            | <15.0          | 22.1           | <15.0          | 22.1                 |
|                                |                      |                   |                        |                      |                      |                      |                      |                      |                |                |                |                      |
| NE Ramp SP                     | 09/12/13             | -                 | Stockpiled             | < 0.00132            | < 0.00263            | < 0.00132            | < 0.00263            | < 0.00263            | <19.8          | <19.8          | <19.8          | <19.8                |
| Central Ramp                   | 09/12/13             | -                 | Stockpiled             | <0.00131             | < 0.00262            | < 0.00131            | <0.00262             | <0.00262             | <19.7          | <19.7          | <19.7          | <19.7                |
| ESW-1 @ 18'                    | 09/12/13             | 18'               | Excavated              | < 0.00117            | <0.00233             | < 0.00117            | <0.00233             | <0.00233             | <17.5          | <17.5          | <17.5          | <17.5                |
| ESW-2 @ 18'<br>ESW-3 @ 18'     | 09/12/13             | 18'<br>18'        | Excavated              | <0.00111             | <0.00222<br><0.00216 | <0.00111             | <0.00222<br><0.00216 | <0.00222<br><0.00216 | <16.8<br><16.2 | 611<br>981     | <16.8<br><16.2 | 611<br>981           |
| ESW-3 @ 18'                    | 09/12/13<br>09/12/13 | 18'               | Excavated<br>Excavated | <0.00108<br><0.00108 | <0.00216             | <0.00108<br><0.00108 | <0.00216             | <0.00216             | <16.2<br><81.4 | 981<br>884     | <16.2<br><81.4 | 981<br>884           |
| SSW-1 @ 18'                    | 09/12/13             | 18'               | Excavated              | < 0.00108            | <0.00217             | < 0.00108            | <0.00217             | < 0.00217            | <16.7          | <16.7          | <16.7          | <16.7                |
| SSW-2 @ 18'                    | 09/12/13             | 18'               | Excavated              | < 0.00111            | < 0.00222            | < 0.00111            | < 0.00222            | <0.00222             | <17.2          | <17.2          | <17.2          | <17.2                |
| SSW-3 @ 18'                    | 09/12/13             | 18'               | Excavated              | < 0.00114            | <0.00224             | < 0.00114            | < 0.00224            | < 0.00224            | <16.8          | <16.8          | <16.8          | <16.8                |
| NSW-1 @ 18'                    | 09/12/13             | 18'               | Excavated              | < 0.00110            | < 0.00220            | < 0.00110            | < 0.00220            | < 0.00220            | 79.0           | 1,450          | <16.5          | 1,530                |
| NSW-2 @ 18'                    | 09/12/13             | 18'               | Excavated              | < 0.00110            | < 0.00219            | < 0.00110            | < 0.00219            | < 0.00219            | <16.4          | 80.8           | <16.4          | 80.8                 |
| NSW-3 @ 18'                    | 09/12/13             | 18'               | Excavated              | < 0.00103            | < 0.00206            | < 0.00103            | < 0.00206            | < 0.00206            | <15.5          | <15.5          | <15.5          | <15.5                |
| WSW-1 @ 18'                    | 09/12/13             | 18'               | In-Situ                | < 0.00114            | < 0.00228            | 0.00478              | 0.0338               | 0.0386               | 299            | 1,320          | <17.2          | 1,620                |
| WSW-2 @ 18'                    | 09/12/13             | 18'               | In-Situ                | < 0.00117            | < 0.00233            | < 0.00117            | < 0.00233            | < 0.00233            | 279            | 1,230          | <17.4          | 1,510                |
| WSW-3 @ 18'                    | 09/12/13             | 18'               | In-Situ                | <0.00118             | 0.00312              | 0.0395               | 0.188                | 0.231                | 2,060          | 5,480          | <88.1          | 7,540                |
| WSW-4 @ 18'                    | 09/12/13             | 18'               | In-Situ                | < 0.00115            | < 0.00230            | 0.023                | 0.371                | 0.394                | 1,470          | 4,320          | <17.4          | 5,790                |
| Floor-1 @ 19'                  | 09/12/13<br>09/12/13 | 19'<br>19'        | Excavated              | < 0.00124            | <0.00248<br><0.00234 | <0.00124<br><0.00117 | <0.00248<br><0.00234 | <0.00248<br><0.00234 | <18.6<br><17.6 | <18.6<br><17.6 | <18.6<br><17.6 | <18.6<br><17.6       |
| Floor-2 @ 19'<br>Floor-3 @ 19' | 09/12/13             | 19'               | Excavated<br>Excavated | <0.00117<br><0.00117 | <0.00234             | <0.00117<br>0.257    | 0.291                | 0.548                | 1,110          | 3,610          | <17.6          | <17.6<br>4,720       |
| Floor-4 @ 19'                  | 09/12/13             | 19'               | Excavated<br>Excavated | <0.00117             | <0.00234             | 0.257                | 0.291                | 0.548                | 71.4           | 210            | <17.7          | 281                  |
| Floor-5 @ 19'                  | 09/12/13             | 19'               | Excavated              | < 0.0588             | < 0.118              | 17.4                 | 41.4                 | 58.8                 | 1,130          | 2,230          | <88.2          | 3,360                |
| F1001-3 @ 19                   | 09/12/13             | 17                | Excavateu              | <0.0368              | <0.110               | 17.4                 | 41.4                 | 30.0                 | 1,130          | 2,230          | <00.2          | 3,300                |

|                            |           |                 |             |                    | Methods: EP        | A SW 846-80        | 21B, 5030         |                 |                | Met            | hods:          |                      |
|----------------------------|-----------|-----------------|-------------|--------------------|--------------------|--------------------|-------------------|-----------------|----------------|----------------|----------------|----------------------|
|                            | SAMPLE    | SAMPLE          |             |                    |                    | ETHYL-             | m,p,o-            | TOTAL           | E              | PA SW 846      | -8015M or      | 418.1                |
| SAMPLE LOCATION            | DATE      | DEPTH<br>(feet) | SOIL STATUS | BENZENE<br>(mg/kg) | TOLUENE<br>(mg/kg) | BENZENE<br>(mg/kg) | XYLENE<br>(mg/kg) | BTEX<br>(mg/kg) | GRO<br>(mg/kg) | DRO<br>(mg/kg) | ORO<br>(mg/kg) | Total TPH<br>(mg/kg) |
| Floor-6 @ 19'              | 09/12/13  | 19'             | Excavated   | < 0.0221           | < 0.0441           | 4.14               | 7.72              | 11.9            | 1,170          | 6,220          | <83.1          | 7,390                |
| Floor-7 @ 19'              | 09/12/13  | 19'             | Excavated   | < 0.0257           | < 0.0514           | 1.97               | 5.78              | 7.75            | 583            | 1,470          | <19.2          | 2,050                |
| Floor-8 @ 19'              | 09/12/13  | 19'             | Excavated   | < 0.00109          | < 0.00218          | 0.0255             | 0.0404            | 0.0659          | 247            | 3,920          | <16.4          | 4,170                |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| ESW-2 @ 2'                 | 10/08/13  | 2'              | Excavated   | < 0.00106          | < 0.00211          | < 0.00106          | < 0.00211         | < 0.00211       | <15.8          | <15.8          | <15.8          | <15.8                |
| ESW-2 @ 10'                | 10/08/13  | 10'             | Excavated   | < 0.00126          | < 0.00252          | < 0.00126          | < 0.00252         | < 0.00252       | <19.0          | <19.0          | <19.0          | <19.0                |
| ESW-2A @ 18'               | 10/08/13  | 18'             | Excavated   | -                  | -                  | -                  | -                 | -               | <18.6          | <18.6          | <18.6          | <18.6                |
| ESW-3 @ 2'                 | 10/08/13  | 2'              | Excavated   | < 0.00102          | < 0.00204          | < 0.00102          | < 0.00204         | < 0.00204       | <15.3          | <15.3          | <15.3          | <15.3                |
| ESW-3 @ 10'                | 10/08/13  | 10'             | Excavated   | < 0.00101          | < 0.00203          | < 0.00101          | < 0.00203         | < 0.00203       | <15.2          | <15.2          | <15.2          | <15.2                |
| ESW-3A @ 18'               | 10/08/13  | 18'             | Excavated   | -                  | -                  | -                  | -                 | -               | <16.7          | <16.7          | <16.7          | <16.7                |
| NSW-1 @ 2'                 | 10/08/13  | 2'              | Excavated   | < 0.00101          | < 0.00202          | < 0.00101          | < 0.00202         | < 0.00202       | <15.1          | <15.1          | <15.1          | <15.1                |
| NSW-1 @ 10'                | 10/08/13  | 10'             | Excavated   | < 0.00101          | < 0.00202          | < 0.00101          | < 0.00202         | < 0.00202       | <15.2          | <15.2          | <15.2          | <15.2                |
| NSW-1A @ 18'               | 10/08/13  | 18'             | Excavated   | -                  | -                  | -                  | -                 | -               | <18.8          | <18.8          | <18.8          | <18.8                |
| ESW-4 @ 2'                 | 10/08/13  | 2'              | Excavated   | < 0.00106          | < 0.00212          | < 0.00106          | < 0.00212         | < 0.00212       | <15.9          | <15.9          | <15.9          | <15.9                |
| ESW-4 @ 10'                | 10/08/13  | 10'             | Excavated   | < 0.00102          | < 0.00205          | < 0.00102          | < 0.00205         | < 0.00205       | <15.3          | <15.3          | <15.3          | <15.3                |
| ESW-4A @ 18'               | 10/08/13  | 18'             | Excavated   | -                  | -                  | -                  | -                 | -               | 31.3           | 1,440          | <16.4          | 1,470                |
| ESW-4B @ 18'               | 10/08/13  | 18'             | Excavated   | -                  | -                  | -                  | -                 | -               | <17.4          | <17.4          | <17.4          | <17.4                |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| W Trench @ 5' bgs          | 11/05/13  | 5'              | In-Situ     | < 0.000996         | < 0.00199          | < 0.000996         | < 0.00199         | < 0.00199       | <16.7          | <16.7          | <16.7          | <16.7                |
| W Trench @ 10' bgs         | 11/05/13  | 10'             | In-Situ     | < 0.000994         | < 0.00199          | < 0.000994         | < 0.00199         | < 0.00199       | <16.6          | <16.6          | <16.6          | <16.6                |
| W Trench @ 15' bgs         | 11/05/13  | 15'             | In-Situ     | < 0.000990         | < 0.00198          | < 0.000990         | < 0.00198         | < 0.00198       | <16.6          | <16.6          | <16.6          | <16.6                |
| W Trench @ 18' bgs         | 11/05/13  | 18'             | In-Situ     | < 0.00100          | < 0.00200          | << 0.00100         | < 0.00200         | < 0.00200       | <17.3          | <17.3          | <17.3          | <17.3                |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| SP-3                       | 07/23/14  | -               | Hauled      | < 0.000996         | < 0.00199          | 0.0106             | 0.0488            | 0.0594          | 332            | 3,150          | 168            | 3,650                |
| SP-4                       | 07/23/14  | -               | Hauled      | < 0.000996         | < 0.00199          | 0.00187            | 0.0120            | 0.0139          | <15.3          | 105            | <15.3          | 105                  |
| SP-5                       | 07/23/14  | -               | Stockpiled  | < 0.000998         | < 0.00200          | < 0.000998         | 0.00351           | 0.00351         | <15.4          | 89.4           | <15.4          | 89.4                 |
| SP-6                       | 07/23/14  | -               | Hauled      | < 0.000994         | < 0.00199          | < 0.000994         | 0.00625           | 0.00625         | 20.2           | 716            | 72.4           | 809                  |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| East Wall Stockpile (SP-8) | 08/08/14  | -               | Stockpiled  | < 0.00104          | < 0.00208          | < 0.00104          | < 0.00208         | < 0.00208       | <15.6          | 60.3           | <15.6          | 60.3                 |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| SP-9                       | 08/19/14  | -               | Stockpiled  | < 0.00102          | < 0.00203          | < 0.00102          | < 0.00203         | < 0.00203       | <15.3          | 49.9           | <15.3          | 49.9                 |
| SP-10                      | 08/19/14  | -               | Stockpiled  | < 0.00102          | < 0.00204          | < 0.00102          | < 0.00204         | < 0.00204       | <15.4          | 66.4           | <15.4          | 66.4                 |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| SP-11                      | 10/13/14  | -               | Stockpiled  | < 0.0200           | < 0.0200           | < 0.0200           | < 0.0200          | < 0.0200        | <4.00          | < 50.0         | < 50.0         | < 50.0               |
| SP-12                      | 10/13/14  | -               | Stockpiled  | < 0.0200           | < 0.0200           | < 0.0200           | < 0.0200          | < 0.0200        | <4.00          | <50.0          | <50.0          | <50.0                |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-1                  | 1/20/2017 | -               | Stockpiled  | < 0.0111           | < 0.0222           | < 0.0111           | < 0.0222          | < 0.0222        | <27.8          | 28.9           | <27.8          | 28.9                 |
| 2017 SP-2                  | 1/20/2017 | -               | Stockpiled  | < 0.0109           | < 0.0217           | < 0.0109           | < 0.0217          | < 0.0217        | <27.2          | <27.2          | <27.2          | <27.2                |
| 2017 SP-3                  | 1/20/2017 | -               | Stockpiled  | < 0.0108           | < 0.0215           | < 0.0108           | < 0.0215          | < 0.0215        | <26.9          | <26.9          | <26.9          | <26.9                |
|                            |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-4                  | 1/24/2017 | -               | Stockpiled  | < 0.0106           | < 0.0213           | < 0.0106           | < 0.0213          | < 0.0213        | <26.6          | <26.6          | <26.6          | <26.6                |
| 2017 SP-5                  | 1/24/2017 | -               | Stockpiled  | < 0.0110           | < 0.0220           | < 0.0110           | < 0.0220          | < 0.0220        | <27.5          | <27.5          | <27.5          | <27.5                |

|                  |           |                 |             |                    | Methods: EP        | A SW 846-80        | 21B, 5030         |                 |                | Met            | hods:          |                      |
|------------------|-----------|-----------------|-------------|--------------------|--------------------|--------------------|-------------------|-----------------|----------------|----------------|----------------|----------------------|
|                  | SAMPLE    | SAMPLE          | aa a        |                    |                    | ETHYL-             | m,p,o-            | TOTAL           | E              | PA SW 846      | -8015M or      | 418.1                |
| SAMPLE LOCATION  | DATE      | DEPTH<br>(feet) | SOIL STATUS | BENZENE<br>(mg/kg) | TOLUENE<br>(mg/kg) | BENZENE<br>(mg/kg) | XYLENE<br>(mg/kg) | BTEX<br>(mg/kg) | GRO<br>(mg/kg) | DRO<br>(mg/kg) | ORO<br>(mg/kg) | Total TPH<br>(mg/kg) |
| 2017 SP-6        | 1/24/2017 | -               | Stockpiled  | < 0.0110           | < 0.0220           | < 0.0110           | < 0.0220          | < 0.0220        | <27.5          | <27.5          | <27.5          | <27.5                |
| 2017 SP-7        | 1/24/2017 | -               | Stockpiled  | < 0.0106           | < 0.0213           | < 0.0106           | < 0.0213          | < 0.0213        | <26.6          | <26.6          | <26.6          | <26.6                |
| 2017 SP-8        | 1/24/2017 | -               | Stockpiled  | < 0.0111           | < 0.0222           | < 0.0111           | < 0.0222          | < 0.0222        | <27.8          | <27.8          | <27.8          | <27.8                |
|                  |           |                 | •           |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-9        | 1/31/2017 | -               | Stockpiled  | < 0.0215           | < 0.0430           | < 0.0215           | < 0.0430          | < 0.0430        | <26.9          | <26.9          | <26.9          | <26.9                |
| 2017 SP-10       | 1/31/2017 | -               | Stockpiled  | < 0.0215           | < 0.0430           | < 0.0215           | < 0.0430          | < 0.0430        | <26.9          | <26.9          | <26.9          | <26.9                |
| 2017 SP-11       | 1/31/2017 | -               | Stockpiled  | < 0.0220           | < 0.0440           | < 0.0220           | < 0.0440          | < 0.0440        | <27.5          | <27.5          | <27.5          | <27.5                |
| 2017 SP-12       | 1/31/2017 | -               | Stockpiled  | < 0.0217           | < 0.0435           | < 0.0217           | < 0.0435          | < 0.0435        | <27.2          | <27.2          | <27.2          | <27.2                |
| 2017 SP-13       | 1/31/2017 | -               | Stockpiled  | < 0.0225           | < 0.0449           | < 0.0225           | < 0.0449          | < 0.0449        | <28.1          | <28.1          | <28.1          | <28.1                |
| 2017 SP-14       | 1/31/2017 | -               | Stockpiled  | < 0.0233           | < 0.0465           | < 0.0233           | < 0.0465          | < 0.0465        | <29.1          | <29.1          | <29.1          | <29.1                |
|                  |           |                 | •           |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-15       | 2/17/2017 | -               | Stockpiled  | < 0.00106          | < 0.00213          | < 0.00106          | < 0.00213         | < 0.00213       | <26.6          | <26.6          | <26.6          | <26.6                |
| 2017 SP-16       | 2/17/2017 | -               | Stockpiled  | < 0.00109          | < 0.00217          | < 0.00109          | < 0.00217         | < 0.00217       | <27.2          | <27.2          | <27.2          | <27.2                |
| 2017 SP-17       | 2/17/2017 | -               | Stockpiled  | < 0.00111          | < 0.00222          | < 0.00111          | < 0.00222         | < 0.00222       | <27.8          | <27.8          | <27.8          | <27.8                |
|                  |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-18       | 2/28/2017 | -               | Stockpiled  | < 0.0213           | < 0.0426           | < 0.0213           | < 0.0426          | < 0.0426        | <26.6          | <26.6          | <26.6          | <26.6                |
| 2017 SP-19       | 2/28/2017 | -               | Stockpiled  | < 0.00109          | < 0.0435           | < 0.0217           | < 0.0435          | < 0.0435        | <27.2          | <27.2          | <27.2          | <27.2                |
| 2017 SP-20       | 2/28/2017 | -               | Stockpiled  | < 0.0225           | < 0.0449           | < 0.0225           | < 0.0449          | < 0.0449        | <28.1          | <28.1          | <28.1          | <28.1                |
| 2017 SP-21       | 2/28/2017 | -               | Stockpiled  | < 0.0215           | < 0.0430           | < 0.0215           | < 0.0430          | < 0.0430        | <26.9          | <26.9          | <26.9          | <26.9                |
| 2017 SP-22       | 2/28/2017 | -               | Stockpiled  | < 0.0217           | < 0.0435           | < 0.0217           | < 0.0435          | < 0.0435        | <27.2          | <27.2          | <27.2          | <27.2                |
|                  |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-23       | 3/2/2017  | -               | Stockpiled  | < 0.0206           | < 0.0412           | < 0.0206           | < 0.0412          | < 0.0412        | <25.8          | <25.8          | <25.8          | <25.8                |
| 2017 SP-24       | 3/2/2017  | -               | Stockpiled  | < 0.0204           | < 0.0408           | < 0.0204           | < 0.0408          | < 0.0408        | <25.5          | <25.5          | <25.5          | <25.5                |
| 2017 SP-25       | 3/2/2017  | -               | Stockpiled  | < 0.0220           | < 0.0440           | < 0.0220           | < 0.0440          | < 0.0440        | <27.5          | <27.5          | <27.5          | <27.5                |
| 2017 SP-26       | 3/2/2017  | -               | Stockpiled  | < 0.0217           | < 0.0435           | < 0.0217           | < 0.0435          | < 0.0435        | <27.2          | <27.2          | <27.2          | <27.2                |
|                  |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-27       | 3/21/2017 | -               | Stockpiled  | < 0.0208           | < 0.0417           | < 0.0208           | < 0.0417          | < 0.0417        | <26.0          | <26.0          | <26.0          | <26.0                |
| 2017 SP-28       | 3/21/2017 | -               | Stockpiled  | < 0.0208           | < 0.0417           | < 0.0208           | < 0.0417          | < 0.0417        | <26.0          | <26.0          | <26.0          | <26.0                |
| 2017 SP-29       | 3/21/2017 | -               | Stockpiled  | < 0.0213           | < 0.0426           | < 0.0213           | < 0.0426          | < 0.0426        | <26.6          | <26.6          | <26.6          | <26.6                |
| 2017 SP-30       | 3/21/2017 | -               | Stockpiled  | < 0.0211           | < 0.0421           | < 0.0211           | < 0.0421          | < 0.0421        | <26.3          | <26.3          | <26.3          | <26.3                |
|                  |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-31       | 5/4/2017  | -               | Stockpiled  | < 0.0202           | < 0.0404           | < 0.0202           | < 0.0404          | < 0.0404        | <25.3          | <25.3          | <25.3          | <25.3                |
| 2017 SP-32       | 5/4/2017  | -               | Stockpiled  | < 0.0215           | < 0.0430           | < 0.0215           | < 0.0430          | < 0.0430        | <26.9          | <26.9          | <26.9          | <26.9                |
|                  |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 SP-33       | 6/6/2017  | -               | Hauled      | < 0.00109          | < 0.00217          | < 0.00109          | < 0.00217         | < 0.00217       | <27.2          | 204            | 89.2           | 293.2                |
| 2017 SP-34       | 6/6/2017  | -               | Stockpiled  | < 0.00106          | < 0.00213          | < 0.00106          | < 0.00213         | < 0.00213       | <26.6          | <26.6          | <26.6          | <26.6                |
|                  |           |                 |             |                    |                    |                    |                   |                 |                |                |                |                      |
| 2017 ESW-1 @ 18' | 7/5/2017  | 18'             | In-Situ     | < 0.00128          | < 0.00256          | < 0.00128          | < 0.00256         | < 0.00256       | <32.1          | <32.1          | <32.1          | <32.1                |
| 2017 ESW-2 @ 18' | 7/5/2017  | 18'             | In-Situ     | < 0.00118          | < 0.00235          | < 0.00118          | < 0.00235         | < 0.00235       | <29.4          | <29.4          | <29.4          | <29.4                |
| 2017 ESW-3 @ 18' | 7/5/2017  | 18'             | In-Situ     | < 0.00125          | < 0.00250          | < 0.00125          | < 0.00250         | < 0.00250       | <31.2          | <31.2          | <31.2          | <31.2                |
| 2017 ESW-4 @ 18' | 7/5/2017  | 18'             | In-Situ     | < 0.00112          | < 0.00225          | < 0.00112          | < 0.00225         | < 0.00225       | <28.1          | <28.1          | <28.1          | <28.1                |
| 2017 ESW-5 @ 18' | 7/5/2017  | 18'             | In-Situ     | < 0.00118          | < 0.00235          | < 0.00118          | < 0.00235         | < 0.00235       | <29.4          | <29.4          | <29.4          | <29.4                |

|                          |               |                 |             |                    | Methods: EP        | A SW 846-80        | 21B, 5030         |                 |                           |                |                |                      |
|--------------------------|---------------|-----------------|-------------|--------------------|--------------------|--------------------|-------------------|-----------------|---------------------------|----------------|----------------|----------------------|
| CAMPLE LOCATION          | SAMPLE        | SAMPLE<br>DEPTH | COH CTATUS  | DENZENE            | TOLLENE            | ETHYL-             | m,p,o-            | TOTAL           | EPA SW 846-8015M or 418.1 |                |                |                      |
| SAMPLE LOCATION          | DATE          | (feet)          | SOIL STATUS | BENZENE<br>(mg/kg) | TOLUENE<br>(mg/kg) | BENZENE<br>(mg/kg) | XYLENE<br>(mg/kg) | BTEX<br>(mg/kg) | GRO<br>(mg/kg)            | DRO<br>(mg/kg) | ORO<br>(mg/kg) | Total TPH<br>(mg/kg) |
| 2017 ESW-6 @ 18'         | 7/5/2017      | 18'             | In-Situ     | < 0.00105          | < 0.00211          | < 0.00105          | < 0.00211         | < 0.00211       | <26.3                     | <26.3          | <26.3          | <26.3                |
| 2017 ESW-7 @ 18'         | 7/5/2017      | 18'             | In-Situ     | < 0.00123          | < 0.00247          | < 0.00123          | < 0.00247         | < 0.00247       | <30.9                     | <30.9          | <30.9          | <30.9                |
| 2017 NSW-1 @ 18'         | 7/5/2017      | 18'             | In-Situ     | < 0.00128          | < 0.00256          | < 0.00128          | < 0.00256         | < 0.00256       | <32.1                     | <32.1          | <32.1          | <32.1                |
| 2017 NSW-2 @ 18'         | 7/5/2017      | 18'             | In-Situ     | < 0.00106          | < 0.00213          | < 0.00106          | < 0.00213         | < 0.00213       | <26.6                     | <26.6          | <26.6          | <26.6                |
| 2017 NSW-3 @ 18'         | 7/5/2017      | 18'             | In-Situ     | < 0.00114          | < 0.00227          | < 0.00114          | < 0.00227         | < 0.00227       | <28.4                     | <28.4          | <28.4          | <28.4                |
|                          |               |                 |             |                    |                    |                    |                   |                 |                           |                |                |                      |
| 2018 SP-35               | 11/27/2018    | -               | Hauled      | < 0.00109          | < 0.0109           | < 0.00543          | < 0.0217          | < 0.0217        | <27.2                     | 261            | 96.5           | 358                  |
| 2019 SP-36               | 5/14/2019     |                 | Stockpiled  | <0.0233            | < 0.0233           | < 0.0233           | < 0.0465          | < 0.0465        | <29.1                     | <29.1          | <29.1          | <29.1                |
| 2019 SP-37               | 5/14/2019     | -               | Stockpiled  | < 0.0227           | < 0.0227           | < 0.0227           | < 0.0455          | < 0.0455        | <28.4                     | <28.4          | <24.8          | <24.8                |
| 2019 SP-38               | 5/14/2019     | -               | Stockpiled  | < 0.0227           | < 0.0227           | < 0.0227           | < 0.0455          | < 0.0455        | <28.4                     | <28.4          | <28.4          | <28.4                |
| 2019 SP-39               | 5/14/2019     | -               | Stockpiled  | < 0.0208           | < 0.0208           | < 0.0208           | < 0.0417          | < 0.0417        | <26.0                     | <26.0          | <26.0          | <26.0                |
| 2019 SP-40               | 5/14/2019     | -               | Stockpiled  | < 0.0208           | < 0.0208           | < 0.0208           | < 0.0417          | < 0.0417        | <26.0                     | <26.0          | <26.0          | <26.0                |
| 2019 SP-41               | 5/14/2019     | -               | Stockpiled  | < 0.0222           | < 0.0222           | < 0.0222           | 0.0444            | < 0.0444        | <27.8                     | <27.8          | <27.8          | <27.8                |
|                          |               |                 |             |                    |                    |                    |                   |                 |                           |                |                |                      |
| 2019 SP-42               | 6/10/2019     | -               | Stockpiled  | < 0.00101          | < 0.00101          | < 0.00101          | < 0.00202         | < 0.00202       | <25.3                     | <25.3          | <25.3          | <25.3                |
| 2019-SP-43               | 6/10/2019     | -               | Stockpiled  | < 0.00114          | < 0.00114          | < 0.00114          | < 0.00227         | < 0.00227       | <28.4                     | <28.4          | <28.4          | <28.4                |
|                          |               |                 |             |                    |                    |                    |                   |                 |                           |                |                |                      |
| 2019-SP-44               | 6/24/2019     | -               | Stockpiled  | < 0.00100          | < 0.00100          | < 0.00100          | < 0.00200         | < 0.00200       | <26.9                     | <26.9          | <26.9          | <26.9                |
| 2019-SP-45               | 6/24/2019     | -               | Stockpiled  | < 0.00100          | < 0.00100          | < 0.00100          | < 0.00200         | < 0.00200       | <26.9                     | <26.9          | <26.9          | <26.9                |
| 2019-SP-46               | 6/27/2019     | _               | Stockpiled  | <0.00100           | <0.00100           | <0.00100           | <0.00200          | < 0.00200       | <26.9                     | <26.9          | <26.9          | <26.9                |
| 2019-SP-40<br>2019-SP-47 | 6/27/2019     | -               | Stockpiled  | <0.00100           | < 0.00100          | < 0.00100          | <0.00200          | < 0.00200       | <26.0                     | <26.0          | <26.0          | <26.0                |
| 2019-SP-48               | 6/27/2019     | -               | Stockpiled  | <0.00100           | < 0.00100          | < 0.00100          | <0.00200          | < 0.00200       | <27.8                     | <27.8          | <27.8          | <27.8                |
| 2017-51 -40              | 0/27/2017     |                 | этоскрпеа   | <0.00100           | <0.00100           | <0.00100           | <0.00200          | <0.00200        | \Z1.0                     | ₹27.0          | \27.0          | V27.8                |
| 2019-SP-49               | 7/25/2019     | -               | Stockpiled  | < 0.00114          | < 0.00114          | < 0.00114          | < 0.00227         | < 0.00227       | <28.4                     | <28.4          | <28.4          | <28.4                |
| 2019-SP-50               | 7/25/2019     | -               | Stockpiled  | < 0.00108          | < 0.00108          | < 0.00108          | < 0.00215         | < 0.00215       | <26.9                     | <26.9          | <26.9          | <26.9                |
| 2019-SP-51               | 7/25/2019     | -               | Stockpiled  | < 0.00108          | < 0.00108          | < 0.00108          | < 0.00215         | < 0.00215       | <26.9                     | <26.9          | <26.9          | <26.9                |
| 2019-SP-52               | 7/25/2019     | -               | Stockpiled  | < 0.00108          | < 0.00108          | < 0.00108          | < 0.00215         | < 0.00215       | <26.9                     | <26.9          | <26.9          | <26.9                |
| 2019-SP-53               | 7/25/2019     | -               | Stockpiled  | < 0.00109          | < 0.00109          | < 0.00109          | < 0.00217         | < 0.00217       | <27.2                     | <27.2          | <27.2          | <27.2                |
| 2019-SP-54               | 7/25/2019     | -               | Stockpiled  | < 0.00110          | < 0.00110          | < 0.00110          | < 0.00220         | < 0.00200       | <27.5                     | <27.5          | <27.5          | <27.5                |
| 2019-SP-55               | 7/25/2019     | -               | Stockpiled  | < 0.00109          | < 0.00109          | < 0.00109          | < 0.00217         | < 0.00217       | <27.2                     | <27.2          | <27.2          | <27.2                |
| 2019-SP-56               | 7/25/2019     | -               | Stockpiled  | < 0.00106          | < 0.00106          | < 0.00106          | < 0.00213         | < 0.00213       | <26.6                     | <26.6          | <26.6          | <26.6                |
| 2010 00 40               | # 10.0 10.0 d |                 |             | 0.004              | 0.0011             | 0.0044             | 0.0025=           | 0.0005          | 20.4                      | 20.4           | 20             | 20.4                 |
| 2019-SP-57               | 7/30/2019     | -               | Stockpiled  | < 0.00114          | < 0.00114          | < 0.00114          | <0.00227          | < 0.00227       | <28.4                     | <28.4          | <28.4          | <28.4                |
| 2019 ESW-1 @ 19'         | 8/12/2019     | 19'             | In-Situ     | < 0.00109          | < 0.00109          | < 0.00109          | < 0.00217         | < 0.00217       | <27.2                     | <27.2          | <27.2          | <27.2                |
| 2019 SSW-1 @ 19'         | 8/12/2019     | 19'             | In-Situ     | < 0.00108          | < 0.00108          | < 0.00108          | < 0.00215         | < 0.00215       | <26.9                     | <26.9          | <26.9          | <26.9                |
| 2019 SSW-2 @ 19'         | 8/12/2019     | 19'             | In-Situ     | < 0.00110          | < 0.00110          | < 0.00110          | < 0.00220         | < 0.00220       | <27.5                     | <27.5          | <27.5          | <27.5                |
|                          |               |                 |             |                    |                    |                    |                   |                 |                           |                |                |                      |
| 2019 ESW-2 @ 19'         | 8/14/2019     | 19'             | In-Situ     | < 0.00118          | < 0.00118          | < 0.00118          | < 0.00235         | < 0.00235       | <29.4                     | <29.4          | <29.4          | <29.4                |
|                          |               |                 |             |                    |                    |                    |                   |                 |                           |                |                |                      |

|                  | SAMPLE    |                 |             |           | Methods: EP | A SW 846-80        |             | Methods:                 |                           |                |                |                      |
|------------------|-----------|-----------------|-------------|-----------|-------------|--------------------|-------------|--------------------------|---------------------------|----------------|----------------|----------------------|
| SAMPLE LOCATION  |           | SAMPLE<br>DEPTH |             | BENZENE   | TOLLIENE    | ETHYL-             | ZENE XYLENE | TOTAL<br>BTEX<br>(mg/kg) | EPA SW 846-8015M or 418.1 |                |                |                      |
| SAMPLE LOCATION  | DATE      | (feet)          | SOIL STATUS | (mg/kg)   | (mg/kg)     | BENZENE<br>(mg/kg) |             |                          | GRO<br>(mg/kg)            | DRO<br>(mg/kg) | ORO<br>(mg/kg) | Total TPH<br>(mg/kg) |
| 2019-SP-58       | 8/14/2019 | -               | Hauled      | < 0.0244  | 0.698       | 1.49               | 6.009       | 8.197                    | 1880                      | 7690           | 1490           | 11,060               |
|                  |           |                 |             |           |             |                    |             |                          |                           |                |                |                      |
| 2020-WSW-1 @ 18' | 1/14/2020 | 18'             | In-Situ     | < 0.00111 | < 0.00111   | < 0.00111          | < 0.00222   | < 0.00222                | <27.8                     | <27.8          | <27.8          | <27.8                |
| 2020-WSW-2 @ 18' | 1/14/2020 | 18'             | In-Situ     | < 0.00109 | < 0.00109   | < 0.00109          | < 0.00217   | < 0.00217                | <27.2                     | <27.2          | <27.2          | <27.2                |

Appendices

# Appendix A Photographic Documentation



Client: Plains Pipeline, L.P. Project Name: Monument 18

Prepared by: TRC Environmental Corporation Location: Lea County, New Mexico

Photograph No. 1

Date:

October 6, 2013

Direction: Looking west

Description:
Initial excavation
activities.
ET/SUGS Pipeline
on pipe stands and
plug for support.
Monitor well MW-3
right of power pole
at middle of photo.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

Photograph No. 2

Date:

October 6, 2013

**Direction:** 

**Looking southwest** 

**Description:** Initial excavation activities. South Trench located at bottom left of photo. ET/SUGS pipeline on pipestand at upper right of photo.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

Photograph No. 3

Date:

**October 7, 2013** 

**Direction:** 

**Looking northwest** 

**Description: Excavation** activities in progress. **Abandoned** storage tank and unlined production pit on west side of **Maddox Road at** photo center. **Monitor well MW-7** at photo center.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

Photograph No. 4

Date:

April 26, 2017

Direction:

**Looking northeast** 

**Description: Excavation** activities in progress.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

Photograph No. 5

Date:

May 22, 2017

Direction:

**Looking northwest** 

**Description: Excavation** activities in progress.





Client: Plains Pipeline, L.P. Project Name: Monument 18

Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

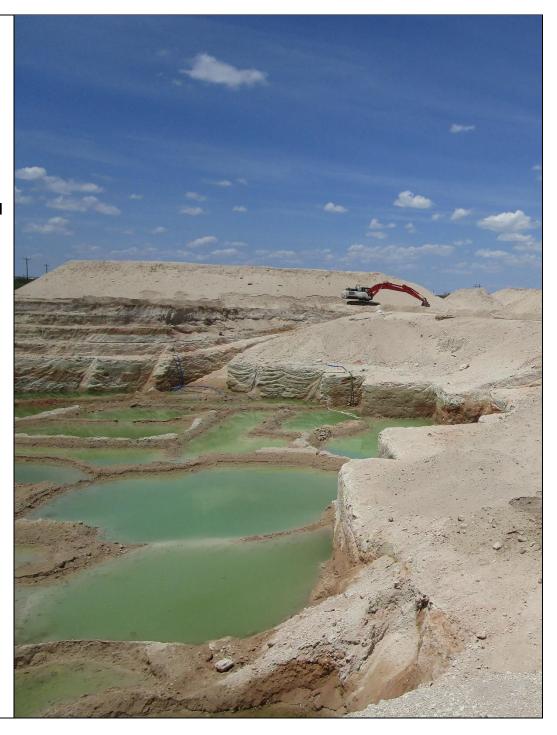
Photograph No. 6

Date:

June 17, 2017

Direction: Looking north

Description: Excavation in progress. PSH and water recovery in progress.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

Photograph No. 7

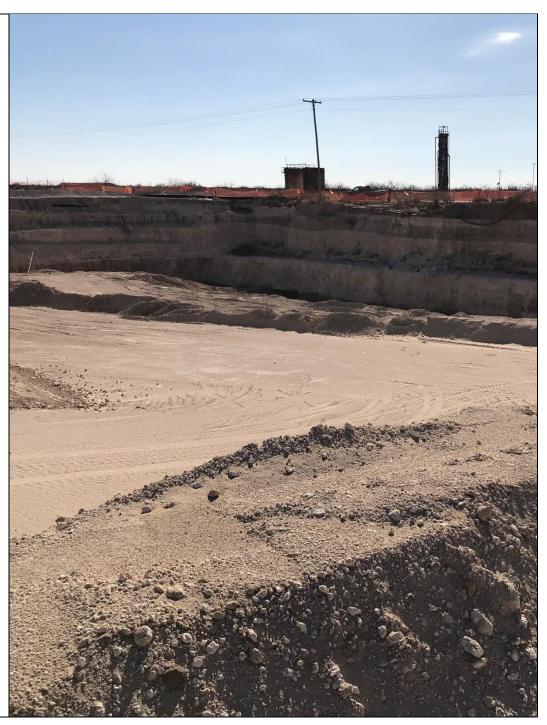
Date:

February 21, 2018

Direction:

**Looking southwest** 

**Description:** Backfill activities in progress.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

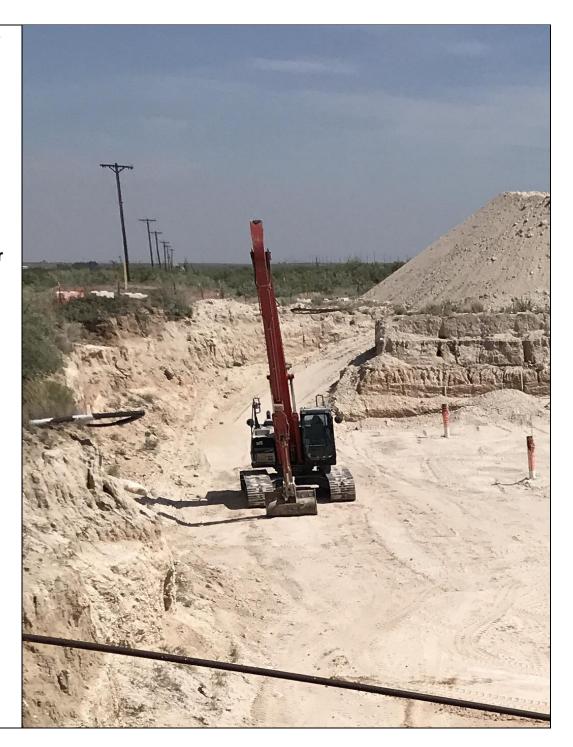
Photograph No. 8

Date:

August 5, 2019

Direction: **Looking north** 

**Description:** Backfill and excavation activities in progress. Monitor wells MW-4 and MW-7 at photo right.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

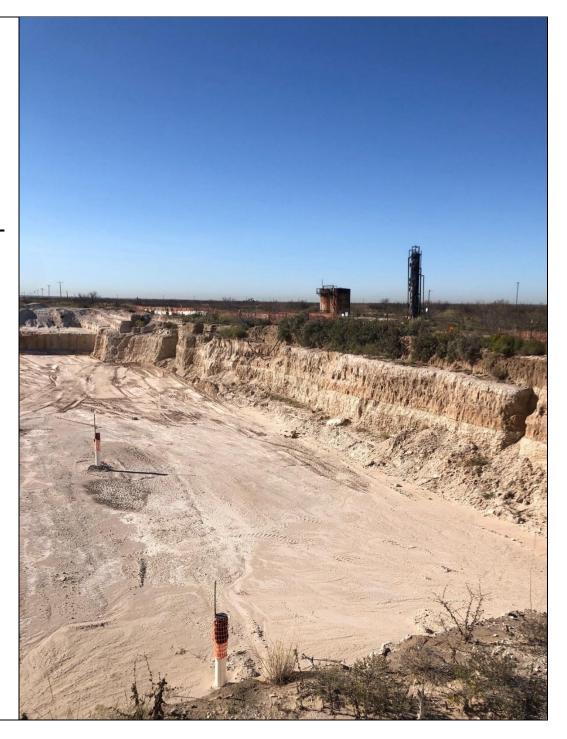
Photograph No. 9

Date:

August 28, 2019

Direction: **Looking south** 

**Description: Backfill activities** in progress. Monitor wells MW-7 and MW-4 at photo left.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

Photograph No. 10

Date:

October 28, 2019

**Direction:** 

**Looking southwest** 

**Description:** Backfill activities in progress.





Client: Plains Pipeline, L.P. Project Name: Monument 18 Prepared by: TRC Environmental Corporation

Location: Lea County, New Mexico

Photograph No. 11

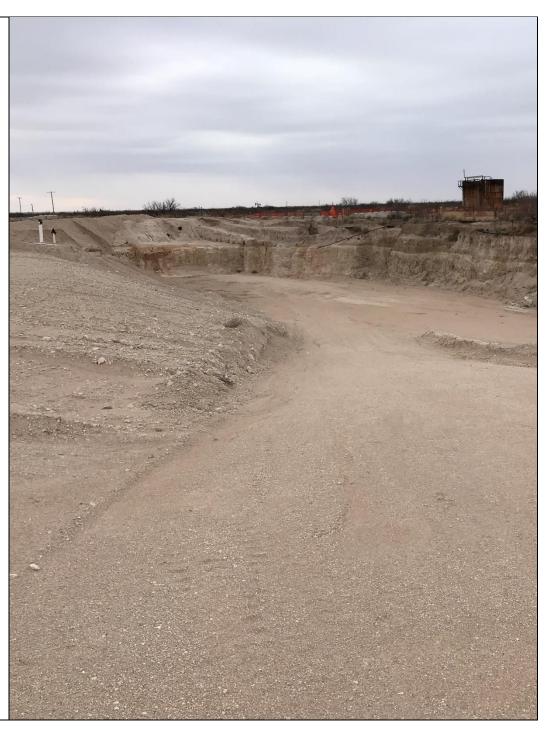
Date:

January 21, 2020

**Direction:** 

**Looking southwest** 

**Description: Backfill activities** in progress.



# Appendix B NMOCD and NMED Correspondence

Tomáš 'Doc' Oberding PhD Hydrologist, Adv-District 1 Oil Conservation Division, EMNRD (505) 476-3403

E-Mail: tomas.oberding@state.nm.us

一期一会

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Camille J Bryant [mailto:CJBryant@paalp.com]

Sent: Monday, January 30, 2017 7:28 AM

To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>

Cc: Jeffrey P Dann < jpdann@paalp.com>; 'Stanley, Curtis D.' < CDStanley@trcsolutions.com>

Subject: FW: Plains Monument 18 Release Site Addendum

Tomas.

Pursuant to our conversation on Friday, January 27, 2017, please find the attached Plains Marketing, L.P. Addendum to the Interim Remediation Summary and Revised Proposed Soil Closure Strategy (Workplan) for the TNM Monument 18 Release Site (NMOCD Ref.#1R-0124). At this time, Plains respectfully requests NMOCD approval to amend the attached Workplan:

Page 2 of the Workplan details the installation of a liner installed above the gravel or equivalent material. Plains is requesting NMOCD approval to place washed caliche on the floor of the excavation, the remaining portion of the excavation will be backfilled with caliche purchased from the landowner. The upper portion of the excavation will be backfilled with soil deemed suitable by the landowner.

Please contact me with any questions or concerns.

Respectfully,

#### Camille J. Bryant

Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555

Cell: 575.441.1099 Fax: 806.592.7479

Email: cibryant@paalp.com

From: Camille J Bryant

Sent: Monday, October 31, 2016 2:19 PM

To: Oberding, Tomas, EMNRD < Tomas. Oberding@state.nm.us > (Tomas. Oberding@state.nm.us)

Subject: Plains Monument 18 Release Site Addendum

#### Tomas;

Please find attached the Plains Marketing, L.P. Addendum to the Interim Remediation Summary and Revised Proposed Soil Closure Strategy, dated October 31, 2016, for the TNM Monument 18 Release Site (NMOCD Ref. # 1R-0124). This Addendum describes proposed remediation activities to be conducted at the site. With NMOCD approval, Plains will commence with the described activities.

Please contact me with any questions or concerns.

Respectfully submitted,

#### Camille J. Bryant

Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555

Cell: 575.441.1099 Fax: 806.592.7479

#### Attention:

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#### Stanley, Curtis D.

From: Oberding, Tomas, EMNRD < Tomas. Oberding@state.nm.us>

Sent: Monday, July 31, 2017 12:07 PM

To: Camille J Bryant

Cc: Jeffrey P Dann; Stanley, Curtis D.

Subject: RE: Plains Monument 18 Release Site Addendum

Aloha Camille et al,

Thank you for the updates and the conversation this morning.

As per the conversation the OCD approves work described below for this site.

Please keep us informed.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD Hydrologist, Adv-District 1 Oil Conservation Division, EMNRD (505) 476-3403

E-Mail: tomas.oberding@state.nm.us

一期一会

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Camille J Bryant [mailto:CJBryant@paalp.com]

Sent: Monday, July 31, 2017 10:19 AM

To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>

Cc: Jeffrey P Dann < jpdann@paalp.com>; 'Stanley, Curtis D.' < CDStanley@trcsolutions.com>

Subject: RE: Plains Monument 18 Release Site Addendum

Tomas,

As per our phone conversation on Monday, July 31, 2017, Plains requested and received NMOCD approval to modify the current Monument 18 (1R-124) Workplan. Plains previously requested NMOCD approval to place washed caliche on the floor of the excavation and install a liner above the washed caliche. As a modification to the existing Workplan, Plains will be backfilling the north and east quadrants of the existing excavation with non-impacted locally purchased soil or overburden soil deemed suitable by analysis for backfill. The existing excavation will be backfilled to approximately fifteen (15) to eighteen (18) below ground surface (bgs). The Landowner (Jimmie Cooper) gave Plains verbal approval to proceed with these activities on Tuesday, July 25, 2017.

On NMOCD approval Plains will commence with backfilling activities of the northern and eastern quadrants of the excavation.

Please contact me with any questions or concerns.

Respectfully,

Camille J. Bryant

**Remediation Coordinator** Plains All American 577 US Highway 385 North

Seminole, Texas 79360 Office: 432.758.8139 Cell: 575.441.1099

From: Oberding, Tomas, EMNRD [mailto:Tomas.Oberding@state.nm.us]

Sent: Tuesday, February 07, 2017 9:24 AM

To: Camille J Bryant

Cc: Jeffrey P Dann; 'Stanley, Curtis D.'

Subject: RE: Plains Monument 18 Release Site Addendum [External]

Ms. Bryant,

Thank you for the patience. The OCD approves the additional work as described. Please keep me informed. Mahalo -Doc

Tomáš 'Doc' Oberding PhD Hydrologist, Adv-District 1 Oil Conservation Division, EMNRD (505) 476-3403

E-Mail: tomas.oberding@state.nm.us

一期一会

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Camille J Bryant [mailto:CJBryant@paalp.com]

Sent: Monday, January 30, 2017 7:28 AM

To: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>

Cc: Jeffrey P Dann < jpdann@paalp.com >; 'Stanley, Curtis D.' < CDStanley@trcsolutions.com >

Subject: FW: Plains Monument 18 Release Site Addendum

Tomas,

Pursuant to our conversation on Friday, January 27, 2017, please find the attached Plains Marketing, L.P. Addendum to the Interim Remediation Summary and Revised Proposed Soil Closure Strategy (Workplan) for the TNM Monument 18 Release Site (NMOCD Ref.#1R-0124). At this time, Plains respectfully requests NMOCD approval to amend the attached Workplan:

Released to Imaging: 6/8/2021 2:45:07 PM

Page 2 of the Workplan details the installation of a liner installed above the gravel or equivalent material. Plains is requesting NMOCD approval to place washed caliche on the floor of the excavation, the remaining portion of the excavation will be backfilled with caliche purchased from the landowner. The upper portion of the excavation will be backfilled with soil deemed suitable by the landowner.

Please contact me with any questions or concerns.

Respectfully,

#### Camille J. Bryant

Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555

Cell: 575.441.1099 Fax: 806.592.7479

Email: cjbryant@paalp.com

From: Camille J Bryant

Sent: Monday, October 31, 2016 2:19 PM

**To:** Oberding, Tomas, EMNRD < <u>Tomas.Oberding@state.nm.us</u>> (<u>Tomas.Oberding@state.nm.us</u>)

Subject: Plains Monument 18 Release Site Addendum

#### Tomas;

Please find attached the Plains Marketing, L.P. Addendum to the Interim Remediation Summary and Revised Proposed Soil Closure Strategy, dated October 31, 2016, for the TNM Monument 18 Release Site (NMOCD Ref. # 1R-0124). This Addendum describes proposed remediation activities to be conducted at the site. With NMOCD approval, Plains will commence with the described activities.

Please contact me with any questions or concerns.

Respectfully submitted,

#### Camille J. Bryant

Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555

Cell: 575.441.1099 Fax: 806.592.7479

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#### Stanley, Curtis D.

From:

Camille J Bryant < CJBryant@paalp.com>

Sent:

Monday, February 13, 2017 10:55 AM

To:

Stanley, Curtis D.

Subject:

FW: Plains Monument 18 Release Site Addendum

From: Oberding, Tomas, EMNRD [mailto:Tomas.Oberding@state.nm.us]

Sent: Tuesday, February 07, 2017 9:24 AM

To: Camille J Bryant

Cc: Jeffrey P Dann; 'Stanley, Curtis D.'

Subject: RE: Plains Monument 18 Release Site Addendum [External]

Ms. Bryant,

Thank you for the patience.

The OCD approves the additional work as described.

Please keep me informed.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD Hydrologist, Adv-District 1 Oil Conservation Division, EMNRD (505) 476-3403

E-Mail: tomas.oberding@state.nm.us

一期一会

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From: Camille J Bryant [mailto:CJBryant@paalp.com]

Sent: Monday, January 30, 2017 7:28 AM

To: Oberding, Tomas, EMNRD < Tomas. Oberding@state.nm.us>

Cc: Jeffrey P Dann < jpdann@paalp.com>; 'Stanley, Curtis D.' < CDStanley@trcsolutions.com>

Subject: FW: Plains Monument 18 Release Site Addendum

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the excavation will be backfilled with caliche purchased from the landowner. The upper portion of the excavation will be backfilled with soil deemed suitable by the landowner.

Please contact me with any questions or concerns.

Respectfully,

#### Camille J. Bryant

Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555

Cell: 575.441.1099 Fax: 806.592.7479

Email: cjbryant@paalp.com

From: Camille J Bryant

Sent: Monday, October 31, 2016 2:19 PM

To: Oberding, Tomas, EMNRD < Tomas. Oberding@state.nm.us > (Tomas. Oberding@state.nm.us)

Subject: Plains Monument 18 Release Site Addendum

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Please contact me with any questions or concerns.

Respectfully submitted,

#### Camille J. Bryant

Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555 Cell: 575.441.1099

Fax: 806.592.7479

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#### **Oberding, Tomas, EMNRD**

From:

Oberding, Tomas, EMNRD

Sent:

Monday, January 30, 2017 8:20 AM

To:

Camille J Bryant

Cc:

Jeffrey P Dann; 'Stanley, Curtis D.'

Subject:

RE: Plains Monument 18 Release Site Addendum

Aloha Camille et al,

Thank you for the update on the situation at this site.

The OCD does not stand in opposition to the amendment.

Please keep us informed.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD Hydrologist, Adv-District 1 Oil Conservation Division, EMNRD (505) 476-3403

E-Mail: tomas.oberding@state.nm.us

一期一会

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From: Camille J Bryant [mailto:CJBryant@paalp.com]

Sent: Monday, January 30, 2017 7:28 AM

To: Oberding, Tomas, EMNRD < Tomas. Oberding@state.nm.us>

Cc: Jeffrey P Dann < jpdann@paalp.com>; 'Stanley, Curtis D.' < CDStanley@trcsolutions.com>

Subject: FW: Plains Monument 18 Release Site Addendum

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Please contact me with any guestions or concerns.

Respectfully,

Received by OCD: 6/8/2021 12:21:29 PM

Camille J. Bryant

Remediation Coordinator Plains All American

2530 State Highway 214 Denver City, Texas 79323

Office: 806.592.2555 Cell: 575.441.1099 Fax: 806.592.7479

Email: cibryant@paalp.com

From: Camille J Bryant

Sent: Monday, October 31, 2016 2:19 PM

**To:** Oberding, Tomas, EMNRD < <u>Tomas.Oberding@state.nm.us</u> > (<u>Tomas.Oberding@state.nm.us</u>)

Subject: Plains Monument 18 Release Site Addendum

#### Tomas;

Please find attached the Plains Marketing, L.P. Addendum to the Interim Remediation Summary and Revised Proposed Soil Closure Strategy, dated October 31, 2016, for the TNM Monument 18 Release Site (NMOCD Ref. # 1R-0124). This Addendum describes proposed remediation activities to be conducted at the site. With NMOCD approval, Plains will commence with the described activities.

Please contact me with any questions or concerns.

Respectfully submitted,

#### Camille J. Bryant

Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555

Cell: 575.441.1099 Fax: 806.592.7479

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#### Stanley, Curtis D.

From:

Camille J Bryant <CJBryant@paalp.com> Tuesday, November 03, 2015 12:48 PM

Sent: To:

Stanley, Curtis D.

Subject:

FW: Plains Monument 18 Release Site 1R-123

See below

From: Oberding, Tomas, EMNRD [mailto:Tomas.Oberding@state.nm.us]

Sent: Tuesday, November 03, 2015 9:23 AM

To: Camille J Bryant

Subject: RE: Plains Monument 18 Release Site 1R-123

Aloha Camille,

Thank you for the updates on this site. After review of the documentation, the OCD approves the plan as written in the revision date may 6, 2015.

Please keep me updated as the situation warrants.

Mahalo

-Doc

Tomáš 'Doc' Oberding PhD Hydrologist, Adv-District 1 Oil Conservation Division, EMNRD (505) 476-3403

E-Mail: tomas.oberding@state.nm.us

一期一会

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From: Camille J Bryant [mailto:CJBryant@paalp.com]

Sent: Thursday, October 29, 2015 1:24 PM

To: Oberding, Tomas, EMNRD < Tomas. Oberding@state.nm.us>

Subject: Plains Monument 18 Release Site 1R-123

Tomas,

Please find attached, for your review, the Interim Remediation Summary and Revised Proposed Soil Closure Strategy for the Plains Monument 18 Release Site 1R-123. This report documents activities to be conducted to progress the site towards and NMOCD approved closure. Please contact me with any questions.

Respectfully submitted,

Camille J. Bryant Remediation Coordinator Plains All American 2530 State Highway 214 Denver City, Texas 79323 Office: 806.592.2555

Cell: 575.441.1099 Fax: 806.592.7479

Email: cjbryant@paalp.com

#### Attention:

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#### **Camille Bryant**

From: Sent: Jeffrey P Dann <jpdann@paalp.com> Friday, September 06, 2013 9:50 AM

To:

'Camille Bryant'

Subject:

FW: Proposed Actions Approval (1R-124) - Plains Monument 18 Release Site

See below

#### Jeffrey P. Dann, P.G.

Senior Environmental Remediation and Compliance Specialist Plains All American Pipeline, L.P. 333 Clay Street, Suite 1600 Houston, TX 77002 office - 713-646-4657 fax - 713-646-4310 cell - 713-201-3548 email - jpdann@paalp.com

From: Hansen, Edward J., EMNRD [mailto:edwardj.hansen@state.nm.us]

Sent: Monday, April 22, 2013 9:42 AM

To: Jason Henry

Cc: Leking, Geoffrey R, EMNRD; Jeffrey P Dann

Subject: Proposed Actions Approval (1R-124) - Plains Monument 18 Release Site

**RE:** Remediation Summary and Proposed Soil Closure Strategy

for the Plains Marketing's

Monument 18 Release Site (1R-124)

Unit D, Section 7, T20S, R37E, NMPM, Lea County, New Mexico

**Proposed Actions Approval** 

#### Dear Mr. Henry:

The New Mexico Oil Conservation Division (OCD) has received the Remediation Summary and Proposed Soil Closure Strategy (including Proposed Actions) for the Monument 18 Release Site, dated March 2013, and has conducted a review of the Proposed Actions. The Proposed Actions indicate that Plains Marketing (Plains) has partially met the requirements of 19.15.29 NMAC (Rule 29; formerly, Rule 116) for a remediation plan. Therefore, the OCD hereby conditionally approves the Proposed Actions as specified for above-referenced site in accordance with 19.15.29 NMAC:

Plains must follow OCD Guidance (1993) for Remediation of Leaks, Spills and Releases.

Plains must obtain OCD approval prior to backfilling the excavation at the site.

Plains must submit to the OCD a report of the corrective actions within 180 days.

Please be advised that OCD approval of this plan does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD

approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

If you have any questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen

Hydrologist

Environmental Bureau

#### Dear Sir:

This letter is to inform you of Climax Chemical Company's petition the New Mexico Environment Department's Hazardous Radioactive Materials Bureau (HRMB) requesting Concentration Limits for hazardous constituents present in the groundwater below the Climax Chemical facility west of Monument, New Mexico. Groundwater samples taken from the upper-most aquifer below Climax Chemical Company's Monument, New Mexico plant contain Cadmium, Silver, 1,1,1, Trichloroethylene and Ethylene Dichloride in concentrations above the safe drinking water standards. Climax Chemical has provided evidence that Alternate Concentration Limits should be granted because the contamination does not pose a threat to human health or the environment. The requested limits are above the safe drinking water standard and could pose a danger to human health should individuals drink, eat or inhale significant amounts of contaminated water or soils. The health of individuals who do not intend to use the groundwater or come in contact with it would not be threatened.

Climax Chemical Company's Monument, New Mexico plant is located three miles west of Monument, New Mexico in Lea County. The plant is a producer of hydrochloric acid and sodium sulfate. Immediately adjacent to and downgradient of Climax Chemical is the Warren Petroleum Company (Chevron) refinery. The upper-most aquifer beneath the refinery has been significantly impacted by hydrocarbon contamination. Due to past oil-field brine contamination of this same aquifer the Oil Conservation Division (OCD) of the New Mexico Energy Minerals and Natural Resources Department is only requiring the refinery to recover hydrocarbon product floating on top of the groundwater within the aquifer.

Climax Chemical Company's argument for granting the Alternate Concentration Limits is: "the water downgradient from Climax Chemical has been contaminated beyond usability by the petroleum industry through brine disposal and hydrocarbon leakage. The addition of Heavy Metal and Volatile Organic contamination above the safe drinking water standard as the Climax plume moves through this area will not adversely affect the usability of the aquifer, constituents."

At this time the HRMB has no evidence that landowners are using groundwater from the contaminated aquifer. Should you now be using or anticipate using groundwater from the upper-most aquifer beneath your property and have questions or comments concerning the petition for granting of Climax Chemical Company's petition request for Alternate Concentration Limits please contact Steve Alexander

at 827-2929 or write: New Mexico Environment Department, Hazardous and Radioactive Materials Bureau, 1190 Saint Francis Drive, P.O. Box 26110, Santa Fe, New Mexico, 87502, Attention: Steve Alexander. Please respond within thirty (30) days following receipt of this notification.

Sincerely,

Steven M. Alexander, Water Resources Specialist Hazardous and Radioactive Materials Bureau New Mexico Environment Department

# Appendix C Laboratory Analytical Reports



K.E.I. Consultants, Inc.
Project Name: TNMPL Monument

Project ID: 610057-02-18

Project Manager: Ann Baker

Project Location: Site 18

Date Received in Lab: Mar 11, 1997 10:30 by RT

Date Report Faxed: Mar 27, 1997

XENCO contact: Carlos Castro/Edward Yonemoto

| Amelyaia Descriptor         | Lab ID:                                 | 170588-001                                    | 170588-002   | 170588-003                              |   |  |        |
|-----------------------------|---|---|--------------|---|---|--|--------|
| Analysis Requested          | Field ID:                               | B18-1   | B18-1        | B18-1                                   | B18-1                                   |  |        |
|                             | Depth:                                  | 1-2'  | 5-6'         | 14-15                                   | 34-35                                   | <u>.</u> .   |        |
| BTEX Analyzed by EPA 8020   |   |   | te Analyzed  | - Analytica                             | Results <b>pr</b>                       | m (mg/L -  | mg/Kg) |
|                             |   | Mar 12, 1997                                  | Mar 12, 1997 | Mar 13, 1997                            | Mar 12, 1997                            |  |        |
| Benzene                     |   | < 0.050                                       | < 0.20       | < 0.20                                  | < 0.050                                 |  |        |
| Toluene                     |   | 0.348   | 4.82         | 1.92                                    | < 0.050                                 | THE THE PERSON OF THE PERSON O |        |
| Ethylbenzene                |   | 0.865   | < 0.20       | 0.92                                    | < 0.050                                 |  |        |
| m,p-Xylenes                 | *************************************** | < 0.100                                       | 12.46        | 8.64                                    | < 0.100                                 |  |        |
| o-Xylene                    |   | < 0.050                                       | < 0.20       | < 0.20                                  | < 0.050                                 | vi.  | was    |
| Total BTEX                  |   | 1.213   | 17.28        | 11.48                                   | < 0.300                                 |  |        |
| SPLP Volatiles by 1312/8260 |   | Dat   | e Analyzed   | - Analytical                            | Results pp                              | m (mg/L, -   | mg/Kg) |
|                             |   |   | Mar 24, 1997 | *************************************** |   | _  |        |
| Benzene                     |   |   | < 0.025      |   |   |  |        |
| Bromobenzene                | ** ** ********************************  |   | < 0.025      |   |   |  |        |
| Bromodichloromethane        |   |   | < 0.025      | 2002.1823                               |   |  |        |
| Bromoform                   | ·····                                   |   | < 0.025      |   |   | PERSONAL PROPERTY OF THE PERSON OF THE PERSO |        |
| Bromomethane                |   | ±,1,1,7 · · · · · · · · · · · · · · · · · · · | < 0.025      | · · · · · · · · · · · · · · · · · · ·   |   |  |        |
| n-Butylbenzene              |   |   | < 0.025      |   |   |  |        |
| sec-Butylbenzene            |   |   | < 0.025      | MAX                                     |   |  | ' '    |
| tert-Butylbenzene           |   |   | < 0.025      |   | *************************************** |  |        |
| Carbon Tetrachloride        | ^                                       |   | < 0.025      |   |   | *  |        |
| Chloroethane                |   |   | < 0.050      |   |   |  |        |
| Chloroform                  |   |   | < 0.025      |   |   |  | ···-   |
| Chloromethane               |   |   | < 0.050      |   |   |  |        |
| 2-Chlorotoluene             |   |   | < 0.025      |   |   | v.run v  |        |
| 4-Chlorotoluene             |   |   | < 0.025      |   |   | 77.79.46.a.d.  |        |
| 1,2-Dibromo-3-chloropropane | · · · · · · · · · · · · · · · · · · ·   |   | < 0.025      |   |   | The state of the s |        |
| Dibromochloromethane        | P100                                    |   | < 0.025      |   |   | 77900.4  |        |
| 1,2-Dibromoethane           | ·                                       |   | < 0.025      |   |   |  |        |
|                             |   |   |              |   |   |  |        |

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Edward Boronemoto, Ph.D.

QA/QC Manager



K.E.I. Consultants, Inc. Project Name: TNMPL Monument

Project ID: 610057-02-18

Project Manager: Ann Baker Project Location: Site 18

Date Received in Lab: Mar 11, 1997 10:30 by RT

Date Report Faxed: Mar 27, 1997

XENCO contact: Carlos Castro/Edward Yonemoto

|                           |   |  |            | YEUCO                       |  |  |   |
|---------------------------|---|--|------------|-----------------------------|--|--|---|
|                           | Lab ID:                                 | 170588-001   | 170588-002 | 170588-003                  | 170588-004   | 1                                      |   |
| Analysis Requested        | Field ID:                               | B18-1  | B18-1      | B18-1                       | B18-1  |  |   |
|                           | Depth:                                  | 1-2"   | 5-6'       | 14-15'                      | 34-35'   |  |   |
| Dibromomethane            |   |  | < 0.025    |                             |  | ·                                      |   |
| 1,2-Dichtorobenzene       |   | - F - I F O' Too I d'Illaho  | < 0.025    |                             | mander of the first of the second   |  |   |
| 1,3-Dichlorobenzene       |   |  | < 0.025    |                             |  |  |   |
| 1,4-Dichlorobenzene       |   |  | < 0.025    | WEAT CARRY L.               |  |  |   |
| Dichlorodifluoromethane   |   |  | < 0.025    |                             |  |  |   |
| 1,1-Dichloroethane        |   |  | < 0.025    |                             |  |  |   |
| 1,2-Dichloroethane        | V-1-1-1-1                               |  | < 0.025    |                             |  |  |   |
| 1,1-Dichloroethene        |   |  | < 0.025    |                             |  | FRANCISCO SCIENCES                     |   |
| cis-1,2-Dichloroethene    |   |  | < 0.025    |                             |  |  | -   |
| trans-1,2-Dichloroethene  |   |  | < 0.025    |                             |  |  | :   |
| 1,2-Dichloropropane       | **************************************  |  | < 0.025    | ····                        |  | vat                                    |   |
| 1,3-Dichloropropane       |   | OF APPROXITATION and the orbit   | < 0.025    |                             |  |  | <del> </del>                                  |
| 2,2-Dichloropropane       | *************************************** |  | < 0.025    |                             |  |  | #   |
| 1,1-Dichloropropene       |   | ,  | < 0.025    |                             |  |  | ·   |
| thylbenzene               |   |  | < 0.025    |                             | ,  | //                                     |   |
| Hexachlorobutadiene       |   |  | < 0.025    |                             |  |  |   |
| sopropylbenzene           | LET TO BE ET CALL THE CO                |  | < 0.025    |                             |  |  |   |
| o-Isopropyltoluene        |   | WALLAND TO THE TAXABLE PARTY OF | < 0.025    | 71.1716 * 733*117 Feb. (141 |  |  | 1000 W  |
| Methylene chloride        |   | 111-127-77-14 VALUE (MARCHAR (MARCHAR)   | < 0.025    |                             |  |  |   |
| laphthalene               | ·                                       |  | < 0.025    |                             |  |  |   |
| n-Propylbenzene           |   |  | < 0.025    |                             |  |  |   |
| Styrene                   |   |  | < 0.025    |                             |  |  |   |
| ,1,1,2-Tetrachloroethane  |   |  | < 0.025    |                             |  | ······································ | a viz o zavivnovo – oprava nasvar             |
| 1,1,2,2-Tetrachloroethane |   |  | < 0.025    |                             | PROVINCE AND A STREET OF THE S |  | 39.29   |
| etrachloroethene          |   |  | < 0.025    |                             | as named as a second   |  | ··/ • : \ \ : · · · · · · · · · · · · · · · · |
| Toluene                   |   |  | < 0.025    |                             |  |  |   |
| 1,2,3-Trichlorobenzene    |   |  | < 0.025    |                             |  |  |   |
| 1,2,4-Trichlorobenzene    |   |  | < 0.025    |                             |  |  |   |
|                           |   |  |            |                             |  |  | 1 1   |

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enemoto, Ph.D. A/QC Manager

Page





K.E.I. Consultants, Inc. Project Name: TNMPL Monument

Project ID: 610057-02-18

Project Manager: Ann Baker Project Location: Site 18

Date Received in Lab: Mar 11, 1997 10:30 by RT

Date Report Faxed: Mar 27, 1997

XENCO contact: Carios Castro/Edward Yonemoto

|                                | Lab ID:       | 170588-001            | 170588-002   | 170588-003    | 170588-004                              |  |
|--------------------------------|---------------|-----------------------|--------------|---------------|---|--|
| Analysis Requested             | Field ID:     | B18-1                 | B18-1        | B18-1         | B18-1                                   |  |
|                                | Depth:        | 1-2'                  | 5-6'         | 14-15'        | 34-35'                                  |  |
| 1,1,1-Trichloroethane          |               |                       | < 0.025      |               |   |  |
| 1,1,2-Trichloroethane          |               |                       | < 0.025      |               |   | PP P P P P P P P P P P P P P P P P P P   |
| Trichloroethene                |               | 7.0.04                | < 0.025      |               | 73.0                                    |  |
| Trichlorofluoromethane         | HALLING TALL  |                       | < 0.025      | , -,          |   |  |
| 1,2,3-Trichloropropane         |               |                       | < 0.025      |               | W. W. S. P                              |  |
| 1,2,4-Trimethylbenzene         |               |                       | 0.086        | W.AssPatida   |   |  |
| 1,3,5-Trimethylbenzene         |               |                       | 0.043        |               |   |  |
| Vinyl chloride                 |               |                       | < 0.025      |               | **************************************  |  |
| o-Xylene                       |               |                       | < 0.025      |               | *************************************** | · †  |
| m.p-Xylenes                    |               | 7101                  | 0.029        |               |   |  |
| Bromochloromethane             |               |                       | < 0.025      |               |   |  |
| Chlorobenzene                  |               |                       | < 0.025      | ************* |   |  |
| MTBE                           |               |                       | < 0.050      |               | 47                                      | THE PERSON NAMED IN COLUMN NAM |
| PLP Semivolatiles by 1312/8270 |               | Date                  | a Analyzed   | - Analytical  | Results p                               | pm (mg/L - mg/Kg)  |
|                                |               |                       | Mar 21, 1997 |               |   |  |
| Acenaphthene                   |               |                       | < 0.028      |               |   |  |
| Acenaphthylene                 |               |                       | < 0.028      |               | A Manager                               | - NO NO.  |
| Anthracene                     |               | 7.27100.00 11.121.1.1 | < 0.028      |               |   |  |
| Ben≥o(a)anthracene             | ,             |                       | < 0.028      | 774/11/202    | ···                                     | V 1 409  |
| Senzo[a]pyrene                 | 7 MATTER 12 M |                       | < 0.028      |               |   |  |
| Benzo(b)fluoranthene           |               |                       | < 0.028      | NI/A-1.       |   |  |
| Benzo(ghi]perylene             |               |                       | < 0.028      |               |   | ļ  |
| Benzo(k)fluoranthene           |               | ,, <u>,</u> ,         | < 0.028      |               |   |  |
| Butyl benzyl phthalate         | Pa APIs S     |                       | < 0.028      |               | — — — — — — — — — — — — — — — — — — —   | 10000  |
| Carbazole                      | w.mw.na       |                       | < 0.028      |               |   |  |
| 4-Chloroaniline                |               |                       | <b>I</b>     | I .           |   | 1  |

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Project ID: 610057-02-18

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Project Location: Site 18

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XENCO contact: Carlos Castro/Edward Yonemoto

|   | Lab ID:  | 170588-001  | 170588-002 | 170588-003  | 170588-004   |   | T  |
|---|--|---|------------|---|--|---|--|
| Analysis Requested                      | Field ID:  | B18-1   | B18-1      | B18-1   | B18-1  |   |  |
| * *                                     | Depth:   | 1-2'  | 5-6'       | 14-15'  | 34-35'   |   |  |
| bis (2-Chloroethoxy) methane            | . 1  |   | < 0.028    |   |  | <del> </del>  |  |
| bis [2-Chloroethyl] ether               |  |   | < 0.028    |   |  |   |  |
| bis [2-Chloroisopropyl] ether           |  |   | < 0.028    |   |  |   |  |
| 2-Chioronaphthalene                     |  |   | < 0.028    |   |  |   |  |
| 2-Chlorophenol                          |  |   | < 0.028    |   |  |   |  |
| 4-Chlorophenyl-phenyl ether             |  | ALE A Parent Manhada  | < 0.028    |   |  |   |  |
| Chrysene                                | ***************************************  |   | < 0.028    |   |  | ļ   | W. HELVORGADER HISTORIA  |
| Dibenzofuran                            |  | V-00'9" P-000's AND POPLANCE W. Andrick   | < 0.028    |   | e e su muit transière de l'autorité de l'entre de l'autorité de l'autori |   |  |
| Dibenzo(a,h]anthracene                  | CPILVILLE.   |   | < 0.028    | ANATONIA SANTONIA SA  |  |   |  |
| 1,2-Dichlorobenzene                     |  |   | < 0.028    |   | And the state of t | \$ a\ a\ \cdot \cdo |  |
| 1,3-Dichlorobenzene                     |  |   | < 0.028    |   |  |   |  |
| 1,4-Dichlorobenzene                     |  |   | < 0.028    |   |  | THE PERSON ASSESSMENT OF THE PERSON AND ADDRESS.  |  |
| 3,3'-Dichlorobenzidine                  | ence a material and act the control of the control of  |   | < 0.028    | THE ACTION OF THE PARTY OF THE |  |   |  |
| 2,4-Dichlorophenol                      |  |   | < 0.028    |   |  |   |  |
| Diethyl phthalate                       | and the state of t |   | < 0.028    | ***************************************   |  |   |  |
| 2,4-Dimethylphenol                      |  |   | < 0.028    |   | e version and the second and the sec |   |  |
| Dimethyl phthalate                      |  |   | < 0.028    |   |  |   | ļ  |
| 4,6-Dinitro-2-methylphenol              |  | AM PERSONAL AND A STATE OF THE | < 0.069    |   | CONTRACTOR  |   | l  |
| 2,4-Dinitrophenol                       |  | en y lagran en  | < 0.069    |   |  | ·   |  |
| 2,4-Dinitrotoluene                      |  |   | < 0.028    |   |  |   | /ATL. AART   |
| 2,6-Dinitrotoluene                      |  |   | < 0.028    |   |  |   |  |
| Di-n-octyl phthalate                    |  |   | < 0.028    |   | v  | N-100   |  |
| bis [2-Ethylhexyl] phthalate            |  | P. V.L. 12 ***********************************  | < 0.028    |   | ,.,  | Property and the second   |  |
| Fluoranthene                            |  |   | < 0.028    |   |  |   |  |
| Fluorene                                |  |   | < 0.028    |   |  | · · · · · · · · · · · · · · · · · · ·   |  |
| Hexachlorobenzene                       |  |   | < 0.028    |   | ,  |   |  |
| Hexachlorobutadiene                     |  |   | < 0.028    |   |  |   |  |
| Hexachlorocyclopentadiene               |  |   | < 0.028    |   |  |   | TO THE REPORT OF THE PARTY OF T |
| 1 × × × × × × × × × × × × × × × × × × × | <u>_</u>   |   |            |   |  |   |  |

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Edward Fromemoto, Ph.D. QA/QC Manager



K.E.I. Consultants, Inc.
Project Name: TNMPL Monument

Project ID: 610057-02-18

Project Manager: Ann Baker

Project Location: Site 18

Date Received in Lab: Mar 11, 1997 10:30 by RT

Date Report Faxed: Mar 27, 1997

XENCO contact: Carlos Castro/Edward Yonemoto

| Analysis Requested         | Lab ID:<br>Field ID:<br>Depth:                  | 170588-001<br>B18-1<br>1-2'            | 170588-002<br>B18-1<br>5-6' | 170588-003<br>B18-1<br>14-15'           | 170588-004<br>B18-1<br>34-35            |  |  |
|----------------------------|---|--|-----------------------------|---|---|--|--|
| Hexachloroethane           |   |  | < 0.028                     |   |   | 1  |  |
| Indeno[1,2,3-cd]pyrene     |   |  | < 0.028                     | ANALIST ALL                             |   | 1  |  |
| Isophorone                 | 1711140-0                                       |  | < 0.028                     |   | 71/12/14/15                             |  | W. W   |
| 2-Methylnaphthalene        |   | ************************************** | < 0.028                     |   |   |  | <u> </u>   |
| 2-Methylphenol             | SERVICE AND |  | < 0.028                     | ·                                       | <u></u>                                 |  |  |
| 4-Methylphenol             |   | 0640                                   | < 0.028                     |   |   |  |  |
| Naphthalene                | 1586  |  | < 0.028                     | FIRE                                    | v                                       | 1000000  |  |
| 2-Nitroaniline             |   |  | < 0.069                     |   | 7,5197-7, 8-                            |  |  |
| 3-Nitroaniline             |   |  | < 0.069                     |   |   |  | THE PARTY NAME OF THE PARTY NA |
| 4-Nitroaniline             | ,   | MI                                     | < 0.069                     |   | ,vr vrkii Ar                            |  |  |
| Nitrobenzene               | (477-7740-41 to a con , **** * Washing and ***  |  | < 0.028                     | 1 - W- (Will WY) (A.)                   |   |  |  |
| 2-Nitrophenol              |   | V-F                                    | < 0.028                     | "                                       |   |  |  |
| 4-Nitrophenol              | v   |  | < 0.028                     |   |   |  |  |
| N-Nitroso-di-n-propylamine |   |  | < 0.028                     |   | -7/4/4/4                                | PROPERTY MANAGEMENT  |  |
| N-Nitrosodiphenylamine     |   |  | < 0.028                     |   |   |  |  |
| Pentachlorophenol          |   | V                                      | < 0.069                     |   |   |  | -  |
| Phenanthrene               |   |  | < 0.028                     |   |   |  |  |
| Phenol ·                   |   |  | < 0.028                     |   | PO VATRALITI IL LA CLALLEAT PALIT       |  |  |
| Pyrene                     |   |  | < 0.028                     |   |   | THE PART OF THE PA |  |
| Pyridine                   | +   |  | < 0.028                     |   |   |  | · · · · · · · · · · · · · · · · · · ·  |
| 1,2,4-Trichlorobenzene     |   |  | < 0.028                     | ** ##* - A. S.**                        | 7.0000000000000000000000000000000000000 |  |  |
| 2,4,5-Trichlorophenol      |   | / L                                    | < 0.069                     |   |   | — portant a <u>— .</u> Peneveranda   | A1V48W   |
| 2,4,6-Trichlorophenol      |   |  | < 0.028                     | *************************************** |   |  |  |
| 4-Bromophenyl-phenylether  |   |  | < 0.028                     |   |   |  |  |
| 4-Chloro-3-Methylphenol    |   |  | < 0.028                     |   |   |  |  |
| Di-n-butyl phthalate       | <del></del>                                     |  | 0.033                       |   |   |  |  |

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6/8/2012 12: 10 PM



### CERTIFICATE OF ANALYSIS SUMMARY 1-70588

### K.E.I. Consultants, Inc.

Project Name: TNMPL Monument

Project ID: 610057-02-18

Project Manager: Ann Baker

Project Location: Site 18

Date Received in Lab: Mar 11, 1997 10:30 by RT

Date Report Faxed: Mar 27, 1997

XENCO contact: Carlos Castro/Edward Yonemoto

|                              |           |              |              | WELLEN       |              |                   |
|------------------------------|-----------|--------------|--------------|--------------|--------------|-------------------|
|                              | Lab ID:   | 170588-001   | 170588-002   | 170588-003   | 170588-004   |                   |
| Analysis Requested           | Field ID: | B18-1        | B18-1        | B18-1        | B18-1        |                   |
|                              | Depth:    | 1-2'         | 5-6'         | 14-15'       | 34-35'       |                   |
| TPH Analyzed by EPA 418.1    |           | Da           | te Analyzed  | - Analytica  | Results pp   | om (mg/L - mg/Kg) |
|                              |           | Mar 13, 1997 | Mar 13, 1997 | Mar 13, 1997 | Mar 13, 1997 |                   |
| Total Petroleum Hydrocarbons |           | 13500        | 31500        | 10900        | 929          |                   |
| SPLP TPH by 1312/418.1       |           | Da           | te Analyzed  | - Analytical | Results pp   | m (mg/L - mg/Kg)  |
|                              |           |              | Mar 25, 1997 |              |              |                   |
| Total Petroleum Hydrocarbons |           |              | 1.9          |              |              |                   |

This report summary, and the entire report it represents. has been made for the exclusive and confidential use of K.E.I. Consultants, Inc.,

The interpretations and results expressed through this analytical report represent the best judgment of XENCO Laboratories. Xenco Laboratories, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented.







### Certificate Of Quality Control for Batch: 17A29A79

### SW- 846 5030/8020 BTEX

Date Validated: Mar 13, 1997 15:30

Analyst: IF

Date Analyzed: Mar 12, 1997 09:55

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|              |                        |                              | BLANK SPII            | KE ANALYS                  | 318                      |                           | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
|--------------|------------------------|------------------------------|-----------------------|----------------------------|--------------------------|---------------------------|---|
| Parameter    | [A]<br>Blank<br>Result | [8]<br>Blank Spike<br>Result | [C]<br>Blank<br>Spike | [D]<br>Method<br>Detection | (E)<br>QC<br>Blank Spike | (F)<br>LIMITS<br>Recovery | (G)<br>Qualifier                        |
|              | ppm                    | ppm                          | Amount<br>ppm         | Limit<br>ppm               | Recovery<br>%            | Range<br>%                |   |
| Benzene      | < 0.0010               | 0.0808                       | 0.1000                | 0.0010                     | 80.8                     | 65-135                    |   |
| Toluene      | < 0.0010               | 0.0866                       | 0.1000                | 0.0010                     | 86.6                     | 65-135                    |   |
| Ethylbenzene | < 0.0010               | 0.0806                       | 0.1000                | 0.0010                     | 80.6                     | 65-135                    |   |
| m.p-Xylenes  | < 0.0020               | 0.1730                       | 0.2000                | 0.0020                     | 86.5                     | 65-135                    |   |
| o-Xylene     | < 0.0010               | 0.0886                       | 0.1000                | 0.0010                     | 88.6                     | 65-135                    |   |

Blank Spike Recovery [E] = 100\*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only



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# Certificate Of Quality Control for Batch: 17A29A79

### SW- 846 5030/8020 BTEX

Date Validated: Mar 13, 1997 15:30

Date Analyzed: Mar 12, 1997 14:36

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: IF

Matrix: Solid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY

| •            |         |              |              | 5      | O VALLUIII | ייים אייי  | THE TOTAL PROPERTY OF THE DOLLION IS AND RECOVERS | ACCOVER 1    |          |              | 1 11       |
|--------------|---------|--------------|--------------|--------|------------|------------|---|--------------|----------|--------------|------------|
| a dames In   | R       | <u>6</u>     | 5            | E      | 3          | Matrix     | E   | 5            | Ξ        | =            | 5          |
| and towns    | Sample  | Matrix Spike | Matrix Spike | Matrix | Method     | Link       | 8   | ဘ္           | ဗ        | Matrix Spike | :          |
| 700 - Joens  | Result  | Result       | Dupitcate    | Spike  | Detection  | Relative   | Spike Relative                                    | Matrix Spike | A S.D.   | Recovery     | Orialifier |
| Parameter    |         |              | Result       | Amount | Chait      | Difference | Differance  | Recovery     | Recovery | Range        |            |
|              | ший     | wdd          | bbm          | wdd    | Hidd.      | *          | *   | *            | **       | š            |            |
| Велгепе      | < 0.050 | 2.025        | 1.895        | 2.000  | 0.050      | 25.0       | 6.6   | 101          | 8 775    |              |            |
| Toluene      | < 0.050 | 2.180        | 2.110        | 2.000  | 050 0      | 25.0       | 23.3  | 0.00+        | 105.5    |              |            |
| Einylbenzene | < 0.050 | 1.925        | 1.880        | 2.000  | 0.050      | 25.0       | 2.4   | 6.69         | 94.0     |              |            |
| m.p-Xylenes  | < 0.100 | 4.330        | 4.210        | 4.000  | 0.100      | 25.0       | 2.8   | 108.3        | 105.3    |              |            |
| o.Xylene     | < 0.050 | 2.130        | 2.085        | 2,000  | 0.050      | 25.0       | 2.1   | 106.5        | 104.3    |              |            |
|              |         |              |              |        |            |            |   |              |          |              |            |

Spike Relative Difference [F] = 200\*(B-C)/(B+C) Matrix Spike Recovery [G] = 100\*(B-A)/[D]

M.S.D. = Matrix Spike Duplicate

M S D. Recovery [H] = 100\*(C-A)/[D]

N.D. = Below detection limit or not detected All results are based on MDL and validated for QC purposes

Edward-fr. Jenemoto, Ph.D. GAVQC Manager

Houston - Dallos - Son Antonio

CM •



Rederred by Court 6/8 22 12: Control PM

# Certificate Of Quality Control for Batch: 17A29A80

### SW 846 5030/8020

Date Validated: Mar 13, 1997 16:25

Date Analyzed: Mar 13, 1997 10:27

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: IF

Matrix: Solid

## BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY

|              |          |               |                |        | į         | •          |                | •           |          |                |     |
|--------------|----------|---------------|----------------|--------|-----------|------------|----------------|-------------|----------|----------------|-----|
|              | ₹        | 9             | <u></u>        | [a]    | <u> </u>  | Rizot      | Ш              | [2]         | 17.2     |                |     |
|              | Blank    | Alzek Sedto   | Ditot Call     | Č      |           |            |                | Ξ           | Ę.       | =              | Ξ   |
| Parameter    | Regist   | Beenle Desire | District Spine | XI S   | Method    | Limit      | ၁၀             | ၁၀          | 8        | Biank Solke    | ··· |
|              | Tools.   | inesu I       | Bresildno      | Sp. 4  | Detection | Relative   | Spike Relative | Blank Spike | B.S.D.   | Permien        | e e |
|              |          |               | Result         | Amount | Limit     | Difference | Difference     | Recovery    | Recovery | Page           |     |
|              | mďď      | mdd           | EEdd           | mdd    | wdd       | *          | Ž.             | , ,         |          | afilip\i       |     |
| Benzene      | C 0 0040 | 00070         |                |        |           |            |                | æ           | ₹        |                |     |
|              | 0.00.0   | U. HOUL       | 9960.0         | 0001   | 0.0010    | 25.0       | 3.5            | 0.00+       | 9 30     |                |     |
| Toluene      | < 0.0010 | 0 1110        | 0000           |        |           |            |                | +00.0       | 0        | 00 - CO        |     |
| 10.15-7      |          |               | U.1020         | 0.1000 | 0.0610    | 25.0       | 20<br>20       | 1110        | 102.0    | 65-135         |     |
| Ellyloenzene | < 0.0010 | 0.1070        | 0.1040         | 0.1000 | 0.0010    | 25.0       | 0,0            |             |          | 3              |     |
| m.p-Xvlenes  | 00000    |               |                |        |           | 0.00       | 0.7            | 107.01      | 104.0    | 65-135         |     |
|              | 10000 V  | 0.2118        | 0.2030         | 0.2000 | 0.0020    | 25.0       | 3.9            | 402.0       | 101      | 100            |     |
| o-Xylene     | <0.001n  | 0.1440        | 2000           |        |           |            |                | 0.00        | 2        | 55-45<br>55-45 |     |
|              | 2        | 5             | 6550 O         | 0001:0 | 0.0010    | 25.0       | 10.5           | 1110        | 0 00     | 85 136         |     |

Spike Relative Difference (F) = 200\*(B-C)/(B+C) Blank Spike Recovery [G] = 100\*(B-A)/[D]

B.S.D. = Blank Spike Duplicate

B.S.D. Recovery [H] = 100\*(C-A)/[D]

All results are based on MDI, and validated for QC purposes N.D. = Below detection limit or not detected

Released to Imaging: 6/8/2021 2:45:07 PM

Edward H. Yonemoto, Ph. D -QX/QC Manager



# Certificate Of Quality Control for Batch: 17A23A33

Received by OCD; 6/80001 12-21-59 PM

### 1312/8260 Volutile Organic Analysis

Date Validated: Mar 25, 1997 18:15

Date Analyzed: Mar 24, 1997 17:41

QA/QC Manager: Edward H. Yonemolo, Ph.D.

Analyst: CE Matrix: Solid

|  |          |              | MATI         | AIX SPIKE | / MATRIX S | PIKE DUPI  | MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY | (ECOVERY     |          |              |           |
|--|----------|--------------|--------------|-----------|------------|------------|--|--------------|----------|--------------|-----------|
| O.C. Samulo III                        | €        | [8]          | [5]          | ē         | 亘          | Matrix     | E  | [5]          | Ξ        |              | Ξ         |
| CM -085921                             | Sample   | Matrix Spike | Matrix Spike | Matrix    | Method     |            | 90   | ၁၀           | ОС       | Matrix Spike |           |
| ************************************** | Result   | Result       | Duplicate    | Spike     | Detection  | Relative   | Spike Relative                                     | Matrix Spike | M.S.D.   | Recovery     | Qualifier |
| Parameter                              |          |              | Result       | Amount    | Limit      | Difference | Difference   | Recovery     | Recovery | · ·          |           |
|  | mgA      | mg/L         | mg/l.        | mg/L      | mg/L       | 38         | *  | *            | *        | **           |           |
| Benzene                                | < 0.0050 | 0.2200       | 0.2180       | 0.2500    | 0.0050     | 21.0       | 6.0  | 89.0         | 87.2     |              |           |
| Chlorobenzene                          | < 0.0050 | 0.2425       | 0.2400       | 0.2500    | 0.0050     | 21.0       | 1.0  | 0.79         | 0.96     |              |           |
| 1,1-Dichkroethene                      | < 0.0200 | 0.2145       | 0,2010       | 0.2500    | 0.0200     | 22.0       | 65   | 85.8         |          |              |           |
| Toluene                                | < 0.0050 | 0.2240       | 0.2225       | 0.2500    | 0.0050     | 21.0       | 7.0  | 89.6         | 0.68     |              |           |
| Trichtoroethene                        | < 0.0150 | 0.2170       | 0.2170       | 0.2500    | 0.0150     | 24.0       | 00   | 86.8         | 86.8     |              |           |
|  |          |              |              |           |            |            |  |              |          |              |           |

Spike Relative Difference [F] = 200\*(B-C)/(B+C) Matrix Spike Recovery [G] = 100\*(B-AVIO)

Matrix Spike Recovery [G] = 100\*(B-A)r[D] M S.D. = Matrix Spike Duplicate

M. S. D. Recovery [H] = 100\*(C-A)/[D]
N.D. = Below detection limit or not detected
All results are based on MDL and validated for QC purposes

Edward H. Jenfemoto, Ph.D. QAYQC Manager



# Certificate Of Quality Control for Batch: 17A34A53

Section 2

### Semivolatifics (SPLP) 1312/8270

Date Validated: Mar 24, 1997 11:45

Date Analyzed: Mar 21, 1997 16:53

QA/QC Manager: Edward H. Yonemolo, Ph.D.

Matrix: Solid Analyst: MM

|                            |          |             | BLA         | VK SPIKE / | BLANK S  | YKE DUPL   | BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY | ECOVERY     |          |             |           |
|----------------------------|----------|-------------|-------------|------------|----------|------------|--|-------------|----------|-------------|-----------|
|                            | [A]      | Ē           | 5           |            |          |            |  |             |          |             |           |
|                            | ŕ        | <u> </u>    | Σ           | <u> </u>   | <u> </u> | Blank      | Œ  | [6]         | Ξ        | E           | =         |
|                            | Blank    | Blank Spike | Blank Spike | Blank      | Method   | Limit      | ၁၀   | J           |          | :           | Ξ         |
| Parameter                  | Result   | Result      | Disolicate  | Spire      |          | ;          |  | 3           | 3        | Biank Spike |           |
|                            |          |             |             | - Fant     | Domania  | Relative   | Spike Relative                                   | Blank Spike | B.S.D.   | Recovery    | Castling  |
|                            |          |             | Result      | Amount     | Ligit    | Difference | Difference                                       | Recovery    | Docomon  |             | endatine: |
|                            | mg/L     | mg/L        | mg/L        | mg/t       | mail     | *          | 76   |             | iscavely | Range       |           |
| Аселариневе                | < 0.0030 | 0.0477      | 0.0451      | 0.050.0    | 0.0030   |            |  | g.          | %        | 3.5         |           |
| 4-Chloro-3-Methylphenol    | 0 0 0 0  | 0.000       |             | 00000      | 0.000.0  | 0.61       | 9.6  | 95.4        | 90.2     | 46-118      |           |
|                            | 0.00.0   | 0.614       | 0.0176      | 0.0500     | 0.0040   | 33.0       | 22.1   | 200         | 6        |             |           |
| 2-Chlorophenol             | < 0.0050 | 0.0362      | 0.0418      | 0.0500     | 0.0050   | 0 03       |  | 787         | 35.2     | 23-97       |           |
| 1.4-Dichlorobenzene        | 0,000    |             |             |            | 00000    | 0.00       | <del>प</del> :<br>प                              | 72.4        | 93.6     | 27-123      |           |
|                            | v.0040   | 0.0479      | 0.0471      | 0.0500     | 0.0040   | 27.0       | 1.1  |             |          |             |           |
| 2,4-Diratrotoluene         | < 0.0050 | 0.0429      | 0.0410      | 0.0500     | 0.0000   |            |  | 92.8        | 94.2     | 36-97       |           |
| N-Nitroso-di-n-nconviamios | 0.000    |             |             |            | 0.0030   | 9.7        | 4.5  | 85.8        | 82.0     | 24-96       |           |
|                            | < 0.0040 | 0.0471      | 0.0461      | 0.0500     | 0.0040   | 38.0       |  |             |          |             | -         |
| 4-Nitrophenol              | < 0.0040 | 0.0102      | 0.0089      | 0.0500     | 0.0040   |            | 7.   | 94.2        | 92.2     | 41-116      |           |
| Penlachlorophenol          | 0600.0 > | 0.0460      | 0.0474      |            | 2        | 0.50       | †3.b   | 20.4        | 17.8     | 10-60       |           |
| Obsessi                    |          |             |             | nnen n     | 0600.0   | 47.0       | 60   | 89.8        | 3        | 0.102       |           |
|                            | < 0.0040 | 0.0110      | 0.0130      | 0.0500     | 0.0040   | 35.0       | 16.7   |             |          | 5           |           |
| Ругепе                     | < 0.0020 | 0.0512      | 0 0 0       | 0.0500     | 0.000    |            |  | 22.0        | 26.0     | 12-89       |           |
| 1.2.4-Trichlorobenzene     | 0.000    |             |             | 0000       | 0.0020   | 20.00      | 0.   | 102.4       | 7 86     | 26-127      |           |
|                            | OCOO A   | 0.0433      | 0.0438      | 0.0500     | 0.0050   | 23.0       | 0.2  | 878         | 87.6     | 30.06       |           |
|                            |          |             |             |            |          |            |  |             | ;        | 2           |           |

Spike Relative Difference [F] = 200°(8-C)/(8+C) Blank Spike Recovery [G] = 100°(8-A)/[D] B.S.D. = Blank Spike Duplicate B.S.D. Recovery [H] = 100°(C-A)/[D] N.D. = Below detection limil or not detected

All results are based on MDL and validated for OC purposes

Edward H Onemolo, Ph.D. CA/QC Manager





### Certificate Of Quality Control for Batch: 17A07B76

### EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Mar 14, 1997 10:15

Analyst: CG

Date Analyzed: Mar 13, 1997 17:26

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|                               |               | MATRIX [         | UPLICATI           | E ANALYS               | iis                    |           |
|-------------------------------|---------------|------------------|--------------------|------------------------|------------------------|-----------|
| Q.C. Sample ID<br>170583- 001 | [A]<br>Sample | [편]<br>Ouplicate | [C]<br>Method      | (D)<br>QC              | (E)                    | (F)       |
| Parameter                     | Result        | Result           | Detection<br>Limit | Relative<br>Difference | Relative<br>Difference | Qualifier |
|                               | ppm           | mqq              | ppm                | %                      | %                      |           |
| Total Petroleum Hydrocarbons  | < 7.50        | < 7.50           | 7.50               | N.C                    | 30.0                   |           |





### Certificate Of Quality Control for Batch: 17A07B76

### EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Mar 14, 1997 10:15

Analyst: CG

Date Analyzed: Mar 13, 1997 17:28

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|                              |        |             | BLANK SPII | CE ANALY  | 31S         |          |           |
|------------------------------|--------|-------------|------------|-----------|-------------|----------|-----------|
|                              | (A)    | (B)         | (C)        | [D]       | (E)         | (F)      | [G]       |
|                              | Blank  | Blank Spike | Blank      | Method    | QC          | LIMITS   | Í         |
| Parameter                    | Result | Result      | Spike      | Detection | Blank Spike | Recovery | Qualifier |
|                              |        |             | Amount     | Limit     | Recovery    | Range    |           |
|                              | mga    | ppm         | ppm        | ppm       | %           | <b>%</b> |           |
| Total Petroleum Hydrocarbons | < 7.50 | 201         | 202        | 7.50      | 99.5        | 65-135   |           |

Blank Spike Recovery [E] = 100\*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only



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Record by 6.8 6/8 12: 2 D PM

# Certificate Of Quality Control for Batch: 17A07C11

### Die 1312/418.1 Splie Tie

Date Validated: Mar 26, 1997 10:00

Date Analyzed: Mar 25, 1997-15:15

QA/QC Manager: Edward H. Yonemolo, Ph.D.

Analyst: 06

Matrix: Solid

|                              |          |             | BLA         | NK SPIKE / | BLANK SI           | WE DUPL    | BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY | ECOVERY     |          |             |          |
|------------------------------|----------|-------------|-------------|------------|--------------------|------------|--|-------------|----------|-------------|----------|
|                              | M        | [8]         | [5]         | [0]        | <u>E</u>           | Blank      | E  | 9           |          |             | 5        |
|                              | Blank    | Blank Spika | Blank Soike | History    | - Physical Control | 1          |  |             |          |             | Ξ        |
| Doromorphy                   | Decorate |             |             |            |                    | Ë          | 3  | 20          | ႘        | Blank Spike | •        |
|                              |          | Hesimi      | Duplicate   | Spike      | Detection          | Relative   | Spika Relative                                   | Blank Spike | B.S.D.   | Recovery    | Oualiser |
|                              |          |             | Result      | Amount     | timit              | Difference | Difference                                       | Recovery    | Recovery |             |          |
|                              | mdd      | шфф         | шфф         | ELOG.      | mdd                | ×          | %  | *           | ¥        | ,<br>8      |          |
| Total Petroleum Hydrocarbons | < 0.72   | 4 02        | 60.6        |            |                    |            |  | ,           | *        | 2           |          |
|                              |          | 20.4        | 3.93        | 4.04       | 0.73               | 25.0       | 2.5  | 8.66        | 97.3     | 65-135      |          |
|                              |          |             |             |            |                    |            |  |             |          |             | _        |

Spike Relative Difference [F] = 200\*(B-C)/(B+C) Blank Spike Recovery [G] = 100\*(B-A)/[D]

B.S.D. = Blank Spike Duplicate

8 S.D. Recovery [H] = 100\*(C-A)/[D]

N.D. = Below detection limit or not detected All results are based on MDL and validated for QC purposes

Edwerd Effonemoto, Ph.D. UA/QC Manager

Received by the 6/8 man 12: The PM two parts of the county of the county

1281 Meatowgen Saile L. Houston, Texas 77082 (713) 589-0692 Fax (713) 589-0695

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page of

Lab Batch # 70,588-H

| Contractor   | ,  | 10080        |
|--|--|--------------|
|  | No coolers this shipment / Contractor COC #  | 0002         |
| 5504 WURZ BACH STC (00 SAN ALLTONIS TX 78238   | S of Airbail No. 7705  | Ω̈́          |
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| Uni Dies Ker Uni   | A PORCE IN THE PROPERTY OF THE | <del>^</del> |
| D S W C G Contester Whate Oil  | 0H 99<br>0H 99<br>XSI<br>XSI<br>XSI<br>XSI<br>XSI<br>XSI<br>XSI<br>XSI   | -            |
|  |  | Stendard     |
| 518-1, 76/97 130 1-21 X 148 GV BI  | 2 KK   | Sec 1        |
| 518-11   |  | N            |
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| 35-35 J 1230 354 J J J J J 618-1, 31-35  | ->->->->->->->->->->->->->->->->->->->   | 4            |
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| Turo,  | 10 8-10-97 070 How Jos.  | £            |
| Metapot For Latershory by  | 3-11-97 1030   |              |

Frk (Contractor), Velow B. White (Lab). Released to Imaging: 6/8/2021 2:45:07 PM.

/ \* Pre-scheduling is recommended

Precision Analytical Services

128 Meaduwgen Su (778) 589-0692

17381 Meadowylen Sulle L. Houston, Texas 77082 (773) 589-0692 Fax (773) 589-0695

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

RECORD Page (

Page | of | Lab Batch # 70588-14

|                          |         |                                  |                  |                        |                   |                        |                                 |                 |                             |             |                   |          | ,        | - | ,        |          |          |                                  |                                 |
|--------------------------|---------|----------------------------------|------------------|------------------------|-------------------|------------------------|---------------------------------|-----------------|-----------------------------|-------------|-------------------|----------|----------|---|----------|----------|----------|----------------------------------|---------------------------------|
|                          |         |                                  | þ                | ) <b>∢</b> ⊈           | SE (              | ک                      | <u> </u>                        | > - >           | 2                           | E)          | 4                 | ហ        | B        | _ | œ        | œ        | Q        |                                  | 79/00/                          |
| Contractor COC # 0002    |         | PON: 7205                        |                  | Turn-sround            | - KSP             | / / Add 04578 TR       | training of the second          | 40ce. Sor       | 45.104                      |             |                   |          | *        |   |          |          |          | Holy Goz.<br>persing TPH Results | * Regnerted by Ann Baker 3/20/9 |
| No coolers this shipmont | Ourrier |                                  |                  | coo                    | 37U)              | VOOC                   | SEN XERES                       | \$<br>><br>X    |                             | 4           |                   |          |          |   |          |          |          | 8-10-97 0750 Holy Goz.           | 2-11-17 M30 # Real              |
|                          | 2       | <b>8</b>                         | 00:              | Z   <                  | <u> </u>          | <u> </u>               | က ဦ                             | 스               | <del> </del>                |             | <del> </del>      | <u> </u> | <u> </u> | ] | <u> </u> | <u> </u> | <b>]</b> | 22202020                         | 4                               |
| Prom (20 16803717        | 1016    | SAM Autonis Tx 78238             | PAUL HARTNETT    | 3                      | 610057-18-02-18   | Die Ker Usi            | # E                             | 6 V 8K-1, 1-2   | -                           | 71-h /1-919 | 1)-8              |          |          |   |          |          |          | Leveldy Com                      | Recorded For Laboratory by      |
|                          |         | 5509 WURZBACHSTE 100 SAN Autonio | MODEL - MONUMENT |                        | MANN              | SAMPLE GARACTERIZATION | Dete Time F 0 A 0 A See Type to | S M X           | 1 1 2 5 5                   | 1 145 115   | J V 350 3/5 J V V |          |          |   |          |          |          | 3/4/51 1730                      |                                 |
| Confessor                | Adriess | 5509                             | Project Name     | Propost Locadors XTC @ | Sompler Objective |                        | Fletd ID                        | 1-818-1<br>1-2, | , <del>2-5</del><br>, 1-318 | 121-41      | 618-1<br>54-35    |          |          |   |          |          |          | W. W.                            |                                 |

Precision Analytical Services

\* Pre-scheduling is recommended

Reletis Ed 92 Triaging 808 82 UST 9. 4 200 PM



K.E.I. Consultants, Inc.

Project Name: TNMPL Monument

Project ID: 610057-2-18

Project Manager: Ann Baker Project Location: Site 18

Date Received in Lab : Mar 20, 1997 11:30 by CC

Date Report Faxed: Apr 7, 1997

XENCO confact: Carlos Castro/Edward Yonemoto

|   | Lab ID:      | 170661-001   | 170661-002         | 170661-003    | 170661-004   | 170661-005         | 170661-006   | 170661-007         | 170561 ANR       | 170664 000    |
|---|--------------|--------------|--------------------|---------------|--------------|--------------------|--------------|--------------------|------------------|---------------|
| Analysis Requested                        | Field ID.    | B18-2        | B18-2              | 818-2         | 818-2        | R18-3              | R18.3        | D10 3              | 040              | 500-1000-1    |
|   | Depti:       | 0-1          | <del>တ်</del><br>တ | 29-30         | 31.32        | 10.4               | 10.40        | 20.00              | * 6              | 7             |
|   |              |              |                    |               | -            | 1                  | 61-21        | 17-07              | 7-1              | 13-14         |
| BTEX by EPA 8020                          |              | 1            | į                  | Dale Analyzed | 1            | Analytical Results |              | ppm (mg/L - mg/Kg) | /Kg)             |               |
|   |              | Mar 20, 1997 | Mar 20, 1997       | Mar 20, 1997  | Mar 20, 1997 | Mar 20, 1997       | Mar 20, 1997 | May 20, 1007       | Mar 20 1007      | 1600 000      |
| Вепzеле                                   |              | < 0.020      | 00000              | 245           | 1 00         | 0000               | 2000         | 100, 104           | 1001 107 min     | Inal 20, 133! |
| Tables                                    |              |              | 7                  | 2.3           |              | v 0.020            | < 0.020      | 0.348              | < 0.020          | < 0.020       |
|   | ;            | < 0.020      | < 0.020            | 2.74          | 1.48         | < 0.020            | < 0.020      | 0.880              | < 0.020          | <0.020        |
| Ethylbenzene                              | ;<br>;<br>;  | < 0.020      | < 0.020            | 8.33          | 3.03         | < 0.020            | < 0.020      | 0.650              | <0.020           | 00000         |
| m,p-Xylenes                               |              | < 0.040      | < 0.040            | 6 13          | 2.48         | 400                | 0.00         | :                  | 970.0            | 0.040         |
| O. Vidooo                                 |              |              |                    | 2             | 2            | 5.0                | 0400         | 000.               | < 0.040          | < 0.040       |
| o'Ayene                                   |              | < 0.020      | < 0.020            | 0.62          | 0.31         | < 0.020            | < 0.020      | 0.424              | < 0.020          | < 0.020       |
| Total BTEX                                |              | < 0.120      | < 0.120            | 19.97         | 8.35         | < 0.120            | < 0.120      | 3.862              | < 0.120          | < 0.120       |
| Total Petroleum Hydrocarbons by EDA 418 + | 418 1        |              |                    | Date Analyzed | ,            | Analytical Results |              | ppm (mg/L - mg/Kg) | . Kg             |               |
|   |              | Mar 20, 1997 | Mar 20, 1997       | Mar 20, 1997  | Mar 20, 1997 | Mar 20, 1997       | Mar 20, 1997 | May 20 1007        | 11 - 100 to 1007 | 112-20 4007   |
| Total Petroleum Hydrocarbons              |              | 29.5         | 13.0               | 12900         | 3380         | 15.5               | I۵           | 2840               | 32.0             | 1904 CU, 1357 |
| !::                                       | 1:4:42:4:4:4 |              |                    |               |              | _                  |              |                    |                  | 200           |

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K.E.I. Consultants, Inc.

Project ID: 610057-2-18

Project Manager: Ann Baker Project Location: Sile 18

Project Name: TNMPL Monument

Date Received in Lab; Mar 20, 1997 11:30 by CC

XENCO contact: Carlos Castro/Edward Yonemoto Date Report Faxed: Apr 7, 1997

|   | Cabio    | 170661-010   |   |
|---|----------|--------------|---|
| Analysis Requested                        | Field ID | 916-4        |   |
|   | Depth.   | 26-27        |   |
| BTEX by EPA 8020                          |          |              | Date Analyzed - Analytical Results ppm (mg/L - mg/Kg) |
|   |          | Mar 20, 1997 |   |
| Вепzеле                                   |          | < 0.020      |   |
| Toluene                                   |          | < 0.020      |   |
| Ethylbenzene                              |          | < 0.020      |   |
| m.p-Xylenes                               |          | < 0.040      |   |
| о-Хујепе                                  |          | < 0.020      |   |
| Total BTEX                                |          | < 0.120      |   |
| Total Petroleum Hydrocarbons hy FPA 448 4 | P& 448 1 |              | Date Analyzed - Analytical Results ppm (mg/L - mg/Kg) |
|   |          | Mar 20, 1997 |   |
| Total Petroleum Hydrocarbons              |          | < 10.0       |   |
|   |          |              |   |
|   |          |              |   |
|   |          |              |   |

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### AGRA EARTH & ENVIRONMENTAL, INC.

12758 Cimerron Path, Suite 128 San Antonio, Texas 78249

Tele: 210-699-6595 Fax: 210-699-6597

6-729-0257

T-0991

4/01/97

### REPORT OF ORGANIC CONTENT

CLIENT:

Xenco Laboratories

5309 Wurzbach, Suite 104 San Antonio, TX 78238

Attn: Carlos A. Castro, Ph.D.

PROJECT:

Xenco Miscellaneous Testing

SERVICES:

Tested for Organic content.

### PROJECT DATA

CONTRACTOR:

N/A N/A

TEST FOR: MATERIAL:

See Below

METHOD OF TEST: ASTM D2974

DATE SAMPLED:

PROJECT NO:

REPORT DATE:

**AUTHORIZATION: Client** 

REPORT NO:

N/A

SAMPLED BY:

Client

SAMPLE LOCATION: See Below

### REPORT OF TESTS

| DESCRIPTION | LOCATION    | MOISTURE<br>PERCENT | ORGANIC<br>CONTENT<br>PERCENT |
|-------------|-------------|---------------------|-------------------------------|
| Brown Sand  | B18-2, 8-9* | 3.5                 | 0.9                           |

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products.

### SW- 846 5030/8020 BTEX

Date Validated: Mar 21, 1997 09:00

Analyst: CB

Date Analyzed: Mar 20, 1997 20:16

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|              |                 |                       | BLANK SPI                | KE ANALYS                    | sis                           |                             |           |
|--------------|-----------------|-----------------------|--------------------------|------------------------------|-------------------------------|-----------------------------|-----------|
|              | [A]             | (B)                   | [C]                      | (D)                          | (E)                           | (F)                         | (G)       |
| Parameter    | Blank<br>Result | Blank Spike<br>Result | Blank<br>Spike<br>Amount | Method<br>Detection<br>Limit | QC<br>Blank Spike<br>Recovery | LIMITS<br>Recovery<br>Range | Qualifier |
|              | ppm             | ppm                   | ppm                      | ppm                          | %                             | %                           |           |
| Benzene      | < 0.0010        | 0.1130                | 0.1000                   | 0.0010                       | 113.0                         | 65-135                      |           |
| Toluene      | < 0.0010        | 0.1110                | 0,1000                   | 0.0010                       | 111.0                         | 65-135                      |           |
| Ethylbenzene | < 0.0010        | 0.1100                | 0.1000                   | 0.0010                       | 110.0                         | 65-135                      |           |
| m,p-Xylenes  | < 0.0020        | 0.2270                | 0.2000                   | 0.0020                       | 113.5                         | 65-135                      |           |
| o-Xylene     | < 0.0010        | 0.1090                | 0.1000                   | 0.0010                       | 109.0                         | 65-135                      |           |

Blank Spike Recovery [E] = 100\*(B-A)/(C)

N.C. = Not calculated, data below detection limit

N.D. = Below detection limit

All results are based on MDL and validated for QC purposes only

Edward H. Fohemoto, Ph.D.



# Certificate Of Quality Control for Batch: 17A25A93

### SW- 846 5030/8020 BTEX

Date Validated: Mar 21, 1997 09:00

Date Analyzed: Mar 20, 1997 20:34

Analyst: CB Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|                | ,       |              | MAT          | RIX SPIKE | MATRIXS   | PIKE DUPI  | MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY | RECOVERY     |          |              | : |
|----------------|---------|--------------|--------------|-----------|-----------|------------|--|--------------|----------|--------------|---|
|                |         | E            | EJI          | ě         |           |            |  |              |          |              |   |
| Q.C. Sample ID |         |              | Ξ            | <u> </u>  | <u>u</u>  | Matrix     | Œ  | <u></u>      | Ξ        | E            | Ξ |
| 173661 (90)    | eduze.  | Matrix Spike | Matrix Splke | Matrix    | Method    |            | 30   | 20           | 8        | Mairix Spike |   |
|                | Result  | Result       | DupHcate     | Spike     | Detection | Relative   | Spike Relative                                     | Matrix Snike | U.S.D    |              | - |
| Parameter      |         | •••          | Result       | Amount    | Limit     | Difference | Difference   | Recovery     | Recovery | Range        |   |
| ŀ              | шов     | mdd          | E COM        | ppm       | mgd       | ×          | *  | ¥            | . 2      | è            |   |
| Benzene        | < 0.020 | 2 640        | 2.480        | 0000      | 0000      |            |  | :            | 4        |              |   |
| 7.51           |         |              |              | 3         | 0.020     | 25.0       | 63   | 132.0        | 124.0    | 65-135       |   |
| anages         | < 0.020 | 2.560        | 2.420        | 2.000     | 0.020     | 25.0       | 56   | 4300         | 0 101    |              |   |
| Ethylbenzene   | < 0.020 | 2 600        | CALC         | 2000      | 0000      |            | :  | 120.0        | 121      | 65 - C       |   |
| On Visional    |         |              | #: 110       | DOD 7     | U.UZG     | 73.0       |  | 130.0        | 122.0    | 65-135       |   |
| m,p-vytelles   | < 0.040 | 5.280        | 9.000        | 4.000     | 0.040     | 25.0       | 5.4  | 0.021        | 1364     | 005 436      |   |
| o-Xylene       | < 0.020 | 2 S40        | OCY C        | 0000      | 0000      |            |  | . d.         | 10.0     |              |   |
|                |         |              | 4.760        | J. 000    | 170°0     | 25.0       | 4.8  | 127.0        | 121.0    | 65-135       |   |

Spike Relative Difference [F] = 200\*(B-C)/(B+C) Matrix Spike Recovery [G] = 100\*(B-A)/[D]

M.S.D. = Matrix Spike Duplicate

M.S.D. Recovery [H] = 100\*(C-A)/ID] N.D. = Below detection limit or not detected

All results are based on MDL and validated for QC purposes

Houston - Doltos - San Antonio





d h. OCD. 6/8/2021 12.21.20 PA

Certificate Of Quality Control for Batch: 17A30B02

## EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Mar 21, 1997 12:00

Date Analyzed: Mar 20, 1997 15:50

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Matrix: Solid

Analyst: HL

|                              |        |              | MATI         | RIX SPIKE | MATRIXS   | PIKE DUPI  | MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY | RECOVERY     |          |              |           |
|------------------------------|--------|--------------|--------------|-----------|-----------|------------|--|--------------|----------|--------------|-----------|
| O.C. Sample 55               | Ξ.     | <u>.</u>     | [5]          | ē         | <u> </u>  | Matrix     |  | [0]          | 宝        | E            | 5         |
| 178661. 603                  | Sample | Matrix Spike | Matrix Spike | Matrix    | Method    | Limit      | 36   | 36           | 28       | Matrix Spike |           |
| MATE - 12-10-10-1            | Result | Result       | Duplicate    | Spike     | Detection | Reiative   | Spike Relative                                     | Matrix Spike | M.S.D.   | Recovery     | Qualifier |
| Parameter                    |        |              | Result       | Amount    | ij        | Difference | Difference   | Recovery     | Recovery | Range        |           |
|                              | шф     | шфф          | mod          | mdd       | Шdd       | ¥€         | ×  | **           | 34       | 7.5          | ·····     |
| Total Petroleum Hydrocarbons | 29.50  | 226          | 219          | 198       | 7.50      | 30.0       | 3.1  | 99.4         | 95.9     | 65-135       |           |



Page

Houston - Dallas - San Antonio

N.D. = Below detection limit or not detected All results are based on MDL and validated for QC purposes

M.S.D. Recovery [H] = 100\*(C-A)/[D]

M.S.D. = Matrix Spike Duplicate

Spike Relative Difference [F] =  $200^{\circ}$ (B-C)/(B+C) Matrix Spike Recovery [G] =  $100^{\circ}$ (B-A)/[D]



### Certificate Of Quality Control for Batch: 17A30B02

### EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Mar 21, 1997 12:00

Analyst: HL

Date Analyzed: Mar 20, 1997 15:41

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|                              |        |             | BLANK SPI | KE ANALY: | SIS         |          |           |
|------------------------------|--------|-------------|-----------|-----------|-------------|----------|-----------|
|                              | (A)    | (8)         | [C]       | [D]       | [E]         | (F)      | [G]       |
|                              | Blank  | Blank Spike | Blank     | Method    | QC          | LIMITS   | ]         |
| Parameter                    | Result | Result      | Spike     | Detection | Blank Spike | Recovery | Qualifier |
|                              |        | į           | Amount    | Limit     | Recovery    | Range    |           |
|                              | ppm    | ppm         | ppm       | ppm       | %           | %        |           |
| Total Petroleum Hydrocarbons | < 7.50 | 189         | 198       | 7.50      | 95.6        | 65-135   |           |

Blank Spike Recovery (E) = 100°(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only





### ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

K.E.I. Consultants, Inc.

Project Name: TNMPL Monument

Project ID: 610057-2-18

Project Manager: Ann Baker Project Location: Sile 18

XENCO COC#: 1-70661

XENCO contact: Carlos Castro/Edward Yonemolo 37 11:30 by CC

| O . 4 |
|-------|
|       |
|       |
|       |
|       |
|       |

|                   |                 |                        |            |         |               |                             |   | Date and Time      | ない な |
|-------------------|-----------------|------------------------|------------|---------|---------------|-----------------------------|---|--------------------|--|
| Held D            | rap.            | Lab. ID Method<br>Name | Method     | Units   | Tum<br>Around | Sample<br>Collected         | Addition<br>Requested                   | Edraellon          | Anabele                                  |
| 1 B18-2 (0.4)     | 170561-001 BTEX |                        | SW 346     | E de    | Standard      | Mar 14, 1997 09:10          |   | Mar 20, 1997 by CB | Uar 20, 1997, 20134 Stv. CR.             |
| 7                 | :               | TPH                    | EPA 418.1  | mdd     | Slandard      | Mar 14, 1997 09:10          |   | Mar 20, 1997 by HI | Mar 20 1947 15:50 hv HI                  |
| 3 818-2 (8-9)     | 170651-802      | втех                   | SW-846     | 5       | Slandard      | Mar 14, 1997 09:15          |   | Mar 20, 1997 by CB | Mar 26, 1997, 21:26 by CB                |
|                   | !<br>-          | ТРН                    | EPA 418.5  | E E     | Standard      | Mar 14, 1997 09:16          |   | Mar 20, 1997 by HL | Mar 28, 1997 15:53 by H                  |
| 40                |                 | Org. Content           | ASTM 02974 | Æ       | Standard      | Mar 14, 1997 09:15          | Mar25,1997 14:00                        |                    |  |
| 6 B(8-2 (29-30)   | 170561-003      | BTEX                   | SW-846     | mdd     | Standard      | Mar 14, 1997 10:20          |   | Mar 20, 1997 by CB | Mar 20, 1997 21:43 by CB                 |
| -                 | :               | TPH                    | EPA 418.1  | - Ed    | Standard      | Mar 14, 1997 10:20          |   | Mar 20, 1997 by HL | May 20, 1997 15:56 by Ht                 |
| 8 B18-2 (31-32)   | 170661-004 BTEX |                        | SW-845     |         | Standard      | Mar 14, 1997 10:22          |   | Mar 20, 1997 by CB | Mar 20, 1997 22:01 by CB                 |
| 0                 | :               | E                      | EPA 418.1  | Ē       | Standard      | Mar 14, 1997 10:22          |   | Mar 20, 1997 by HL | Wai 20, 1997, 15:59 by H                 |
| 10 818-3 (1-2)    | 170561-005 BTEX | BTEX                   | SW-846     | mdd     | Slandard      | Mar 14, 1597 10:35          |   | Mar 20, 1997 by CB | Mar 20, 1997 22:18 to CB                 |
| <u>.</u>          | :               | E                      | EPA 418.1  | . Bad   | Standard      | War 14, 1997 10:35          |   | Mar 20, 1997 by HI | Mar 20, 1997, 15-12 5v H                 |
| 12 818-3(12-13)   | 170661-006      | втех                   | SW-846     | wdd     | Slandard      | Mar 14, 1997 10:58          |   | Mar 20, 1997 by CB | Mar 20, 1997, 22:35 tv CB                |
| <u>.</u>          | ;               | E                      | EPA 418.1  | mdd .   | Slandard      | War 14, 1997 10;50          |   | Mar 20, 1997 by HL | Mar 20, 1997 16:05 by Ht.                |
| 14 B16-3 (26-27') | 170661-007 BTEX | 97ЕХ                   | SW-846     | . mede  | Slandard      | Mar 14, 1997 11:35          |   | Mar 20, 1997 by CB | Mar 20, 1997 22:53 by CB                 |
| 45°               |                 | H.                     | EPA 418.1  |         | Slandard      | Mar 14, 1997 11:35          | :                                       | Mar 20, 1997 by HL | Mar 20, 1997 16:08 by HL                 |
| 16 218-4 (1-2')   | 170661-008      | <b>BTEX</b>            | SW-846     | - Piper | Slandard      | Mar 14, 1997 11:40          | !                                       | Mar 20, 1997 by CB | Mar 20, 1997 23:10 by CB                 |
| 41                |                 | Ē                      | EPA 418.1  | Ed.     | Standard      | War 14, 1997 11:40          | *************************************** | Mar 20, 1997 by HL | Mar 20, 1857 16:41 by HL                 |
| 18 818-4 (13-14') | 170561-009 BTEX | BTEX                   | SW-046     | Edd     | Slandard      | Mar 14, 1997 12:02          |   | Mar 20, 1997 by CB | Mar 20, 1997 23:27 by CB                 |
| 161               |                 | Ĕ                      | EPA 418.1  | wda     | Standard      | Mar 14, 1997 12:02          |   | Mar 20, 1997 by HL | Mar 20, 1897 18:14 by HL                 |
| 20 B18-4 (25-27)  | 170661-010 BTEX | втех                   | SW-846     | HD4     | Standard      | Mar 14, 1997 12:42          |   | Mar 20, 1997 by CB | Mar 20, 1997 23:45 by CB                 |
| F2                |                 | Ŧ                      | EPA 418.1  | Æ       | Standard      | Standard Mar 14, 1997 12:42 |   | Mar 20, 1997 by HL | Mar 20, 1997 16:17 by HL                 |

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Laboratorios

1087 Meadowgen Suita L. Houshon, Texas 77082 (70) 568-0692 Fax (70) 569-0695

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

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Page

Lab. Batch # (7026/-574)

| Contractor                              |                                 |                                   |                          | ナバラマン                 | メルエ                                     |
|---|---------------------------------|-----------------------------------|--------------------------|-----------------------|---|
| 15.57<br>1.557                          |                                 | Mone (2(0) 6803767                | No coolers this shipmost | Confractor COC # 00(2 |   |
| Actrons                                 | ,                               |                                   | Currier                  | Quote #:              |   |
| 53041                                   | 3                               | mis TR 78238                      | of Airthill No.          | PONG 7205             |   |
| Project Name                            | PRODUNING TAIM PL/ MUNCHERT PAR | <b>}</b>                          |                          | ļ                     |   |
| Project Location 5 (TG)                 | <u>\$)</u>                      | 1 OF 120 1                        | (20g                     | Turn-around           | <b>_</b>   ∢₽                           |
| Sempler Signature                       |                                 | 27-2-18                           |                          |                       | 4 ×                                     |
| vi                                      | SAJAN E CHARACTERIZATION Pro-   | Preservative Usd Dies Ker Unknown |                          | * * *                 | E                                       |
|   | OO:                             | (a)                               | S (Mar)                  |                       |   |
|   | * O                             | 8                                 | (E/E/                    | Remarks               |   |
|   |                                 | BIA-2 0-1                         | ンベメ                      | 10 1 8 ac.            | -                                       |
| 818,2                                   | 29/6 8-9                        | BA2, 8-9:                         |                          |                       | Q                                       |
| 0.4.7<br>7.4.75                         |                                 | 18/4-2, 39-301                    |                          |                       | ,                                       |
| 3-4-2                                   | 1033                            | 614-2, 31-221                     |                          |                       | 4                                       |
| かが、                                     | 1035 [2                         | BIA-3, 1-2'                       |                          |                       | ıç                                      |
|   | 1056 1/2                        | BIA3, 12-13"                      |                          |                       | 6                                       |
| 2 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 11.36 36                        | BIA-3, 24-27!                     |                          |                       | _                                       |
|   | 24                              | 121 July 121                      |                          |                       | ø                                       |
| Pro 2.                                  | 1302 FT                         | BIA-4, 13-14"                     |                          |                       | a                                       |
| F. 26:31                                | 1                               | 14-4 JED                          | →<br>→                   | >                     | Q                                       |
|   | Scannid DCR TREE B              | A Commence of                     |                          | 11 0 800 000 12       |   |
| A ST. E.                                | 200 9 / 2 20 1 5/18 18-4 5      | HAND MUCK. S                      | V 18-47 (200 HOL         | 15 T 18               | ar# <b>*</b>                            |
|   | (1)                             | Received For Laboratory by        | 3-20-97 (1:30            |                       | *************************************** |
| Prin (Crotracted Volce                  | od Yokus & William (I oh)       | Ab.                               | 77                       | ANS.                  | 7                                       |

Pink (Contractor), Yellow & White (Lab).

\* Pre-scheduling is recommended

Precision Analytical Services



K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Site #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

Date Received in Lab: Sep 16, 1997 10:40 by AS

Date Report Faxed: Sep 30, 1997

XeNCO contact: Carlos Castro/Edward Yonemoto

| Analysis Requested             | CI Preij | 172149-001<br>MW18-5 | 172149-002<br>MW18-5 | 172149-003<br>MW18-6 | 172149-004<br>MW18-6 | 172149-005         | 172149-006   | 172149-007   | 172149-008    | 172149-009   |
|--------------------------------|----------|----------------------|----------------------|----------------------|----------------------|--------------------|--------------|--|---------------|--------------|
|                                | Depth    | 5-7                  | 33-34                | 5-7                  | 28-30                | 5-7                | 8.5-10.5     | 20-22  | 28-30         | B18-A        |
| TPH-DRO (Diesel) by EPA 8015 M |          |                      |                      | Date Analyzed        |                      | Analytical Results |              | ppm (mg/L - mg/Kg)   | (Kg)          | 5            |
|                                |          | Sep 21, 1997         | Sep 21, 1997         | Sep 21, 1997         | Sep 21, 1997         | Sep 21, 1997       | Seo 22 1997  | Con 22 5007  | Con 22 4007   |              |
| Total Petroleum Hydrocarbons   |          | 9.6 >                | 9.6 >                | < 10.1               | < 10.1               | 306 >              | T 6          | 100 to 10 | 1661 177 dags | /861 77 dag  |
|                                |          |                      |                      |                      |                      | 2002               | DRCC         | 5310   | 1050          | < 10.2       |
| BTEX by EPA 8020               |          |                      |                      | Date Analyzed        | ١.                   | Analytical Results |              | ppm (mg/L - mg/Kq)   | /Kg)          |              |
|                                |          | Sep 18, 1997         | Sep 18, 1997         | Sep 18, 1997         | Sen 18 1997          | Can 18 1007        | Con 40 6007  | 0.5  |               |              |
| Вепzеле                        |          | 7 0.0£0              | 0.000                |                      |                      | och 10: 1331       | 3ch 13, 1337 | 766 16 148/  | Sep 18, 1997  | Sep 22, 1997 |
| Talean                         |          | V.030                | Ocn.u >              | < 0.050              | < 0.050              | < 0.050            | 1.18         | < 0.050  | > 0.050       | < 0.050      |
| oneue                          |          | < 0.050              | < 0.050              | < 0.050              | < 0.050              | < 0.050            | 2.48         | < 0.050  | < 0.050       | 03000        |
| Ethylbenzene                   |          | < 0.050              | < 0.050              | < 0.050              | <0.050               | < 0.050            | 20 04        | 0.00   | OCO.D         | , u.u.o      |
| m n-Xvienes                    |          | 1                    |                      |                      |                      | 0000               | CE:71        | 0c0.0 >  | 0.376         | < 0.050      |
| Collective data                |          | U.111                | < 0.100              | 0.113                | < 0.100              | < 0.100            | 13.35        | < 0.100  | 0.715         | < 0.100      |
| 0-Xylene                       |          | < 0.050              | < 0.050              | < 0.050              | < 0.050              | < 0.050            | 3.03         | 03007  | 2000          | 3            |
| Tolal BTEX                     |          | 0.111                | 0000                 | 2 442                |                      |                    | 30.5         | 00.00  | U. IIO        | < 0.050      |
|                                |          |                      | V0.300               | 0.113                | < 0.300              | < 0.300            | 32.99        | < 0.300  | 1.252         | < 0.300      |
|                                |          |                      |                      |                      |                      |                    |              |  |               |              |

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K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Sile #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

Date Received in Lab: Sep 16, 1997 10:40 by AS

XENCO contact: Carlos Castro/Edward Yonemoto Date Report Faxed: Sep 30, 1997

|   | Cab ID:   | 172149-010       | 172149-011         | 172149-012         | 172149-013              | 172149-014         |                           |
|---|---|------------------|--------------------|--------------------|-------------------------|--------------------|---------------------------|
| Analysis Requested  | 2000年   | B18-A            | 818-8              | B18-B              | B18-C                   | B18.0              |                           |
|   | Deptil  | 28-30            | 5-7                | 15-17              | 5-7                     | 105.426            |                           |
|   |   |                  |                    |                    |                         | 10.21-0.01         |                           |
| TPH-DRO (Diesel) by EPA 8015 M  |   |                  |                    | Date Analyzed      | •                       | Analytical Results | Ppm (mg/L - mg/Kg)        |
|   |   | Sep 22, 1997     | Sep 22, 1997       | Sep 22, 1997       | Sep 22, 1997            | Sep 22, 1997       |                           |
| I olal Petroleum Hydrocarbons   |   | &<br>⊕<br>⊕      | < 143              | 7760               | > 99.6                  | 11400              |                           |
|   |   |                  |                    |                    |                         | DOLL I             |                           |
| BTEX by EPA 8020  |   |                  |                    | Date Analyzed      |                         | Analytical Results | ppm (mg/L - mg/Kg)        |
|   |   | Sep 19, 1997     | Sep 18, 1997       | Sep 19, 1997       | Sep 19, 1997            | Seo 19 1997        |                           |
| denzene   |   | < 0.050          | < 0.050            | < 0.50             | < 0.050                 | 108                |                           |
| Toluene   |   | < 0.050          | < 0.050            | 88                 | < 0.050                 | 98.6               |                           |
| Ethylbenzene  |   | 0.134            | < 0.050            | 14.35              | 050 U >                 | 20.00              |                           |
| m,p-Xylenes   |   | 0.232            | < 0.100            | 27.45              | 0.228                   | 00.00              |                           |
| o-Xylene  |   | 0.354            | < 0.050            | 4 88               | 030 0 7                 | Caro               |                           |
| Total BTEX  |   | 0.720            | 400                | 200                | 20.00                   | 0.40               |                           |
|   |   | 0.7 6.0          | , U.300            | 46.64              | 0.228                   | 75.24              |                           |
| Volatile Organic Analysis by EPA 8260   | 8   |                  |                    | Date Analyzed      | 1                       | Analytical Results | ppm (mg/L - mg/Ka)        |
|   |   |                  |                    |                    |                         | 500 A 4003         |                           |
| Benzene   |   | -                |                    |                    |                         | 250 1320 day       |                           |
| Bromobenzene  |   |                  |                    |                    |                         | 0.0                |                           |
| Bromodichloromethane  |   |                  |                    |                    |                         | 6.9                |                           |
| Вготобогт   |   |                  |                    |                    |                         | 6.0 7              |                           |
| Вгототетрапе  |   |                  |                    |                    |                         | 0.5<br>0.0 ×       |                           |
|   |   |                  |                    |                    |                         |                    |                           |
| This report summary, and the entire report it represents, has been made for the exclusive and confidential use of KE3.0. The interpretations and results expressed through this analytical report represent the best intriment of YSNCO 3 showed. | rebends, has but the the the the the the the the the th | een made for the | exclusive and con  | fidential use of   | K.E.J. Consultants, Inc | nts, Inc           | - 11 1 2                  |
| XENCO Laboratories, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented.   | onsibility and  | makes no warran  | thy to the end use | of the data hereby | oratones.<br>presented. |                    | Edward H. Zonemoto, Ph.D. |
|   |   |                  |                    |                    |                         |                    | UAQC Manager              |

Houston - Dalkas - San Antonio

OA/QC Manager



K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

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Project Manager: Mike Chapa

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Date Received in Lab : Sep 16, 1997 10:40 by AS

XENCO contact: Carlos Castro/Edward Yonemoto Date Report Faxed: Sep 30, 1997

|   | [ab ID                              | 172149-010                           | 172149-011                             | 1734 AD 042           | 2774 10 045              |                    |                    |                 |
|---|-------------------------------------|--------------------------------------|--|-----------------------|--------------------------|--------------------|--------------------|-----------------|
| Analysis Dogwootod  | Elekt D                             | 4                                    | 79.7                                   | 710-241711            | 112149-013               | 1/2149-014         |                    |                 |
| unarysis vequested  | 25 c                                | #18-A                                | 818.8                                  | 818-8                 | 918-C                    | B18-C              | 11.271-21          |                 |
|   | Cepeli                              | 28-30                                | 5-7                                    | 15-17                 | 5-7                      | 10.5-12.5          |                    |                 |
|   |                                     |                                      |  | Dale Analyzed         | ١.                       | Analytical Results | ppm (mg/L - mg/Kg) | _               |
|   |                                     |                                      |  |                       |                          | Seo St. ten?       |                    |                 |
| n-Butylbenzene  |                                     |                                      |  |                       |                          | 3.8                |                    |                 |
| sec-Bulylbenzene  | 1                                   |                                      |  |                       |                          | 0,0                |                    |                 |
| lert-Bulylbenzene   |                                     |                                      |  |                       |                          | 3.6                |                    |                 |
| Carbon Tetrachloride  |                                     |                                      |  |                       |                          | < 0.5              |                    |                 |
| Chloroethane  |                                     |                                      |  |                       |                          | < 0.5              |                    |                 |
| Chloroform  |                                     |                                      |  |                       |                          | 3 4                |                    |                 |
| Chloromethane   |                                     |                                      |  |                       |                          | 00/                |                    |                 |
| 2-Chlorotokuene   |                                     |                                      |  |                       |                          | 0.1                |                    |                 |
| 4-Chlorotokuene   |                                     |                                      |  |                       |                          | c.0.5              |                    |                 |
| 1,2-Dibromo-3-chloropropane   |                                     |                                      |  |                       |                          | < 0.5              |                    |                 |
| Dibromochloromethane  |                                     |                                      |  |                       |                          | < 0.5              |                    |                 |
| 1,2-Dibromoethane   |                                     |                                      |  |                       |                          | < 0.5              |                    |                 |
| Dibromomethane  |                                     |                                      |  |                       |                          | < 0.5              |                    |                 |
| 1,2-Dichiprobenzene   |                                     |                                      |  |                       |                          | 7 0.3              |                    |                 |
| 1,3-Dichlorobenzene   |                                     |                                      |  |                       |                          | 6.07               |                    |                 |
| 1,4-Díchlorobenzene   |                                     |                                      |  |                       |                          | 507                |                    |                 |
| Dichlorodifluoromethane   |                                     |                                      |  |                       |                          | × 0.5              |                    |                 |
|   |                                     |                                      |  |                       |                          |                    |                    |                 |
| This report summary, and the entire report it represents, has been made for the exclusive and confidential use of   | recents, tas b                      | sen made for the                     | exclusive and cor                      | Aldential use of      | K.E.J. Consultants, Inc. | ints, Inc.         |                    | and the second  |
| The miss present the sale results expressed through this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories, however, assumes no responsibility and makes no warranty to the end real of the Asia however. | in inis analytic<br>Ionsibility and | al report represe<br>Makes no warrar | nt the best judgm<br>Ay to the end use | ent of XENCO Lab      | oratories.               |                    | Edward             | Tenemoto, Ph.D. |
|   |                                     |                                      |  | Of the water life and | ргезенее.                |                    |                    | OA/OC Manager   |

Houston - Dallas - Son Antonio

Page

COMOC Manager



K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Site #18

Project Manager: Mike Chapa

Project ID: 610057 Sile #18

Date Received in Lab: Sep 16, 1997 10:40 by AS

Date Report Faxed: Sep 30, 1997

XfNCO contact: Carlos Castro/Edward Yonemolo

| B18-B   B18-C   10.5-12.5   B18-C   15-17   B18-C  |   | Cab ID:  | 172149-010                           | 172149-011                               | 172149-012                       | 172149.013      | 172140.044     |                  |                  |     |
|--|---|--|--------------------------------------|--|----------------------------------|-----------------|----------------|------------------|------------------|-----|
| Analytical Results ppm (mg/L - mg/Kg)  Sep 26, 1997  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5   | Analysis Requested  | Field ID:  | B18-A                                | 918-B                                    | 0.819.                           | 2 0             | 10-61-711      |                  |                  |     |
| Analytical Results ppm (mg/L - mg/Kg)  Sep 26, 1997  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5   | M   | Dage:  | 28-30                                | 5.7                                      | 15-17                            | 5.7<br>5.7      | 518-C          | To Tankana       | ······           |     |
| Sep 26, 1997  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  < 0.5  <  |   |  |                                      |  | Date Analy                       |                 | rtical Results | ppm (mg/L - mg/K |                  |     |
| <ul> <li>&lt; 0.5</li> &lt;</ul> |   |  |                                      |  |                                  |                 | Seo 26, 1997   |                  | -                |     |
| <ul> <li>&lt; 0.5</li> <li></li></ul>  | 1,1-Dichloroethane  |  |                                      |  |                                  |                 |                |                  |                  |     |
| <ul> <li>&lt; 0.5</li> &lt;</ul> | 1,2-Dichloroethane  |  |                                      |  |                                  |                 | 200            |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li></li></ul>  | 1,1-Dichloroethene  |  |                                      |  |                                  |                 | 10.0           |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li></li></ul>  | cis-1,2-Dichloroelhene  |  |                                      |  |                                  |                 | 5 0.5<br>5 0.5 |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.0</li> <li></li></ul>  | Irans-1,2-Dichloroethene  |  |                                      |  |                                  |                 | C.9 A          |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.0</li> <li></li></ul>  | 1.2-Dichloropropane   |  |                                      |  |                                  |                 | 000            |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li>&lt; 4.3</li> <li>&lt; 4.3</li> <li>&lt; 5.8</li> <li>Edward H. Edward H. GA/O(QA/O)</li> </ul>   | 1,3-Dichloropropane   |  |                                      |  |                                  |                 | 007            |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.0</li> <li></li></ul>  | 2,2-Dichloropropane   |  |                                      |  |                                  |                 | 0.07           |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 0.5</li> <li>&lt; 4.3</li> <li>&lt; &lt; 1.0</li> <li>&lt; &lt; 5.8</li> <li>Edward H.</li> <li>©AAOQ</li> </ul>   | 1,1-Dichloropropene   |  |                                      |  |                                  |                 | , a.s.         |                  |                  |     |
| - 20.5<br>- 20.0<br>8.0<br>8.0<br>4.3<br>- 4.3<br>- 5.8<br>Edward H.   | cis-1,3-Dichloropropene   |  |                                      |  |                                  |                 | 0.0            |                  | _                |     |
| - 20.0<br>- 20.0<br>8.0<br>- 4.3<br>- 4.3<br>- 5.8<br>Edward H.  | Irans-1,3-Dichloropropene   |  |                                      |  |                                  |                 | < 0.0          |                  |                  |     |
| <ul> <li>&lt; 0.5</li> <li>8.0</li> <li>4.3</li> <li>&lt; 1.0</li> <li>5.8</li> <li>Edward H. Calvor</li> </ul>  | Ethylbenzene  |  |                                      |  |                                  |                 | ,              |                  |                  |     |
| 8.0<br>< 1.0<br>< 5.8<br>Edward H.   | Hexachlorobutadiene   |  |                                      |  |                                  |                 | , ,            |                  |                  |     |
| sultants, inc  | Sopropylbenzene   |  |                                      |  |                                  |                 | 0.00           |                  |                  |     |
| sultants, inc.   | p-Isopropyltokuene  |  |                                      |  |                                  |                 | ) (F           |                  |                  |     |
| nsultants, inc.  | Methylene chloride  |  |                                      |  |                                  |                 | 210            |                  |                  |     |
| insultants, inc  Edward T  | Naphihalene   |  |                                      |  |                                  |                 | 5.8            |                  |                  |     |
| ensultants, inc  Edward H. A. O.A.O.   |   |  |                                      |  |                                  |                 |                |                  |                  |     |
| CANO   | This report summary, and the entire report it report in the interpretations and results expressed throu XENCO Laboratories, however, assumes no result. | presents, has be<br>ugh this analytic<br>properties. | sen made for the cal report represer | exclusive and constitute the best judgme | Adential use of ant of XENCO Lab | K.E.I. Consulta | ints, inc      | Edwage           | . Yohemoto, Ph.D | M = |
|  |   | Pist francisco                                       | 100 HOUSE                            | y to the end list o                      | of line data hereby              | presented.      |                | 100              | VQC Manager      |     |

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K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Site #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

I Name: 610057 Site #18

Date Received in Lab: Sep 16, 1997 10:40 by AS Date Report Faxed: Sep 30, 1997

X6NCO contact: Carlos Castro/Edward Yonemoto

| Analysis requested        | Fed O  | B18-A | B18-8 | B18-8         | 1/2149-013<br>B18-C | 1/2149-014<br>B18-C | *****              |
|---------------------------|--------|-------|-------|---------------|---------------------|---------------------|--------------------|
|                           | Depth: | 28-30 | 5-7   | 15-17         | 5-7                 | 10.5-12.5           |                    |
|                           |        |       |       | Date Analyzed | ,                   | Analytical Results  | ppm (mg/L - mg/Kg) |
|                           |        |       |       |               |                     | Sep 26, 1997        |                    |
| n-Propyloenzene           |        |       |       |               |                     | 10.8                |                    |
| Styrene                   |        |       |       |               |                     | < 0.5               |                    |
| 1,1,1,2.Tetrachioroethane |        |       |       |               |                     | < 0.5               |                    |
| 1,1,2,2-Tetrachioroethane |        |       |       |               |                     | < 0.5               |                    |
| Tetrachloroethene         |        |       |       |               |                     | ×0.5                |                    |
| Toluene                   |        |       |       |               |                     | × 0.5               |                    |
| 1,2,3-Trichlorobenzene    |        |       |       |               |                     | \$ U S              |                    |
| 1,2,4-Trichlorobenzene    |        |       |       |               |                     | 307                 |                    |
| 1,1,1-Trichloroethane     |        |       |       |               |                     | 3 6                 |                    |
| 1 1 2. Trichtorouthane    |        |       |       |               |                     | < 0.5               |                    |
|                           |        |       |       |               |                     | < 0.5               |                    |
| Inchloroethene            |        |       |       |               |                     | < 0.5               |                    |
| Trichlorofluoromethane    |        |       |       |               |                     | < 0.5               |                    |
| 1,2,3-Trichloropropane    |        | !     |       |               |                     | < 0.5               |                    |
| 1,2,4-Trimethylbenzene    |        |       |       |               |                     | . 25.5              |                    |
| 1,3,5-Trimethylbenzene    |        |       |       |               |                     | 10.8                |                    |
| Vinyl chloride            |        |       |       |               |                     | < 0.5               |                    |
| o-Xyfene                  | !      |       |       |               |                     | < 0.5               |                    |

K.E.L. Consultants, Inc.. The interpretations and results expressed through this analytical report represent the best judgment of XENCO Laboratories.

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Edward-f. Jenemoto, Ph.D. OA/QC Manager

Houston - Dallas - San Antonio

K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Site #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

ne: 61005/ Site #18 Date Re

Date Received in Lab ; Sep 16, 1997 10:40 by AS

Date Report Faxed: Sep 30, 1997
XENCO contact: Carlos Castro/Edward Yonemoto

|   | Cap (D:  | 172149-010   | 172149-011   | 172149-012   | 172149-013  | 172149-014         |                        |
|---|--|--|--|--|---|--------------------|------------------------|
| Analysis Requested  | 등등   | B18-A  | 818-8  | B18-B  | B18-C   | B18-C              |                        |
|   | Cepily:  | 28-30  | 5-7  | 15-17  | 5-7   | 10.5-12.5          |                        |
|   |  |  |  | Dale Analyzed  | '   | Analytical Results | ppm (mg/L - mg/Kg)     |
|   |  |  |  |  |   | Sep 26, 1997       |                        |
| m,p-Xylenes   |  |  |  |  |   | 25.1               |                        |
| Bromochloromethane  |  |  |  |  |   | <0.5               |                        |
| Chlorobenzene   |  |  |  |  |   | <0.5               |                        |
| MTBE  |  |  |  |  |   | S C                |                        |
| " Result beyond calibration limits  |  |  |  |  |   | ?                  |                        |
|   |  |  |  | Date Analyzed  | ,   | Analytical Docule  |                        |
| semivolatiles (SVOCs TCL) by EPA 8270   | 270  |  |  |  |   | real results       | Pplit (IIIg/L - mg/Kg) |
| A constability and a  |  |  |  |  |   | Sep 26, 1997       |                        |
| Acertaphinene   |  |  |  |  |   | < 167              |                        |
| Acenaphthylene  | ***************************************                  |  |  |  |   | < 167              |                        |
| Anthracene  |  |  |  |  |   | < 167              |                        |
| Benzo(a)anthracene  |  |  |  |  |   | < 167              |                        |
| Benzo(a)pyrene  |  |  |  |  |   | < 167              |                        |
| Benzo(b)fluoranthene  |  |  |  |  |   | < 167              |                        |
| Benzo(g,h,i)perylene  |  |  |  |  |   | > 167              |                        |
| Benzo(k)fluoranthene  |  |  |  |  |   | < 167              |                        |
| Butyl benzyl phthalate  |  |  |  |  |   | < 167              |                        |
|   |  |  |  |  |   |                    |                        |
| This report summary, and the entire report it represents, has been made for the exclusive and confidential use of KEL Co. The interpretations and results expressed through this analytical report represent the bast judgment of XENCO Laboratories. XENCO Laboratories, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented. | resents, has be<br>gh this analytic<br>sonsibility and i | en made for the e<br>al report represer<br>makes no warran | xclusive and con<br>t the bast judgm<br>y to the end use | ilidential use of<br>ant of XENCO Labs<br>of the data hereby | K.E.I. Consultants, Inc<br>oratories.<br>presented. | nts, trc           | Edward Fortemoto, Ph.D |
|   |  |  |  |  |   |                    | UAVUC Manager          |

Haurban Dallas Care

Page



K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Site #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

Date Received in Lab: Sep 16, 1997 10:40 by AS

XENCO confact: Carlos Castro/Edward Yonemoto Date Report Faxed: Sep 30, 1997

| Analysis Requested | Cab ID:<br>Field ID:<br>Oaph: | 172149-010<br>B18-A<br>28-30 | 172149-011<br>B18-B<br>5-7 | 172149-011         172149-012         172149-013         172149-014           B18-B         B18-C         B18-C         B18-C           5-7         15-17         5-7         10.5-12.5 | 172149-013<br>B18-C<br>5-7 | 172149-014<br>B18-C<br>10.5-12.5   |                    |
|--------------------|-------------------------------|------------------------------|----------------------------|---|----------------------------|------------------------------------|--------------------|
|                    |                               |                              |                            | Date Analyz   | ed - Analy                 | Date Analyzed - Analytical Results | ppm (mg/L - mg/Kg) |
| Carbazole          |                               |                              |                            |   |                            | Sep 26, 1997                       |                    |

| Analysis Requested            | Field  | B18.A | B18-B | 818-8         | 818-C | 1/2149-U14<br>B18-C |                    |       | THE REAL PROPERTY. |
|-------------------------------|--------|-------|-------|---------------|-------|---------------------|--------------------|-------|--------------------|
|                               | Cepth; | 28-30 | 5-7   | 15-17         | 5-7   | 10.5-12.5           |                    |       | 110 120            |
|                               |        |       |       | Date Analyzed | •     | Analytical Results  | ppm (mg/L - mg/Kg) | g/Kg) | Mary Control       |
|                               |        |       |       |               |       | Sep 26, 1997        |                    |       | _                  |
| Carbazole                     |        |       |       |               |       | < 167               |                    |       | -                  |
| 4-Chloroaniline               |        |       |       |               |       | < 167               |                    |       |                    |
| bis [2-Chloroelhoxy] methane  |        |       |       |               |       | < 167               |                    |       |                    |
| bis [2-Chloroethyl] ether     |        |       |       |               |       | < 167               |                    |       |                    |
| bis [2-Chloroisopropyl] ether |        |       |       |               |       | < 187               |                    |       |                    |
| 2-Chloronaphlhalene           |        |       |       |               |       | × 167               |                    |       |                    |
| 2-Chlorophenol                |        |       |       |               |       | 1917                |                    |       |                    |
| 4-Chlorophenyl-phenyl ether   |        |       |       |               |       | × 167               |                    |       |                    |
| Chrysene                      |        |       |       |               |       | < 167               |                    |       |                    |
| Dibenzofuran                  |        |       |       |               |       | < 167               |                    |       |                    |
| Oibenzo(a,h)anthracene        |        |       |       |               |       | < 167               |                    |       |                    |
| 1,2-Dichlorobenzene           |        |       |       |               |       | < 167               |                    |       |                    |
| 1,3-Dichlorobenzene           |        |       |       |               |       | < 167               |                    |       |                    |
| 1,4-Dichlorobenzene           |        |       |       |               |       | < 167               |                    |       |                    |
| 3,3'-Dichlorobenzidine        |        |       |       |               |       | 187                 |                    |       |                    |
| 2,4-Dichlorophenal            |        |       |       |               |       | < 167               |                    |       |                    |
| Diethyl phthalate             |        |       |       |               |       | < 167               |                    |       |                    |
|                               |        |       |       |               |       |                     |                    |       | _                  |

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K.E.I. Consultants, Inc.

Project Location: Monument Sile #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

Project Name: 610057 Site #18

Date Received in Lab: Sep 16, 1997 10:40 by AS Date Report Faxed: Sep 30, 1997

XENCO contact: Carlos Castro/Edward Yonemoto

| Arrietysis Nequested         Tient of Deptit         B18-B         B18-B         B18-C         < | Depit: 28-30 5-7   | 818-C 5-7 10.5-12.5  - Analytical Results  |
|--|--|--|
| Depth 28-30 5-7 15-17 5-7 10.5-12.5   Date Analyzed - Analytical Results   Date Analyzed - Analytical Results  | Shendi Shendi Salari Sa | 5-7 10.5-12.5 - Analytical Results   |
| Date Analyzed - Analytical Results  not   Sep 26, 1997   | thehal   | - Analytical Results   Sep 26, 1997  |
| ate  | 2,4-Dimethyl phthalate 4,6-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitropluene 2,6-Dinitrololuene Di-n-octyl phthalate bis [2-Ethylhexyl] phthalate Fluoranthene Fluoranthene Hexachlorobenzene Hexachlorobutadiene  | Sep 26, 1997         < 167   |
| aste lene  | Dimethyl phthalate 4,6-Dinitro-2-methylphenol 2,4-Dinitrophenol 2,4-Dinitrolotuene Di-n-octyl phthalate Di-n-octyl phthalate Fluoranthene Fluoranthene Hexachlorobenzene Hexachlorobutadiene   | <ul> <li>&lt; 167</li> <li>&lt; 417</li> <li>&lt; 417</li> <li>&lt; 417</li> <li>&lt; 167</li> </ul> |
| late ene   | Dimethyl phthalate 4,6-Dinitro-2-methylphenol 2,4-Dinitrophenol 2,4-Dinitrolotuene 2,6-Dinitrolotuene Di-n-octyl phthalate bis [2-Ethylhexyl] phthalate Fluoranthene Fluoranthene Hexachlorobenzene Hexachlorobutadiene  | <ul> <li>&lt; 167</li> <li>&lt; 417</li> <li>&lt; 417</li> <li>&lt; 167</li> </ul>   |
| late ene   | 4,6-Dinitro-2-methylphenol 2,4-Dinitrophenol 2,4-Dinitrololuene 2,6-Dinitrololuene Di-n-octyl phthalate bis [2-Ethylhexyl] phthalate Fluoranthene Fluoranthene Hexachlorobenzene Hexachlorobutadiene   | <ul> <li>&lt; 417</li> <li>&lt; 417</li> <li>&lt; 167</li> </ul>   |
| late sate  | 2,4-Dinitrophenol 2,4-Dinitrololuene 2,6-Dinitrololuene Di-n-octyl phthalate bis [2-Ethylhexyl] phthalate Fluoranthene Fluoranthene Hexachlorobenzene Hexachlorobutadiene  | <ul> <li>&lt; 417</li> <li>&lt; 417</li> <li>&lt; 167</li> </ul>   |
| ene ene  | 2,4-Dinitrololuene 2,6-Dinitrololuene Di-n-octyl phthalate bis [2-Ethylhexyl] phthalate Fluoranthene Fluoranthene Hexachlorobenzene Hexachlorobutadiene  | <ul> <li>&lt; 167</li> </ul>   |
| late ene   | 2,6-Dinitrololuene  Di-n-octyl phthalale  bis [2-Ethylbexyl] phthalate  Fluoranthene  Fluoranthene  Hexachlorobenzene  Hexachlorobutadiene   | <ul> <li>&lt; 167</li> </ul>   |
| ene  | Di-n-octyl phthalate bis [2-Ethylhexyl] phthalate Fluoranthene Fluorene Hexachlorobenzene Hexachlorobutadiene  |  |
| ene  | bis [2-Ethylhexyl] phthalate Fluoranthene Fluorene Hexachlorobenzene Hexachlorobutadiene   | <ul> <li>&lt; 167</li> <li>&lt; 167</li> <li>&lt; 167</li> <li>&lt; 167</li> </ul>   |
| energy (energy)  | Fluoranthene Fluorene Hexachlorobenzene Hexachlorobutadiene  | < 167 < 167 < 167  |
| ene  | Fluorene Hexachlorobenzene Hexachlorobutadiene   | < 167  |
| en e   | Hexachlorobenzene<br>Hexachlorobutadiene   | /0; >  |
| ene  | Hexachlorobutadiene  |  |
| lene   |  | 101  |
|  | Hexachlorocyclopentadiene  | 100  |
|  | Hexachloroethane   |  |
|  | Indeno(1,2,3-cd)pyrene   | 100  |
|  | Isophorone   | 161 >  |
|  | 2-Meltylnaphthalene  | < 167  |
|  |  |  |

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Edward Honemoto, Ph.D.

GA/QC Manager



K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Site #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

Date Received in Lab: Sep 16, 1997 10:40 by AS Date Report Faxed: Sep 30, 1997 XENCO contact: Carlos Castro/Edward Yonemolo

| Arranysis Kequested From 2-Methylphenol 4-Methylphenol Naphihalene 2-Mitroaniline 3-Mitroaniline | Depth:      | B18-A<br>28-30 | 818-8 | 0 010         | (     |                    |                    |  |
|--|-------------|----------------|-------|---------------|-------|--------------------|--------------------|--|
|  | Sept.       | 28-30          |       | 0.00          | 138°C | B18-C              |                    |  |
| 2-Methylphenol 4-Methylphenol Naphthalene 2-Nitroaniine  |             |                | 5-7   | 15-17         | 5-7   | 10.5-12.5          |                    |  |
| 2-Methylphenol 4-Methylphenol Naphthalene 2-Nitroanline 3-Nitroanline                            |             |                |       | Date Analyzed | ١ ،   | Analytical Results | ppm (mg/L - mg/Kg) |  |
| 4-Methylphenol Naphthalene 2-Mitroaniine   |             |                |       |               |       | Sep 26, 1997       |                    |  |
| 4-Methylphenol Naphthalene 2-Nitroantine 3-Nitroantine   |             |                |       |               |       | < 167              |                    |  |
| Naphthalene 2-Nitroanline 3-Nitroanline  |             |                |       |               |       | > 167              |                    |  |
| 2-Nitroantine  |             |                |       |               |       | < 167              |                    |  |
| 3. Nitroaniine   |             |                |       |               |       | 1                  |                    |  |
|  | ,,,,,,,,,,, |                |       |               |       | -   !              |                    |  |
| 4-Nitroanilne  |             |                |       |               |       | <41/               |                    |  |
| Nitrobenzene   | -           |                |       |               |       | /141/              |                    |  |
| 2-Nitrophenol  |             |                |       |               |       | /gL >              | Mark to the second |  |
| 4-Nitrophenol  |             |                |       |               |       | < 167              |                    |  |
| N-Nifroso-di-n-onovfamine  |             |                |       |               |       | < 167              |                    |  |
| N-Mikocodinhomino  |             |                |       |               |       | < 167              |                    |  |
| Destachisment  |             |                |       |               |       | < 167              |                    |  |
| L datachiophienoi  |             |                |       |               |       | <417               |                    |  |
| Prienanthrene  |             |                |       |               |       | < 167              |                    |  |
| Phenoi   |             |                |       |               |       | < 167              |                    |  |
| Ругеле   |             |                |       |               |       | < 167              |                    |  |
| Pyridine   |             |                |       |               |       | < 167              |                    |  |
| 1,2,4-Trichlorobenzene   |             |                |       |               |       | 1047               |                    |  |

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K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

Project Location: Monument Site #18

Project Manager: Mike Chapa

Project ID: 610057 Site #18

Date Received in Lab : Sep 16, 1997 10:40 by AS

Date Report Faxed: Sep 30, 1997

X6NCO contact : Carlos Castro/Edward Yonemoto

| •                            | Lab ID:  | 172149-010 | 172149-011 | 172149-012    | 172149-013                         | 172149-014           |                    |  |
|------------------------------|----------|------------|------------|---------------|------------------------------------|----------------------|--------------------|--|
| Analysis Requested           | <b>是</b> | B18-A      | B18-B      | B18-8         | B18-C                              | B18-C                |                    |  |
|                              | Depth.   | 28-30      | 5-7        | 15-17         | 5-7                                | 10.5-12.5            | the second         |  |
|                              |          |            |            | Date Analy    | Date Analyzed - Analytical Results | rtical Results       | ppm (mg/L - mg/Kg) |  |
|                              |          |            | ******     |               |                                    | Sen 26 1997          |                    |  |
| 2,4,5-Trichlorophenol        |          |            |            |               |                                    | 7.447                |                    |  |
| 2,4,6-Trichlorophenol        |          |            |            |               |                                    | 1147                 |                    |  |
| 4-Bromophenyl-phenylether    |          |            |            |               |                                    | 701                  |                    |  |
| 4-Chloro-3-Methylphenol      |          |            |            |               |                                    | 101                  |                    |  |
| Di-n-buly phthalale          |          |            |            |               |                                    | /01 >                |                    |  |
|                              |          |            |            |               |                                    | < 167                |                    |  |
|                              |          |            |            |               |                                    |                      |                    |  |
| SPLP TPH by 1312/418.1       |          |            |            | Date Analyzed | ,                                  | - Analytical Results | ppm (mg/L - mg/Kg) |  |
|                              |          |            |            |               |                                    | Sep 26, 1997         |                    |  |
| ioial metroleum Hydrocarbons |          |            |            |               |                                    | 4.6                  |                    |  |

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# Certificate Of Quality Control for Batch 17A02C28

### SW- 346 3015 M TPH. DRO (Diesel)

Date Validated: Sep 23, 1997 17:05

Date Analyzed: Sep 21, 1997 18:29

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: LC

Matrix: Solid

|                              |  | ATRIX DUPLI | OUPLICATEAN | ALYSIS                                   |          |              | MATRIX   | SPIKE ANAL    | SIS      |           |
|------------------------------|--|-------------|-------------|--|----------|--------------|----------|---------------|----------|-----------|
| Of Course In                 | ₹  | [8]         | [2]         | Q.                                       | E        | 1 H          | -        |               |          |           |
|                              | Sample   | Dunifrate   | Mothey      |  |          |              | <u>.</u> | Ξ             | =        | [0]       |
| 172147- 603                  |  |             |             | ž  | CIMIS    | Matrix Spike | Matrix   | 00            | LIMITS   |           |
|                              | Result   | Resuit      | Detection   | Relative                                 | Relative | Result       | Soike    | Batrie Caller |          |           |
|                              |  |             | Ē           | Difference                               |          |              | 2        | Menty office  | Mecovery | Qualifier |
| Farameter                    | e de la constante de la consta |             |             | A)III III III III III III III III III II |          |              | Amount   | Recovery      | Range    |           |
|                              | Sylfan.  | D D D       | mg/kg       | ×  | *        | mg/kg        | mg/kg    |               | ,        |           |
| Total Petroleum Hydrocarbons | × 10 00  | < 10.00     | 40.00       | 2  |          |              | ,        | ς.            | *        |           |
|                              |  | 20.01       | 10.00       | 2  | 30.0     | 330          | 900      | 2 08          |          |           |
| ·                            |  |             |             |  |          |              | 2        | 678           | 65-135   |           |

Edward-17 Yonemoto, Ph.D. GA/QC Manager

Horreson Bodge Con Automo.

N.D. = Below defection limit All results are based on MDL and validated for QC purposes only

M.C. = Not calculated, data below detection limit

Relative Difference [D] = 200°(B-A)/(B+A) Matrix Spike Recovery [H] = 100°(F-A)/(G)



### SW- 846 8015 M TPH- DRO (Diesel)

Date Validated: Sep 23, 1997 17:05

Analyst: LC

Date Analyzed: Sep 21, 1997 15:12

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|                              |         |             | BLANK SPII | KE ANALY: | SIS         |          |           |
|------------------------------|---------|-------------|------------|-----------|-------------|----------|-----------|
|                              | (A)     | (B)         | (C)        | [0]       | (E)         | (F)      | [G]       |
|                              | Blank   | Blank Spike | Blank      | Method    | QC          | LIMITS   |           |
| Parameter                    | Result  | Result      | Spike      | Detection | Blank Spike | Recovery | Qualifier |
|                              |         |             | Amount     | Limit     | Recovery    | Range    |           |
|                              | mg/kg   | mg/kg       | mg/kg      | mig/kg    | %           | %        |           |
| Total Petroleum Hydrocarbons | < 10.00 | 87.65       | 100        | 10,00     | 87.7        | 65-135   |           |

Blank Spike Recovery [E] = 100\*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only

Edward Pronemoto, Ph.D.



## SW. 846 8015 M TPIF. DRO (Diesel)

Date Validated: Sep 23, 1997 17:10

Date Analyzed: Sep 22, 1997 09:41

QA/QC Manager: Edward H. Yonemolo, Ph.D.

Analyst: LC

Matrix: Solid

|                              |         | ATRIX DUP  | UPLICATE ANALYSIS | ALYSIS     |            |              | MATRIX | SPIKE ANAL)   | SIS     |           |
|------------------------------|---------|------------|-------------------|------------|------------|--------------|--------|---------------|---------|-----------|
| O.C. Sample III              | Y       | <b>82.</b> | [c]               | (a)        | E          |              |        |               |         |           |
| 179148- 400                  | Sample  | Duplicate  | Method            | 00         | LIMITS     | Matrix Spike | Matrix | 30            | EINITS  | 2         |
|                              | Result  | Result     | Delection         | Relative   | Relative   | Result       | Spike  | Matrix Smiles | Danning | ;         |
| Parameter                    | :       |            | Ĭ                 | Difference | Difference |              | Amount | Recovery      | Range   | Cualifier |
|                              | mg/kg   | mg/kg      | mg/kg             | 24         | *          | mg/kg        | mg/kg  | à             |         | "         |
| Total Petroteum Hydrocarbons | < 10.00 | < 10.00    | 10.00             | 2          | 0.00       | 6,6          |        |               | ,       |           |
|                              |         |            |                   |            | 2000       | 213          | 200    | 106.5         | 65-135  |           |



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Malrix Spike Recovery [H] = 100\*(F-Ay[G]) N.C. = Not calculated, data below detection limit N.D. = Below detection limit

Relative Difference [D] = 200\*(B-A)(B+A)

All results are based on MDL and validated for QC purposes only



### SW- 846 8015 M TPH- DRO (Diesel)

Date Validated: Sep 23, 1997 17:10

Analyst: LC

Date Analyzed: Sep 20, 1997 15:12

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|                              |              |                    | BLANK SPII      | KE ANALYS          | 31 <b>S</b> (4.5)       |                   |           |
|------------------------------|--------------|--------------------|-----------------|--------------------|-------------------------|-------------------|-----------|
|                              | (A)<br>Blank | [8]<br>Blank Spike | (C)<br>Blank    | [D]<br>Method      | (E)                     | [F]<br>LIMITS     | [G]       |
| Parameter                    | Result       | Result             | Spike<br>Amount | Detection<br>Limit | Blank Spike<br>Recovery | Recovery<br>Range | Qualifier |
|                              | mg/kg        | mg/kg              | mg/kg           | mg/kg              | %                       | %                 |           |
| Total Petroleum Hydrocarbons | < 10.00      | 87.65              | 100             | 10.00              | 87.7                    | 65-135            | ,         |

Blank Spike Recovery [E] = 100\*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. = Below detection limit
All results are based on MDL and validated for QC purposes only





### SW- 846 5030/8020 RTEX

Date Validated: Sep 23, 1997 14:30

Date Analyzed: Sep 22, 1997 13:48

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: OR

Matrix: Solid

|                |         |              | MAN.         | RIX SPIKE / | MATRIXS      | PIKE DUE   | MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY | RECOVERY     |          | 74 1<br>74 1<br>77 7<br>77 7<br>70 7<br>70 7 |           |
|----------------|---------|--------------|--------------|-------------|--------------|------------|--|--------------|----------|--|-----------|
| G.C. Sample ID | ~       | <u>6</u>     | 5            | Œ.          | ᇤ            | Hafrix     | 4  | 5            | Ξ        | =  | 85,       |
| 172920. 008    | Sample  | Matrix Spike | Matrix Spike | Mairix      | Hethod       | Carit      | 30   | ဗ            | 90       | Matrix Spike                                 |           |
|                | Result  | Result       | Duplicate    | Spike       | Delection    | Retative   | Spike Relative                                     | Matrix Spike | M.S.D.   | Recovery                                     | Qualifier |
| Parameter      |         |              | Result       | Amount      | THE STATE OF | Difference | Difference   | Кесочету     | Recovery | Range  |           |
|                | шоо     | mdd          | Ed.          | mdd         | wdd          | ×          | 35   | *            | ěę       | ×  |           |
| Вепгеле        | < 0.050 | 1.915        | 1 905        | 2.000       | 0.050        | 20.0       | 0.5  | 95.8         | 95.3     |  |           |
| Toluene        | < 0.050 | 1.875        | 1.885        | 2.000       | 0.050        | 20.0       | 0.5  | 93.8         | 94.3     |  |           |
| Ethylbenzene   | < 0.050 | 1.980        | 2.010        | 2.000       | 0.050        | 20.0       | #?   | 99.0         | 100.5    |  |           |
| m,p-Xylenes    | < 0.100 | 4.085        | 4.180        | 4.000       | 0.100        | 20.0       | 2.3  | 102.1        | 104.5    | 65-135                                       |           |
| o-Xylena       | < 0.050 | 1.865        | 1.910        | 2.000       | 0.050        | 20.0       | 2.4  | 93.3         | 95.5     | 65-135                                       |           |

Edward H. Sanemolo, Ph.D. Cox/QC Manager

Houston - Dollos - Son Antonio

All results are based on MDL and validated for QC purposes

N.O. = Below detection limit or not detected

M.S.D. Recovery [H] = 100"(C-A)(D) M.S.D. = Matrix Spike Ouplicate

Spike Relative Difference [F] = 2001(B-C)/(B+C)

Matrix Spike Recovery [G] = 100\*(B-A)/[D]



### SW- 846 5030/8020 BTEX

Date Validated: Sep 23, 1997 14:30

Analyst: OR

Date Analyzed: Sep 22, 1997 10:36

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|              |          |             | BLANK SPII | (E ANALY: | 3 <b>is</b> |                     |           |
|--------------|----------|-------------|------------|-----------|-------------|---------------------|-----------|
|              | [A]      | (8)         | (C)        | [D]       | (E)         | (F)                 | [G]       |
|              | Blank    | Blank Spike | Blank      | Method    | QC          | LIMITS              | 1         |
| Parameter    | Result   | Result      | Spike      | Detection | Blank Spike | Recovery            | Qualifier |
|              |          |             | Amount     | Limit     | Recovery    | Range               |           |
|              | ppm      | ppm         | ppm '      | ppm       | %           | %                   |           |
| Benzene      | < 0.0010 | 0.0902      | 0.1000     | 0.0010    | 90.2        | 6 <del>5</del> -135 |           |
| Toluene      | < 0.0010 | 0.0877      | 0.1000     | 0.0010    | 87.7        | 65-135              |           |
| Ethylbenzene | < 0.0010 | 0.0927      | 0.1000     | 0.0010    | 92.7        | 65-135              |           |
| m,p-Xylenes  | < 0.0020 | 0.1900      | 0.2000     | 0.0020    | 95.0        | 65-135              |           |
| o-Xylene     | < 0.0010 | 0.0878      | 0.1000     | 0.0010    | 87.8        | 65-135              |           |

Blank Spike Recovery [E] = 100°(B-A)/(C) N.C. = Not calculated, data below detection limit

N.D. = Below detection limit

Received by OCD: 6/8/2021 12:21:29 PM

All results are based on MDL and validated for QC purposes only

Edward H Fonemoto, Ph.D.



### SW- 846 5030/8020 RTEX

Date Validated: Sep 22, 1997 10:05

Analyst: OR

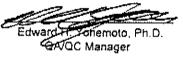
Date Analyzed: Sep 19, 1997 10:04

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|              |                        |                              | BLANK SPII            |                            |                          | ************************************** |              |
|--------------|------------------------|------------------------------|-----------------------|----------------------------|--------------------------|--|--------------|
| Parameter    | (A)<br>Blank<br>Result | (B)<br>Blank Spike<br>Result | {C}<br>Blank<br>Spike | (D)<br>Method<br>Detection | (E)<br>QC<br>Blank Spike | (F)<br>LIMITS<br>Recovery              | [G] Qualifie |
| r Brantotts  | ррт                    | ppm                          | Amount<br>ppm         | Limit                      | Recovery                 | Range<br>%                             | - Quantie    |
| Banzene      | < 0.0010               | 0.0857                       | 0.1000                | 0.0010                     | 85.7                     | 55-135                                 |              |
| Toluene      | < 0.0010               | 0.0855                       | 0.1000                | 0,0010                     | 85.5                     | 65-135                                 |              |
| Ethylbenzene | < 0.0010               | 0.0924                       | 0.1000                | 0.0010                     | 92.4                     | 65-135                                 |              |
| m,p-Xylenes  | < 0.0020               | 0.1880                       | 0.2000                | 0.0020                     | 94.0                     | 65-135                                 |              |
| o-Xylene     | < 0.0010               | 0.0876                       | 0.1000                | 0.0010                     | 87.6                     | 65-135                                 |              |

Blank Spike Recovery [E] = 100\*(B-A)/(C)
N.C. = Not calculated, data below detection limit
N.D. ■ Below detection limit
All results are based on MDL and validated for QC purposes only





### SW. 846 5030/8020 RTEX

Date Validated: Sep 22, 1997 10:05

Date Analyzed: Sep 19, 1997 13:22

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: OR Matrix: Solid

|              |         |              |              | RIX SPIKE / | MATRIXS   | PIKEDUPI   | MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY | RECOVERY     |          |              | 1 - 64.<br>- 104.<br>- 11 - 161 |
|--------------|---------|--------------|--------------|-------------|-----------|------------|--|--------------|----------|--------------|---------------------------------|
| Of Samulo 10 | lw)     | 6            | 5            | 8           | <u> </u>  | Matrix     | E  | [5]          | E        | =            | Ξ                               |
| 179159, 009  | Sample  | Matrix Spike | Matrix Spike | Matrix      | Wethod    | Limit      | 8  | သူ           | ည        | Matrix Spike |                                 |
|              | Result  | Result       | Duplicate    | Spike       | Detection | Relative   | Spike Relative                                     | Matrix Spike | N.S.D.   | Recovery     | Qualifier                       |
| Parameter    |         |              | Result       | Amount      | 善         | Oifference | Difference   | Recovery     | Recovery | Range        |                                 |
|              | mdd     | шdd          | mdd          | mdd         | Euck      | **         | *  | *            | 54       | ×2.          |                                 |
| Велгеле      | < 0.050 | 1.690        | 1.785        | 2,000       | 0.050     | 20.0       | 5.5  | 84.5         | 89.3     | 65-135       |                                 |
| Toluene      | < 0.050 | 1.780        | 1.880        | 2.000       | 0.050     | 200        | 5.5  | 89.0         | 94.0     | 65-135       |                                 |
| Ethylbenzene | < 0.050 | 2.045        | 2.170        | 2,000       | 0.050     | 20.0       | 5.9  | 102.3        | 108.5    | 65-135       |                                 |
| m.p-Xylenes  | < 0.100 | 4.165        | 4.410        | 4.000       | 0.100     | 20.0       | 5.7  | 104.1        | 110.3    | 65-135       |                                 |
| o-Xylene     | < 0.050 | 2.005        | 2.125        | 2.000       | 0.050     | 20.0       | 5.8  | 100.3        | 106.3    | 65-135       |                                 |
|              |         |              |              |             |           |            |  |              |          |              |                                 |

Spike Relative Difference  $\{F\} = 200^{\circ}(B+C)/(B+C)$ Matrix Spike Recovery  $\{G\} = 100^{\circ}(B+A)/[D]$ 

M.S.D. = Matrix Spike Duplicate M.S.D. Recovery [H] = 100\*(C-A)[D]

N D. = Below detection limit or not detected All results are based on MDL, and validated for QC purposes

Edward # Tohemoto, Ph.D.

Page

Houston - Dallas - San Antonio



### SW- 846 5030/8020 BTEX

Date Validated: Sep 19, 1997 17:15

Analyst: OR

Date Analyzed: Sep 18, 1997 12:41

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|  |          |             | BLANK SPII      | KE ANALYS          | is          | 4.6        |           |
|--|----------|-------------|-----------------|--------------------|-------------|------------|-----------|
| 1111 1111 1111 1111 1111 1111 1111 1111 1111 | (A)      | [B]         | (C)             | [D]                | (自)         | [F]        | [G]       |
|  | Blank    | Blank Spike | Blank           | Method             | ac          | LIMITS     |           |
| Parameter                                    | Result   | Result      | Spike<br>Amount | Detection<br>Limit | Blank Spike | Recovery   | Qualifier |
|  | ppm      | ppm         | ppm             | ppm                | Recovery %  | Range<br>% |           |
| Benzene                                      | < 0.0010 | 0.0896      | 0.1000          | 0.0010             | 89.6        | 65-135     |           |
| Toluene                                      | < 0.0010 | 0.0887      | 0.1000          | 0.0010             | 88.7        | 65-135     |           |
| Ethylbenzene                                 | < 0.0010 | 0.0952      | 0.1000          | 0.0010             | 95.2        | 65-135     |           |
| m.p-Xylenes                                  | < 0.0020 | 0.1930      | 0.2000          | 0.0020             | 96.5        | 65-135     |           |
| o-Xylene                                     | < 0.0010 | 0.0901      | 0.1000          | 0.0010             | 90.1        | 65-135     |           |

Blank Spike Recovery [E] = 100\*(B-A)/(C)
N.C. ≅ Not calculated, data below detection limit
N.D. ≅ Below detection limit
All results are based on MDL and validated for QC purposes only

Edward Fronemoto, Ph.D.



SW- 846 5030/8020 RTEX

Date Validated: Sep 19, 1997 17:15

Date Analyzed: Sep 18, 1997 15:46 QA/QC Manager: Edward H. Yonemolo, Ph.D.

Analyst: OR

Matrix: Solid

|              |         |              | A CO         | MATRIX SPIKE/ | MATRIXS   | PIKE DUP   | MATRIX SPIKE DUPLICATE AND RECOVERY | RECOVERY     | A CALL A |              |           |
|--------------|---------|--------------|--------------|---------------|-----------|------------|-------------------------------------|--------------|----------|--------------|-----------|
|              | X       | 181          | 5            | E             | Œ         | Matrix     | E                                   | <u></u>      | E        |              | 5         |
| 179147, 004  | Sample  | Matrix Spike | Matrix Spike | Matrix        | Method    | T T        | 90                                  | ဗ            | 20       | Matrix Spike |           |
|              | Result  | Result       | Duplicate    | Spike         | Detection | Relative   | Spike Relative                      | Matrix Spike | M.S.D.   | Recovery     | Qualifier |
| Parameter    |         |              | Result       | Amount        | Limit     | Difference | Difference                          | Кесочелу     | Recovery | Range        |           |
|              | шф      | mdd          | bbu          | mod           | шdd       | *          | 25                                  | 22           | ×        | *            |           |
| Benzene      | < 0.050 | 1.420        | 1.560        | 2.000         | 0.050     | 20.0       | 9.4                                 | 71.0         | 78.0     | 65-135       |           |
| Toluene      | < 0.050 | 1.520        | 1.615        | 2.000         | 0.050     | 20.0       | 6.1                                 | 76.0         | 80.8     | 65-135       |           |
| Ethylbenzene | < 0.050 | 1.855        | 1.845        | 2,000         | 0.050     | 20.0       | 0.5                                 | 92.8         | 92.3     | 65-135       |           |
| m.p-Xylenes  | < 0.100 | 3.705        | 3.710        | 4.000         | 0.100     | 20.0       | 0.1                                 | 92.6         | 92.8     | 65-135       |           |
| o-Xylene     | 050'0>  | 1.680        | 1.825        | 2.000         | 0.050     | 20.0       | 8.3                                 | 84.0         | 91.3     | 65-135       |           |

Spike Relative Difference [F] = 200\*(B-C)/(B+C) Matrix Spike Recovery [G] = 100\*(B-A)/(D] M.S.D. = Matrix Spike Duplicate M.S.D. Recovery [H] = 100\*(C-A)/[D]

N.D. \* Below detection limit or not detected All results are based on MDL and validated for QC purposes

Edward H. Spatemolo, Ph.D.

Page



## SW846- 5260 Volutile Organic Analysis

Date Validated: Sep 29, 1997 16:45

Date Analyzed: Sep 26, 1997 14:30

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: CE Matrix: Solid

|                    |        |              | MAI          | KIX SPIKE / | MATRIXS   | PIKE DUPI  | MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY | RECOVERY     |          |              |           |
|--------------------|--------|--------------|--------------|-------------|-----------|------------|--|--------------|----------|--------------|-----------|
| O.C. Samule III    | [A]    | (8)          | (0)          | <u>6</u>    |           | Matrix     | H  | [6]          | E        | 8            | Ξ         |
|                    | Sample | Matrix Spike | Matrix Spike | Matrix      | Mathod    | Umit       | ဘွ   | ၁၅           | ဘွ       | Matrix Spike |           |
| :                  | Result | Result       | Ouplicate    | Spike       | Detection | Relative   | Spike Relative                                     | Matrix Spike | M.S.D.   | Racovery     | Qualifier |
| Parameter          |        |              | Result       | Amount      | Limit     | Difference | Difference   | Recovery     | Recovery | Range        |           |
| -errene Lu         | mg/Kg  | mg/Kg        | mg/Kg        | mg/Kg       | mg/Kg     | **         | ò.   | **           | -        | *            |           |
| Benzene            | 0.84   | 5.97         | 6.05         | 5.83        | 0.10      | 20.0       | 1.3  | 102.6        | 164.2    |              |           |
| Chlorobenzene      | < 0.10 | 4.89         | 5.09         | 5.00        | 0.10      | 200        | 4.0  | 0 479        | 104      |              |           |
| 1.1-Dichloroeihene | < 0.40 | 4.46         | 35.4         | 5.00        | 0.40      | 25.0       | 1.8  | 89.7         | 8.05     |              |           |
| Toluene            | < 0.10 | 4.93         | 4.98         | 2003        | 0.10      | 20.0       | 1.0  | 986          | 9.66     |              |           |
| Trichloroethene    | < 0.30 | 4.92         | 5.03         | 5.00        | 0.30      | 20.0       | 22   | 98.4         | 100.6    |              |           |

Spike Relative Difference [F] = 200\*(B-C)/(B+C) Matrix Spike Recovery [G] = 100\*(B-A)/[D]

M.S.D. = Matrix Spake Duplicate

M.S.D. Recovery [H] = 100°(C.Ay[D])
N.D. = Below detection limit or not detected
All results are based on MDL and validated for QC purposes

Houston - Colles - San Antonio

Edwarg H. Terfemoto, Ph.D. Br/OC Manager

Page



### SW846-8270 PAHs by GC-MS (610 List)

Date Validated: Sep 27, 1997 11:46

Date Analyzed: Sep 26, 1997 03:48

QA/QC Manager: Edward H. Yonemolo, Ph.D.

Matrix: Solid Analyst: LC

|                           |         |  |              | RIX SPIKE | MATRIXS   | PIKE DUP   | MATRIX SPIKE / MATRIX SPIKE DLIPI ICATE AND DECOMEDY | CONCERV      |          |              |     |
|---------------------------|---------|--|--------------|-----------|-----------|------------|--|--------------|----------|--------------|-----|
|                           |         |  | \            |           |           |            |  |              | ing<br>M |              |     |
| 4                         | ₹.      | 8.   | <u></u>      | <u> </u>  | 旦         | 36-6-5     | Ę  |              |          |              |     |
| d.c. sample IU            | Samole  | Mainly Suite   | A tolerand   |           | Ţ.        | Macix      | <b>.</b>   | <u>[9</u>    | Ξ        |              | [6] |
| 172201-001                | Parist  | December of the contract of th | MALEIA SPIKO | Malrix    | Method    | Linit      | ઝ  | OC.          | 9        | Hatrix Spike |     |
|                           | isless: | linsau   | Unplicate    | Spilka    | Detection | Retative   | Spike Relative                                       | Matrix Spike | C 47     |              |     |
| Parameter                 |         |  | Result       | Amount    | Umit      | Olfference | Difference   | Recovery     | Recovery | Recovery     |     |
|                           | mg/Kg   | mg/Kg  | mg/Kg        | mg/Kg     | mg/Kg     | ×          | ×  |              | ,        |              |     |
| Acenaphthene              | < 0.133 | 2.687  | 2.807        | 3,333     | 0.113     | 10.0       |  |              | ą.       | *            |     |
| 4-Chloro-3-Melhyphenol    | < 0.253 | 2227   | 2 353        | 2 222     | 0.00      | 0.61       | <b>ए</b>   | 80.6         | 84.2     | 31-137       |     |
| 2-Chloropheno             | C 0 323 | 5.00   |              | 2000      | 0.233     | 33.0       | ۍ<br>دي  | 66.8         | 70.6     | 26-103       |     |
|                           | V. 4333 | 7777   | 2.433        | 3,333     | 0.333     | 28.7       | 8.8  | 8 88         | 70.7     | 1            |     |
| 1,4-Dichlorobenzene       | < 0.280 | 2.693  | 2.880        | 3.333     | 0.280     | 30.4       |  | 9.50         | 13.0     | 701-07       |     |
| 2,4-Dinitrololuene        | < 0.333 | 2713   | 2 8331       | 4 900     |           | 1          | Ð./  | 80.8         | 86.4     | 28-104       |     |
| N-Nitroso-di-n-oronyamine | 4000    | 1  | 500.7        | 3.335     | 0.333     | 71.8       | 4.3  | 81.4         | 85.0     | 28-89        |     |
|                           | V.CD?   | 796.2  | 3.093        | 3.333     | 0.267     | 55.4       | 4.2  | 89.0         | A CD     | 26+14        |     |
| 4-Intropheno              | < 0.267 | 0.640  | 0.787        | 3,333     | 0.267     | 47.2       | 20.5   |              |          | 071-14       |     |
| Pentachlorophenol         | < 0.573 | 1.393  | 1.507        | 3.333     | 0.573     | 48.9       | 7.0  | 7.81         | 23.0     | 11-114       |     |
| Phenoi                    | < 0.247 | 2.513  | 2.680        | 3.333     | 0.247     | 228        | , u  | 8.1.8        | 45.2     | 17-109       |     |
| Pyrene                    | < 0.133 | 2.040  | 2.107        | 3.333     | 0.133     | 35.3       | * 6  | 75.4         | - GS     | 26-90        |     |
| 1,2,4-Trichlorobenzene    | < 0.360 | 2.573  | 2.687        | 3.333     | 0.360     | 27.0       | 3.5  | 61.2         | 63.2     |              |     |
|                           |         |  |              |           | 2         | )<br>4     | 7  | 17.2         | 99       | 38-107       |     |

Spike Retalive Difference (F) = 200\*(B-C)/(B+C) Malrix Spike Recovery (G) = 100\*(8-A)/[D]

M.S.D. = Matrix Spike Duplicate

M.S.D. Recovery [11] = 100\*(C-A)(ID)

N.D. = Below detection limit or not detected All results are based on MDI, and validated for QC purposes

Edward F. Yonemolo, Ph.D. QA/QC Manager

Houston - Dailas - San Antonio



### SW846-8270 PAHs by GC-MS (610 List)

Date Validated: Sep 27, 1997 11:46

Analyst: LC

Date Analyzed: Sep 25, 1997 19:26

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

|                            |         |             | BLANK SPII | (E ANALY: | 3 <b>IS</b> |          |          |
|----------------------------|---------|-------------|------------|-----------|-------------|----------|----------|
|                            | [A]     | (B)         | [C]        | (0)       | (E)         | (F)      | [G]      |
|                            | Blank   | Blank Spike | Blank      | Method    | QC          | LIMITS   | ļ        |
| Parameter                  | Result  | Result      | Spike      | Detection | Blank Spike | Recovery | Qualifie |
|                            |         |             | Amount     | Limit     | Recovery    | Range    | ļ        |
|                            | mg/Kg   | mg/Kg       | mg/Kg      | mg/Kg     | %           | %        |          |
| Acenaphthene               | < 0.133 | 2.373       | 3.333      | 0.133     | 71.2        | 31-137   |          |
| 4-Chloro-3-Methylphenol    | < 0.253 | 2.060       | 3.333      | 0.253     | 61.8        | 26-103   |          |
| 2-Chlorophenoi             | < 0.333 | 2.247       | 3.333      | 0.333     | 67.4        | 25-102   |          |
| 1,4-Dichlorobenzene        | < 0.280 | 2.380       | 3.333      | 0.280     | 71.4        | 28-104   |          |
| 2,4-Dinitrotoluene         | < 0.333 | 2.387       | 3.333      | 0.333     | 71.6        | 28-89    |          |
| N-Nitroso-di-n-propylamine | < 0.287 | 2.620       | 3.333      | 0.267     | 78.6        | 41-126   |          |
| 4-Nitrophenol              | < D.257 | 1.447       | 3.333      | 0.267     | 43.4        | 11-114   |          |
| Pentachlorophenol          | < 0.573 | 2.207       | 3.333      | 0.573     | 66.2        | 17-109   |          |
| Phenol                     | < 0.247 | 2.433       | 3.333      | 0.247     | 73.0        | 26-90    |          |
| Pyrene                     | < 0.133 | 1.860       | 3.333      | 0.133     | 55.8        | 35-142   |          |
| 1,2.4-Trichlorobenzene     | < 0.360 | 2.360       | 3.333      | 0.360     | 71.4        | 38-107   |          |

Stank Spike Recovery (E) = 100\*(8-A)/(C) N.C. = Not calculated, data below detection limit N.D. = Selow detection limit

All results are based on MDL and validated for QC purposes only





# Certificate of Quality Control for Batch

### SPLP TPH EPA 1312/418.1

Date Validated: Sep 27, 1997 08:00

Date Analyzed: Sep 26, 1997 14:26

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: 0G

Matrix: Solid

|            | 65-135                  | 95.5          | 96.3                        | 0.6            | 20.0                                     | 0.50                                    | 4.03     | 3.85   | 3.66         | × 0.30 | fold remoleuni nyawatawa      |
|------------|-------------------------|---------------|-----------------------------|----------------|--|---|----------|--|--------------|--------|-------------------------------|
|            |                         |               |                             |                |  |   |          |  |              | 0000   | Total Defratours Medescorbone |
|            | *                       | *             | *                           | *              | ×  | uudd                                    | mdd      | mdd  | uudd         | mdd    |                               |
|            | Range                   | Recovery      | Recovery                    | Difference     | Difference                               | imi.                                    | Amount   | Result   |              | ****** |                               |
| Qualifier  | Recovery                | B.S.D.        | Blank Spike                 | Spike Relative | Relative                                 | Detection                               | Spike    | Duplicate  | Mesu         | Sex    | rarameter                     |
|            | Bfank Spike             | 8             | ဘ္                          | <b>ઝ</b>       | Ē  | Meihod                                  | Blank    | Biank Spike  | Bizank Spike |        |                               |
| ir.i       | LIJ.                    | lH]           | [0]                         | E              | Blank                                    | 皿                                       | <b>=</b> | <u>.</u>   | <u>ē</u> :   |        |                               |
| <b>医安全</b> | TAX STATE               | というという。       | el antomorrale describer de | のはなどのであっていたから  | The second second                        | 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |          |  | Į.           | 1.4.1  |                               |
|            |                         |               | ECOVERY.                    | CATE AND R     |  |   |          |  | THE PARTY.   |        |                               |
| COULT BY   | SALES ALS SEED OF SEEDS | AND PRINCIPLE | からないないというない                 | <b>医神经神经</b>   | を ない | <b>新文化的</b>                             | 新 なが ないな | STATE OF THE STATE |              | が経動が   |                               |

Houston - Doilos - San Antonio

Adremoto, Ph.D. TAVOC Manager

N.D. = Below detection limit or not detected All results are based on MOL and validated for QC purposes

B.S.D. Recovery [H] = 100\*(C-A)/[D]

B.S.D. = Blank Spike Duplicate

Spike Relative Difference [F] = 200\*(B-C)/(B+C) Blank Spike Recovery (G) = 100\*(B-A)/(D)

### ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

K.E.I. Consultants, Inc.

Project Name: 610057 Site #18

XENCO COC#: 1-72149

XENCO contact: Carlos Castro/Edward Yonemoto Date Received in Lab: Sep 16, 1997 10:40 by AS

Project Location: Monument Site #18 Project Manager: Mike Chapa

Project ID: 610057 Sile #18

|                      |                 |             |               |        | -          |              |           |                        |  |
|----------------------|-----------------|-------------|---------------|--------|------------|--------------|-----------|------------------------|--|
|                      |                 |             |               |        |            |              | Date      | Date and Time          |  |
| Field ID             | Lab, (D         | Method      | Method        | 4      | Turn       | Sample       | Addition  |                        |  |
|                      |                 | Name        | ٥             | 2 5    | Around     | Collected    | Requested | Extraction             | Analysis   |
| 1 MW18-5 (5-7)       | 172149-001      | втех        | SW:846        | Æ      | Standard   | Sep 11, 1997 |           | Sec. 18, 1997 hv OR    | See 18 1907 17-15-1-00   |
| 24                   |                 | TPH8015M.D  | SW-846 B015 M | mg/kg  | Standard   | Sep 11, 1997 |           | Sen 20 1997 by CV      | South took took by the   |
| 3 MW18-5(33-34)      | 172149-002 BTEX | ) etex      | SW-846        | mdd    | Standard   | Sep 11, 1997 |           | Sep 18 1997 by OD      | Sep 49 4007 47:044. OF   |
| 4                    |                 | TPH#015M-D  | SW-845 8015 M | Ī      | Ţ          | Sep 11, 1997 |           | Sen 20 1967 by CV      | Out 10, 1997 11,34 by OH   |
| 5 MW18-6 (5-7)       | 172149-003      | втех        | SW-846        | Endd   | Standard   | Sep 12, 1997 |           | San 10 4007 hu Od      | Sep 21, 1337 21:33 dy LC   |
| U                    |                 | TPH8015M-D  | SW-845 8015 M | #1g/kg | 1          | Sep 12, 1997 |           | Sep 20, 1331 by UK     | Sep 18, 1937 18:11 by OR   |
| 7 WW18-6 (28-30)     | 172149-004      | BTEX        | SW-846        | wdd    | Standard   | Sep 12, 1997 |           | Seo 18, 1997 by OR     | Sep 18, 1997 22:15 by LC   |
|                      |                 | TPH8015IR-D | SW-846 8015 M | парка  | Standard   | Sep 12, 1997 |           | Sep 20, 1997 by CY     | Sep 21 1997 22-03-10   |
| 9 MW18-4 (5-7)       | 172149-005      | BTEX        | SW-846        | E de   | Standard   | Sep 12, 1997 |           | Sea 18, 1997 by OR     | Sen 18 1007 to 100 to 00   |
| 10                   |                 | TPH8015M-D  | SW-846 8015 M | mgilkg | Standard   | Sep 12, 1997 |           | Sep 70 1997 by CV      | Con 34 4007 33-50 09-015   |
| 11 MW18-4 (8.5-10.5) | 172149-006      | з втех      | SW-846        | E      | Standard   | Sep 12, 1997 |           | Sen 19 1997 by OP      | Cen to 4007 44.00 by LC  |
| 12                   |                 | TPH8015M-D  | SW-846 8015 M | mg/kg  | Standard   | Sep 12, 1997 |           | Seo 20 1997 har CV     | Con 23 4603 00-27  |
| 13 86W18-4 (20-22)   | 172149-007      | , BTEX      | SW-846        | E &    | Т          | Sep 12, 1997 |           | See 48 4007 hr. On     | Sep 42, 1997 W.36 By LC  |
| 4                    |                 | TP:18015M-D | SW-846 8015 M | Ī_     | T          | Sep 12, 1997 |           | Sep 20, 1951 by Ox.    | dep 18, 1937 1938 by OK  |
| (S MW18-4 (28-30)    | 172149-008      | ВТЕХ        | SW-846        | Ī      | Standard S | Sep 12, 1997 |           | Sec 18 1997 hr OP      | Con 19 4009 00.44 09 Lt.   |
| 91                   |                 | TPH8015K-D  | SW-846 8015 M | Γ      | Standard   | Sep 12, 1997 |           | See 26 4007 by Ch      | 3ch 10, 1337 40:14 by UK   |
| 17 818-A (5-7)       | 172149-009      | BTEX        | SW-B46        | 7      | 1          | Sep 11, 1997 |           | See 27 4007 h. On      | Sep 22, 1997 02:07 by LC   |
| 4                    |                 | TPH8015M-D  | SW-846 8015 M |        | 1          | San 41 1987  |           | Sep 14, 1931 by UR     | Sep 22, 1997 11.11 by OR   |
| 19 B18.A (28-30)     | 172149-010      | BTEX        | SW-846        | Ť      | 7          | Sen 11 1997  |           | Sep 20, 1991 by CT     | Sep 22, 1997 02:53 by LC   |
| 20                   |                 | TPH8015M-D  | SW-846 8015 M | T      | Т          | Sep 11, 1997 |           | Sep 13, 1937 by OK     | Sep 19, 1997 11:16 by OR   |
| 21 818-8 (5-7)       | 172149-011 BTEX | 9TEX        | SW-846        | Ī      | T          | Sep 12, 1997 |           | Sen 18 1997 hv OR      | San to 1997 June L. OD   |
| 22                   |                 | TPH8015M-D  | SW-846 8015 M | Ī.,    | Т          | Sep 12, 1997 |           | Seo 20, 1997 by CY     | San 22 1007 04-25 2-10   |
| 23 818-8 (15-17)     | 172149-012      | e etex      | SW-846        | Ī      |            | Sep 12, 1997 |           | Sep 19 1997 hu OR      | Can de teat terrain of   |
| 24                   |                 | TPH801538-D | SW-845 B015 M | ang/kg | Standard   | Sep 12, 1997 |           | Sep 26, 1997 by CY     | Sen 22 1947 02:40 to 1   |
| 25 B18-C (5-7)       | 172149-013      | BTEX        | SW-846        | udd    | Standard   | Sep 12, 1997 |           | Sen 19 1997 bu OP      | Con 46 4007 12/10 12.00  |
| 26                   |                 | TPH4615M-D  | SW-846 8015 M |        | T          | Sep 12, 1997 |           | Sep 20 1862 h CV       | HO 60 07 71 1881 181 day   |
| 27 Bt8-C (10.5-12.5) | 172149-014 BTEX | BTEX        | SW-846        | T      | i          | Sep 12, 1997 |           | Sen 19 1997 by OF      | Con 40 co |
| 28                   |                 | TPH8015M-D  | SW-846 8015 M | T_     | T          | Sen +2 1007  |           | orp in the case of the | OFF 15, 1557 12.46 By UR   |
|                      |                 |             |               | ٦      | 7          | 1001 141 441 |           | 38p 40, 195f by CY     | Sep 22, 1997 06:41 by LC   |

Dage

## ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

XENCO COC#: 1-72149

Date Received in Lab: Sep 16, 1997 10:40 by AS

XENICO contact : Carlos Castro/Edward Yonemoto

Project Name: 610057 Site #18 K.E.I. Consultants, Inc. Project Location: Monument Site #18 Project ID: 610057 Site #18 Project Manager: Mike Chapa

|          |         |            |             |           | *************************************** |                                | Date             | Date and Time                             |  | _   |
|----------|---------|------------|-------------|-----------|---|--------------------------------|------------------|---|--|-----|
|          |         |            |             |           |   |                                | 3                |   |  |     |
| Field ID | Lab. ID | Method     | Method      | - Inite   | Turn                                    | Sample                         | Addition         |   |  |     |
|          |         | Name       | <u>0</u>    | 5         | Around                                  | Around Collected               | Requested        | Extraction                                | A color  |     |
|          | -       | HdI d idS  | 193         |           |   |                                | :                |   | Analysis   |     |
|          |         |            |             | ELEC      | Standard                                | PPIT   Standard   Sep 12, 1997 | Sep25,1997_16:30 | Sen 28 1997 by Oc                         | Sep25, 1997 16:30 Sen 28, 1997 by Oc. 10, 10, 10, 10, 10, 10, 10, 10, 10, 10,  | ٠.  |
|          |         | VOA /82601 | SWIRIC GOOD | *         |   |                                |                  | DO IN ICE: for don                        | 30 kg cr; st 7661 'oz dac  | _   |
|          |         |            | 7077.5150   | mgrag     | Standard                                | Ingrag Standard Sep 12, 1997   | Sep25,1997 16;30 | Sep 25, 1997 hv CF                        | Sep25,1997 16:30   Sep 26, 1997 hv CF   Can 36 1007 14:30  |     |
|          |         | SV-TCL     | SHJRJK-8270 | 200       |   |                                |                  | 72 fz : : : : : : : : : : : : : : : : : : | ach to lear lead by CE   |     |
|          |         |            | 2           | li iguery | linging Standard Sep 12, 1997           |                                | Sep25,1997 16:30 | Sep 25, 1997 by CY                        | Sep25,1997 16:30   Sep 25, 1997 by CY   Sen 26, 1997 01-12 by 1  | ••• |
|          |         |            |             |           |   |                                |                  |   | AT IN PARTY OF THE | _   |
|          |         |            |             |           |   |                                |                  |   |  |     |

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Page

XENCO Laboratories

1381 Meatinegen Safe L. Houston, Texas 77082 (713) 589-0692 Fax (713) 589-0695

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

I FUKM

Lab. Batch # / 72 / 49-H

| Contractor  |           |                         |  |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            |                  | 111  | -6+17    |
|---|-----------|-------------------------|--|---------------|---------|-------------|-----------------|--------------|---------------------------|--|-----------|-------------------------|----------|--|-------------|---------------|------------|------------------|--|----------|
| KET Consultants   | KET       | Consu                   | 1100   | 72            |         |             | 5               | Phone (2/0   | , 680.                    | 3767   | 2         |                         | Ř        | bipasen                                    | L           | Q             | ombac      | Contractor COC # | *2   |          |
| 5309 Wishout Sute 100   | 7 60.     | Justo                   | r.y  | Sw            | 1 3     |             | 54,73           | Y,           | 76238                     |  | 'ব        | Currier:<br>Airbill No. | ups<br>8 | N  |             |               | <i>y</i> ~ | Quote #1         |  |          |
| Project Name  |           |                         |  |               |         |             | Project [       |              | MIKE A                    | Han Thu  | T         |                         | 7        |  | -           |               |            |                  |  | <b>P</b> |
| Project Looston Mount   | Moon      |                         | SITE   | #16           | ce.     | <u>.</u>    | Project Manager | ł .          |                           | Chase  | <b>z </b> |                         | 5,08     | ******                                     | (2/         |               |            |                  | / Turn-around  |          |
| Semple Signature  | 4         | 1                       |  |               |         |             | Project No.     | 3            |                           | 14   | : _ z     |                         |          |  | Z/)         |               |            | _                | wsv - /  | Š        |
|   | SAMPE     | SAMPLE CHARACTERIZATION | NAME OF THE PERSON OF THE PERS | TROW          |         |             | E               | Proservative | Ual Dies                  | 1 .  | T         |                         | ₹ 2.9    | $\widehat{\gamma}_{\gamma_{\overline{z}}}$ | 7           |               |            | P                | # X .  |          |
| Pet D   | Cate      | Time                    | Owerz  | <b>გ</b> ≺⊢ო¤ | 0 α ≺ α | Sea Type se | . B             | 8            | Water Oil<br>PET No:      | e Oil<br>No: That No:<br>Sanda Description   | S (1)     | S) Xalia                | 2015     | 1 dry 5                                    | -           |               |            | OH essent        | at the state of th | *        |
| Mug.5   | 9-11-47   |                         | 2:1  |               |         |             |                 |              |                           | and land   |           |                         |          |  | igg         |               | 1          |                  | Remarks  | **       |
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| 3<br>MW6.   | 14.11.5   |                         | 50   |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            |                  |  | 6        |
| 7-Alm W   | 9.12.4)   |                         | 26.<br>30  |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            | -                |  | 4        |
| ML¥B·∜  | (h:211)   |                         | 5.   |               |         |             |                 |              |                           |  | -         |                         |          |  |             |               |            | -                |  | 10       |
| h-gir-livil   | 41247     |                         | 85.<br>10.5  |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            |                  |  | Ģ        |
| Minigh  | F-11-41   |                         | . 92   |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            |                  |  |          |
| พะมชะป  | [ do 2]dy |                         | 30   |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            |                  |  | •        |
| R18-A   | 9-11-17   |                         | 3.   |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            |                  |  | <u> </u> |
| 818-4   | 4-11-97   |                         | 30   |               |         |             |                 |              |                           |  |           |                         |          |  |             |               |            |                  | <del>-</del>   | Q.       |
| Mallocation by Charles  | E A       |                         |  | DATE:         | -       | 10E         | _               | Reserved Up: |                           | Carpana Carpan | ā         | DATE                    | TOME     | <u> </u>                                   | Remarks     | 3             | 1          | 1                | TO# (Rus)  | 1        |
|   | M.        |                         |  | 1-15-47       |         | 1150        |                 |              |                           |  |           |                         |          | ·  | 2 2 2       | ئے ۔<br>پور د | ,          |                  | 194  |          |
|   |           |                         |  |               |         |             | 13/2            | LA LA        | Receipt For Laboratory by | n. Br  | 16        | 9/16/81                 | 04:01    |  | <del></del> |               | V /        | Sync<br>Nuc      |  |          |
|   |           |                         |  |               |         |             | 1               |              |                           | ŧ  |           |                         |          |  |             |               |            |                  |  |          |

Pirk (Contractor), Yellow & White (Lab).

\* Pre-scheduling is recommended

Precision Analytical Services

Received by OCD: 6/8/2021 12:21:29 PM

1081 Meadowgien Salle L. Houston, Texas 77062 (713) 589-0682 Fax (713) 589-0685

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page

Lab. Batch # 1721119 11

| 1  | Contractor Co   | Cons./tonts Prome(2     | 1725 - 680 - 5767    | No coolers this shipment | Confractor COC *                       | ,            |
|--|-----------------|-------------------------|----------------------|--------------------------|--|--------------|
| 3.39 Puricle L. Suite 100 5.4 7x 782.35 d dutinins Transment 10 10 10 10 10 10 10 10 10 10 10 10 10  |                 |                         |                      | No.                      |  |              |
| Marie Chicle Chick Chi       | 5309            | Suite 100               | بخر                  |                          | Quote #:<br>P.O. No:                   |              |
| Meanword 516 #19   Mark   Ma       | Tripica Name    | Project Directo         |                      | <u> </u>                 |  |              |
| Date   Time   E   0   0   0   0   0   0   0   0   0  |                 | Site #18                | Mixe Chan            | 200e                     |  | ] <b>4</b> @ |
| Date   Time   E   S   V   C   C   C   C   C   C   C   C   C  | Sertion Sprakes |                         | 41.5                 | (a)                      | ************************************** | 3            |
| Date   Time  | SAMPLE          |                         | Dies Kor             | 28<br>♥><br><b>Voc</b>   | Ex. /4/                                | <u> </u>     |
| The   Three        | -               | E S W C Octainer        | Winte Oil            | (Carry X                 | 94 0                                   | <b>→</b>     |
| 912 97 5-7 902 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |                 | Time T M A Scor Type Ge | Par No:<br>Sample De | 30\S                     | Press                                  | ı            |
| 912.47 15-7 902  912.47 10.47 902  912.47 10.40  912.47 1130  912.47 1130  912.47 1130  912.40  912.40  912.40   |                 | 5. // //                |                      |                          |  | -            |
| 912.97 5-7 90.2<br>912.97 12.55 90.2<br>10.11. 1 | 8               | 15-                     |                      |                          |  | N            |
| 11.47 10.55 9th 11.50  1.45 11.50  1.45 11.50  1.40 11     |                 | 2-1                     |                      |                          |  | 6            |
| P.15-97 1/26  P.     |                 |                         |                      |                          |  | 4            |
| DATE TRUE   Secretar by   Secretar   DATE   TRUE   Sample of layers   TPH (805)   P-15-47   1/26   Sample of layers   PH (805)   P       |                 |                         |                      |                          |  | 2            |
| Part 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  9-15-97 1/36  |                 |                         |                      |                          |  | Ø            |
| PATE THE RESIDENCE TO THE SECRETARY TO 1/2 1/26 SAMPLE of highest TRH (805)  |                 |                         |                      |                          |  | _            |
| Part 1/36 Date That Sample of highest TOH (805)  |                 |                         |                      |                          |  | 8            |
| Part   1/36   Part          |                 |                         |                      |                          |  | 6            |
| 12.15   1/36   Secretar Davies   Thate   Sample of linghist   Sample of linghist   Sample of linghist   Sample of linghist   pls ma Spep TPH   pls ma Spep TPH   Sample of Sam       |                 |                         |                      |                          |  | ō            |
| 1/36   Marchaelarian 19   1/2/19   10:40   1/2/19   1/2/1     | X               | DATE THE                | Contraction of       | The Ken                  |  |              |
| mes 9/16/87 10:40  |                 |                         |                      | o                        |  |              |
| mar 9/16/87 10:40  | 101.            | 47 77 0                 |                      | 50                       | · mm SPLPTPH                           |              |
|  |                 | (The                    | ndr                  | ""                       | 548C<br>VeC                            |              |

\* Pre-scheduling is recommended

Precision Analytical Services

### **ANALYTICAL REPORT 1-82683**

for

K.E.I. Consultants, Inc.

Project Manager: Theresa Nix

Project Name: Monument Site #18

Project Id: 610057-2-18

August 17, 1998



HOUSTON - DALLAS - SAN ANTONIO

11381 Meadowglen Lane Suite L \* Houston, Texas 77082-2647 Phone (281) 589-0692 Fax (281) 589-0695



11381 Meadowglen Suite L Houston, Texas 77082-2647 (281) 589-0692 Fax: (281) 589-0695 Houston - Dollos - Son Antonio - Latin America

August 17, 1998

Project Manager: Theresa Nix K.E.I. Consultants, Inc. 5309 Wurzbach Rd. Suite 100 San Antonio, TX 78238

Reference;

XENCO Report No.: 1-82683

Project Name: Monument Site #18

Project ID: 610057-2-18

Project Address: Monument, NM

Dear Theresa Nix:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with XENCO Chain of Custody Number 1-82683. All results being reported to you apply only to the samples analyzed, properly identified with a Laboratory IO number. This letter documents the official transmission of the contents of the report and validates the information contained within.

All the results for the quality control samples passed thorough examination. Also, all parameters for data reduction and validation checked satisfactorily. In view of this, we are able to release the analytical data for this report within acceptance criteria for accuracy, precision, completeness or properly flagged.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 3 years in our archives and after that time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in COC No. 1-82683 will be filed for 60 days, and after that time they will be properly disposed of without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

XENCO operates under the A2LA guidelines. Our Quality System meets (SO/IEC Guide 25 requirements which is strictly implemented and enforced through our standard QA/QC procedures.

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Sincerely,

Edgle L. Clemons, II QA/QC Manager

> Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY!



K.E.I. Consultants, Inc.

Project Location: Monument, NM

Project Manager: Theresa Nix

Project ID: 610057-2-18

| Date Received in Lab : Jul 15, 1998 09:15 | Date Report Faxed: Aug 17, 1998 | XENCO contact: Carlos Castro/Eddie Clemons |
|---|---------------------------------|--|
| Fruject Manie, Manument Site #16          |                                 |  |

|                              |          |                    |                |                 | The same          |                 |                 |          |
|------------------------------|----------|--------------------|----------------|-----------------|-------------------|-----------------|-----------------|----------|
|                              | (ab ft)  | 182683 001         | 182683 002     | 182683 003      | 182683 004        | 182583 005      | 182683 006      | [        |
|                              | red of   | S-DLWM             | MW18-8         | MW18-8          | MW18-7            | MW18-7          | MW18-7          |          |
| Analysis Remosteri           | Depth:   | 0.5.               | 8:10           | 28:30           | 0.2               | 60              | 28-30           |          |
| narcaulant ata francis       | Halrix:  | Solid              | Solid          | Solid           | Solid             | Solid           | S               |          |
|                              | Sampled  | 07/15/98 08:30     | 07/15/98 09:45 | 07/15/98 11:00  | 07/15/98 12:30    | 07/15/98 13:30  | 07/15/98 15:00  | 2        |
| TPH-DRO (Diesel)             | Analyzed | Analyzed: 07128/98 | 0728198        |                 | 1                 | 07/28/98        | 1777 RPR        | Γ        |
| EPA 8015 M                   | Units:   | Units: mg/kg       | mg/kg K.L.     | mg/kg           | ₹                 | mg/kg R.L.      | mg/kg           | ~        |
| Total Petroleum Hydrocarbons |          | 9.6 (5.0)          | 7.3 (5.0)      | 15.6 (5.0)      | 7.0 (5.0)         | 10.5 (5.0)      |                 | 69       |
| H.EX                         | Analyzed | Anulyzed: 07H179B  | 0711708        |                 | $\Gamma$          | 7               | RACIUM          |          |
| EPA 8021B                    | chaits:  | Units: ppm         | man man        | Poem R.L.       | ¥                 | R.L.            | usda            | A.       |
| Велгене                      |          | < 0.020 (0.020)    | (0.020 (0.020) | < 0.020 (0.020) | < 0.020 (0.020)   | < 0.020 (0.020) | < 0.10          | (0.10)   |
| Toluene                      |          |                    | (0.020 (0.020) | < 0.020 (0.020) | · < 0.020 (0.020) | < 0.020 (0.020) | 0.10            | (0.10)   |
| Ethylkenzene                 |          |                    | (0.020 (0.020) | < 0.020 (0.020) | < 0.020 (0.020)   | < 0.020 (0.020) | < 0.10          | (0.10)   |
| m,p.Xylenes                  |          | < 0.040 (0.040)    | (0.040 (0.040) | < 0.040 (0.040) | < 0.040 (0.040)   | < 0.040 (0.040) | < 0.20          | (0.20)   |
| o-Xylene                     |          | < 0.020 (0.020)    | (0,020 (0,020) | < 0.020 (0.020) | < 0.020 (0.020)   | < 0.020 (0.020) | 0.11            | (0 10)   |
| Tutal BTEX                   |          | ND                 | C.N            | ON              | ND                | ON              |                 | 0.210    |
| SPLP-Senivolatiles           | Analyzed |                    |                |                 |                   |                 | 07131600        | T        |
| EPA1312/8270                 | Units    |                    |                |                 |                   |                 | ORPH.           | A.       |
| Acenaphiliene                |          |                    |                |                 |                   |                 | < 0.005         | (0.005)  |
| Acenaphiliylene              |          |                    |                |                 |                   |                 | < 0.005 (0.005) | 10 0051  |
| Authucene                    |          |                    |                |                 |                   |                 | <0.005 (0.005)  | 0.005    |
| Benzo(a)anthracene           |          |                    |                |                 |                   |                 | < 0.005 (0.005) | 0.0051   |
| Berizo(a)pyrene              |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.00.5) |
| Benzo(b)fluoranthene         |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.005)  |
| Benzo(g.h.i)porylene         |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.005)  |
| Benzo(k)Bioranthene          |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.005)  |
| 4-Brantontenyl-plenylether   |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.005)  |
| Bulyi berizyi phihafate      |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.005)  |
| Carbazole                    |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.005)  |
| 4-Chlaro-3-mellyphenol       |          |                    |                |                 |                   |                 | < 0.005 (0.005) | (0.005)  |
|                              |          |                    |                |                 |                   |                 |                 |          |

K.E.I. Consultants, Inc.. The interpretations and results expressed through this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories, however, assumes no responsibility and makes no warrany to the and use of the data hereby presented. his report somenay, and the entire report it represents, has been made for the exclusive and confidential use of

Eddle L. Clemons, II QA/QC Manager

Kerlin bake, 'andalaha

Page



K.E.I. Consultants, Inc.

Project Name: Monument Site #18

Project ID: 610057-2-18

Project Manager: Theresa Nix

Date Received in Lab: Jul 16, 1998-09:15

XENCO contact: Carlos Castro/Eddie Clem Date Report Faxed: Aug 17, 1998

| Project Location: Monument NM  |           |                |                |                | vale report ra | Vale report Faxed: Aug 17, 1998          | 0                  |
|--|-----------|----------------|----------------|----------------|----------------|--|--------------------|
|  | ł         |                |                |                | HUDONA         | ACINCO CONIDO CARROS CASITO/CODE CIEMONS | dale Clemons       |
|  | Lab IV.   | 182683 001     | 162683 002     | 182583 003     | 182683 004     | 182683 005                               | 182683 006         |
|  | 上番号       | MW18-8         | MW18-8         | MW18-6         | MW18-7         | 14W18-7                                  | WW18-7             |
| Analysis Rounestar   |           | 0.2            | 9:10           | 28:30          | 0.2            |  | 28:30              |
| noncomban circlination   |           | Solid          | Solid          | Solid          | Solid          | Solid                                    | Solid              |
|  | Sampled:  | 07/15/98 08:30 | 07/15/98 09:45 | 07/15/98 11:00 | 07/15/98 12:30 | 07/15/98 13:30                           | 07/15/98 15:00     |
|  | Analyzed: |                |                |                |                |  | Marso              |
| EPA1312/8270   | Units     |                |                |                |                |  | I.P. R.L.          |
| 4.Chlosnandine   |           |                |                |                |                |  |                    |
|  |           |                |                |                |                |  | < 0.005 (0.005)    |
| Z-Carloronaphilialene  |           |                |                |                |                |  | < 0.005 (0.005)    |
| 2-Chlorophenol   |           |                |                |                |                |  | < 0.005 (0.005)    |
| 4-Chlorophenyl-phenyl ether  |           |                |                |                |                |  | < 0.005 00.005     |
| Chrysene   |           |                |                |                |                |  | Coordination of    |
| Distributyl philhalate   |           |                |                |                |                |  | (con o) coo o >    |
| film.ochd alebalata  |           |                |                |                |                |  | (500.0) 500.0 >    |
|  |           |                |                |                |                |  | < 0.005 (0.005)    |
| Moch Zola, m) al Minia ace ne  |           |                |                |                |                |  | < 0.005 (0.005)    |
| Dibenzohiran   |           |                |                |                |                |  | < 0.005 (0.005)    |
| 1,2-Pichlorobenzene  |           |                |                |                |                |  | C 0.005 (0.005)    |
| 1,3-Dichlorobenzene  |           |                |                |                |                |  | concer ready       |
| 1.4-Dichlorohenzene  |           |                |                |                |                |  | (CD) (O) (CD) (CD) |
| 3 % Direktorohanzidina   |           |                |                |                |                |  | < 0.005 (0.005)    |
| O / Distriction  |           |                |                |                |                |  | < 0.005 (0.005)    |
| 2.4-3 ACTIOLODIENOI  |           |                |                |                |                |  | < 0.005 (0.005)    |
| neiny philialaie   |           |                |                |                |                |  | < 0.005 (0.005)    |
| Z,4-Luneunyphenol  |           |                |                |                |                |  | < 0.005 (0.005)    |
| Dimethyl philhalale  |           |                |                |                |                |  | < 0.005 (0.005)    |
| 4,6-Dinitro-2-methylphenol   |           |                |                |                |                |  | < 0.013 (0.013)    |
| 2.4 Dinitophenol   |           |                |                |                |                |  | 1                  |
| 2,4-Dinitrotolirene  |           |                |                |                |                |  |                    |
| 2.6-Dinitrotokrene   |           |                |                |                |                |  | 1900 07 900 07     |
| Fliorarthene   |           |                |                |                |                |  |                    |
| Fluctions  |           |                |                |                |                |  | (coo o) coo o s    |
| i interest of the second of th |           |                |                |                |                |  | < 0.005 (0.005)    |
| Texacitionbenzene  |           |                |                |                |                |  | < 0.005 (0.005)    |
|  |           |                |                |                |                |  |                    |

K.E.J. Consultants, Inc. XERICO Faboratories, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented. His report standary, and the entire report it represents, has been made for the exclusive and confidential use of K.E.J.C. the interpretabilities and results expressed through this analytical report represent the best judgment of XENCO Laboratories.

Marcher Dalfas, 'a sa Dubean

Eddie L. Clemons, II QA/QC Manager



K.E.I. Consultants, Inc.

Project Name: Monument Site #18

Project ID: 610057-2-18

Project Manager: Theresa Nix

Date Received in Lab : Jul 16, 1998 09:15

Date Report Faxed: Aug 17, 1998

XENCO contact: Carlos Castro/Eddie Clemon

| Project Location: Monument NM  | <b>-</b>   |                              |                                   |                            | Date Report Fa                          | Vale Report Faxed: Aug 17, 1998            |                      |
|--|--|------------------------------|-----------------------------------|----------------------------|---|--|----------------------|
|  | 1  |                              |                                   |                            | אבשרם כפווו                             | Acaco confact: Carlos Casifo/Eddie Clemons | date Clemons         |
|  | 185<br>185<br>185<br>185<br>185<br>185<br>185<br>185<br>185<br>185 | (82583 001<br>MW18-8         | 182683 002<br>MW18-8              | 182683 003<br>MM18-8       | 182683 004<br>MW18-7                    | 182683 005<br>MW18-7                       | 182683 006<br>MW18-7 |
| Analysis Requested   | Matrix   | Solid                        | Solid                             | 28-30'<br>Solet            | 9.2<br>至                                | φ  | 28:30                |
|  | Sampled.   | 07/15/98 08:30               | 07/15/98 09:45                    | 07/15/98 11:00             | 07/15/98 12:30                          | 07/15/98 13:30                             | 07/15/98 15:00       |
|  | Anayzed.   |                              |                                   |                            |   |  | 07/31/98             |
| EPA1312/8270   | Cinis  |                              |                                   |                            |   |  | Ingl.                |
| lexactionolatisatione  |  |                              |                                   |                            |   |  | C A ARE IN BASE      |
| lexactionocyclopentadiene  |  |                              |                                   |                            |   |  |                      |
| Hexachloroethane   |  |                              |                                   |                            |   |  |                      |
| Interio(1,2,3-cd)pyrene  |  |                              |                                   |                            |   |  | CO.00 (0.000)        |
| Bophoroue  |  |                              |                                   |                            |   |  | COUNTY TO THE        |
| 2-Mellyhaphihalene   |  |                              |                                   |                            |   |  | 200 07 S100 0        |
| 2-Mellylphenol   |  |                              |                                   |                            |   |  | < 0.005 (0.005)      |
| 4-Melly/phenol   |  |                              |                                   |                            |   |  | (2000) 5000 ×        |
| N-Nitroso-di-n-propylamine   |  |                              |                                   |                            |   |  | < 0.005 (0.005)      |
| N Mirosodipherylamine  |  |                              |                                   |                            |   |  | < 0.005 (0.005       |
| Naphthalene  |  |                              |                                   |                            |   |  | < 0.005 (0.005)      |
| 2-Nitroaniline   |  |                              |                                   |                            |   |  | < 0.013 (0.013       |
| 3-Nitroaniline   |  |                              |                                   |                            |   |  | < 0.013 (0.013)      |
| 4-filtroaniline  |  |                              |                                   |                            |   |  | < 0.013 (0.013       |
| Minobenzene  |  |                              |                                   |                            |   |  | < 0.005 (0.005       |
| 2-Mitrojalienol  |  |                              |                                   |                            |   |  | < 0.005 (0.005       |
| 4-Mitraphenol  |  |                              |                                   |                            |   |  | < 0.005 (0.005       |
| Pentacitlorophenol   |  |                              |                                   |                            |   |  | < 0.013 (0.013)      |
| Phenaulhrene   |  |                              |                                   |                            |   |  | < 0.005 (0.005)      |
| Plienol  |  |                              |                                   |                            |   |  | < 0.005 (0.005       |
| Pyrene   |  |                              |                                   |                            |   |  | < 0.005 (0.005       |
| 1,2,4. Trichlorobenzene  |  |                              |                                   |                            |   |  | < 0.005 (0.005)      |
| 2,4,5-Trichlorophenol  |  |                              |                                   |                            |   |  | < 0.013 (0.013)      |
| 2,4,6-TrictNorophenol  |  |                              |                                   |                            |   |  | < 0.005 (0.005       |
|  |  |                              |                                   |                            |   | 27   | 1                    |
| This report statutings, and the eigher report it represents, has been made for the   | it represents, his   | as Seen made for the exclu   | exclusive and confidential use of | d K.E.I. Consultants, Inc. |   | La Marie                                   | Market               |
| The interpretations and results expressed through titls analytical report represent the best judgment of XENCO Laboratorius. | Brough Bids and  | lytical report represent the | best judgment of XENCO            | aboratories.               |   | Eddie                                      | L. Clemons, II       |
| KERLA) i Jioralorius, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented.  | o responsibility   | and makes no warranly to     | the end use of the data her       | eby presented.             | • | ð  | QA/QC Manager        |

Bleneston - Basher - Janed Jebanne



K.E.I. Consultants, Inc.

Project Name: Monument Site #18

Project Location: Monument, NM

Project Manager: Theresa Nix

Project ID: 610057-2-18

Date Received in Lab: Jul 16, 1998 09:15

XeNCO confact: Carlos Castro/Eddie Clemons Date Report Faxed: Aug 17, 1998

|  | Lab ID:<br>Field ID:                 | 182683 001<br>MW18-8                                      | 182683 002<br>MW18-8                                   | 182683 003<br>MW18-8         | 182683 004<br>MW18-7 | 182683 005<br>MAY18.7 | 182683 006   |
|--|--------------------------------------|---|--|------------------------------|----------------------|-----------------------|--|
| Analysis Damostod  | Depth:                               | 0.5   | 8:10   | 28:30                        | 0.2                  | - <del> </del>        | 28.30  |
| Analysis nethested   | Mahrk                                | Solid   | Solid  | Solid                        | Solid                | Solid                 | Solid  |
|  | Sampled                              | 07/15/98 08:30  | 07/15/98 09:45   | 07/15/98 11:00               | 07/15/98 12:30       | 07/15/98 13:30        | 07/15/98 15:00   |
|  | Analyzed                             |   |  |                              |                      |                       | 07/31/08 B   |
| EPA1312/8270   | Calles                               |   |  |                              |                      |                       | mgit n. E.   |
| his(2-Cirloroeffloxy) methane  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| bis(2-Chloroethyl) ether   |                                      |   |  |                              |                      |                       |  |
| his(2-Chloroisopropyl) ether   |                                      |   |  |                              |                      |                       |  |
| bis(2-Ethylhexyl) philialate   |                                      |   |  |                              |                      |                       |  |
|  |                                      |   |  |                              |                      |                       |  |
| SPLP Volutiles   | Analyzed                             |   |  |                              |                      |                       | 0463498  |
| EPA 8260   | Units:                               |   |  |                              |                      |                       | mot.   |
| Henzene  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Вголювелдене   |                                      |   |  |                              |                      |                       | <0.005 (0.005)   |
| Вготостючненнале   |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Brownodichloromethane  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Вюпорот  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Bromomethane   |                                      |   |  |                              |                      |                       |  |
| Carbon Tetrachloride   |                                      |   |  |                              |                      |                       |  |
| Chlorobenzene  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Cirloroethane  |                                      |   |  |                              |                      |                       | <0.010 (0.010)   |
| Chloroform   |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Chloromethane  |                                      |   |  |                              |                      |                       | c 0.010 (0.010)  |
| 2-Chlorololitene   |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| 4-Chiorotokiene  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| 1,2-Dibromo-3-chloropropane  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Dibromochloremelhane   |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| 1,2-Dibromoethane  |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
| Dilrononethane   |                                      |   |  |                              |                      |                       | < 0.005 (0.005)  |
|  |                                      |   |  |                              |                      | 4115                  | The Contract of the Contract o |
| This report summing, and the mithe report if represents, has been made for the   | Il ropresents, h                     | as been made for the exclu                                | exclusive and confidential use of                      | of K.E.J. Consultants, Inc., | <u>ر</u>             | The second            | The state of the s |
| ine interpretations and resurts expressed through this analytical represent the best judgment of KENCO Laboratories.  XERECT Laboratories, however, assumes no reponsibility and makes no warranty to the end use of the data severy measured. | Orcoppi ilds and<br>O responsibility | ilytical report represent the<br>and makes no warranty to | best fudgment of XENCO.<br>the end use of the data her | Laboratories.                |                      | reddie                | ddle L. Clemons, II  |
|  |                                      |   |  | and browning                 |                      | Ϋ́                    | QA/QC Manager  |

Baston - Dallas Sens Bulaneo

K.E.I. Consultants, Inc.

Project Name: Monument Site #18

Project Location: Monument, NM

Project Manager: Theresa Nix

Project ID: 610057-2-18

Date Received in Lab: Jul 16, 1998-09:15

Date Report Faxed: Aug 17, 1998

| MORNING MORNING NO            | =        |                |                |                         |                      | Poor for Barrier                           |                 |
|-------------------------------|----------|----------------|----------------|-------------------------|----------------------|--|-----------------|
|                               | Lab (D)  | 182583 001     | 183883.000     |                         | YENCO cont           | Athrocontact: Carlos Castro/Eddie Clenions | ddie Clemons    |
|                               | Feld 10. | MW18-8         | MW18-8         | 162683 Q03<br>MW18-8    | 182683 004<br>MW18-7 | 182683 005<br>MM/18.7                      | 182683 006      |
| Analysis Kequested            | Mainr    | Solid          | 01-10          | 28-30                   | 02.                  | 9.9  | 74.30'          |
|                               | Sampled: | 07/15/98 08:30 | O7/15/98 09:45 | Solid<br>07/15/98 11-00 | Solid                | Solid                                      | Solid           |
|                               | Analyzed |                |                | 2011                    | Urr 13/30 12:30      | 07/15/98 13:36                             | 07/15/98 15:00  |
| EPA 8260                      | Loris:   |                |                |                         |                      |  | 0801/08         |
| 1,2-Dichlorobenzene           |          |                |                |                         |                      |  |                 |
| 1,3-Dichlorobenzene           |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1,4-Dichlorobenzene           |          |                |                |                         |                      |  | < 0.005 (0.005) |
| Dichlorodilluoromethane       |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1,1-DidNoroethane             |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1,2-Dichloroethane            |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1,1-Dichloroelliene           |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1,2-Dichloropropane           |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1,3-Dichloropropane           |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 2,2-Dichloropropane           |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1, f-Dictionopropene          |          |                |                |                         |                      |  | < 0.005 (0.005) |
| Ethylbenzene                  |          |                |                |                         |                      |  | < 0.005 (0.005) |
| Fexactilorobutadiene          |          |                |                |                         |                      |  | < 0.005 (0.005) |
| Isopropylbenzene              |          |                |                |                         |                      |  | < 0.005 (0.005) |
| MTBE                          |          |                |                |                         |                      |  | < 0.005 (0.005) |
| Melliylene chloride           |          |                |                |                         |                      |  | < 0.016 (0.010) |
| Naphthalene                   |          |                |                |                         |                      |  | < 0.020 (0.020) |
| Slyrene                       |          |                |                |                         |                      |  | 0 012 (0.005)   |
| 1, 1, 1, 2. Telrachloroethane |          |                |                |                         |                      |  | < 0.005 (0.00S) |
| 1,1,2,2-Tetrachioroethane     |          |                |                |                         |                      |  | < 0.005 (0.005) |
| Tetrachilorouthene            |          |                |                |                         |                      |  | < 0.005 (0.005) |
| Tolkene                       |          |                |                |                         |                      |  | < 0.005 (0.005) |
| 1,2,3-Trichlorobenzene        |          |                |                |                         |                      |  | 0.006 (0.005)   |
| 1,2,4-Trichlorohenzene        |          |                |                |                         |                      |  | < 0.005 (0.005) |
|                               |          |                |                |                         |                      |  | < 0.005 (0.005) |

Houston (killer Sen Butugo

The interpretations and results expressed through this analytical report represent the best judgment of XENCO Laboratories. XEMC(1) I aboratories, however, assumes no responsibility and makes no warranty to the end use of the data bereby presented.

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K.E.J. Consultants, Inc..

Eddie L. Clemons, II QA/QC Manager



K.E.I. Consultants, Inc.

Project Name: Monument Site #18

Project ID; 610057-2-18

Project Manager: Theresa Nix

Date Received in Lab: Jul 16, 1998 09:15

Date Report Faxed: Aug 17, 1998

| Project Location: Monument NM | 45       |                |                |                | Vale Report Fa | Vale Report Faxed: Aug 17, 1996            | Č .             |
|-------------------------------|----------|----------------|----------------|----------------|----------------|--|-----------------|
|                               | 1        |                |                |                | YEN'LO COUR    | Athrocomiaci : Carios Casifo/Eddie Clemons | ddie Clemons    |
|                               | 1300     | 182583 001     | 182683 002     | 182683 003     | 182683 004     | 182663 005                                 | 182683 006      |
|                               | 2 2      | 0.0.1          | MW18-8         | MM18-8         | MW18-7         | MW18-7                                     | MW18-7          |
| Analysis Requester!           |          | 0.5            |                | 28-30          | 0-2            | So   | 28-30           |
|                               | Mainr    | Solid          | Solid          | Solid          | Solid          | Solid                                      | Solid           |
|                               | Sampled  | 07/15/98 08:30 | 07/15/98 09:45 | 07/15/98 11:00 | 07/15/98 12:30 | 07/15/98 13:30                             | 07/15/98 15:00  |
|                               | Analyzad |                |                |                |                |  | CHOLOGR         |
| EPA 8260                      | Units:   |                |                |                |                |  | HOL R.L.        |
| 1,1,1-Trichloroethane         |          |                |                |                |                |  | 1500 01 500 02  |
| 1,1,2-Trichloroethane         |          | ,              |                |                |                |  | (500.0) 500.0 > |
| Trichloroethene               |          |                |                |                |                |  | 150000 50000 >  |
| Trichloroficoromethane        |          |                |                |                |                |  | (2000) 2000 V   |
| 1,2,3 Trichloropropane        |          |                |                |                |                |  | (500.0) 500.0 > |
| 1,2,4-Trimellybenzene         |          |                |                |                |                |  | 0.010 10.0051   |
| 1,3,5-Trimethylbenzene        |          |                |                |                |                |  | (con.p) 210.0   |
| Vinyl chloride                |          |                |                |                |                |  | 10000 (0.000)   |
| cis-1,2-Dichloroethene        |          |                |                |                |                |  | (con a) con a   |
| cis-1.3-Dictionanconene       |          |                |                |                |                |  | (cmn) cmn >     |
| an D. Valonac                 |          |                |                |                |                |  | < 0.005 (0.005) |
| o Dutilly                     |          |                |                |                |                |  | 0.013 (0.005)   |
| 211971190MHC-11               |          |                |                |                |                |  | < 0.005 (0.005) |
| n Ployvibenzene               |          |                |                |                |                |  | < 0.005 (0.005) |
| o Aylene                      |          |                |                |                |                |  | 0.006 (0.005)   |
| p-Isopropylouene              |          |                |                |                |                |  | < 0.005 (0.005) |
| sec-Bulythenzene              |          |                |                |                |                |  | < 0.005 (0.005) |
| lert-Britylbenzene            |          |                |                |                |                |  | < 0.005 (0.005) |
| trans-1,2-Dichoroelhene       |          |                |                |                |                |  | < 0.005 (0.005) |
| Irans-1,3-Dichloropropene     |          |                |                |                |                |  | < 0.005 (0.005) |
|                               |          |                |                |                |                |  | 1               |
| अना का वि                     | Analyzed |                |                |                |                |  | 17773 1.0GH     |
| 1312/418.1                    | Units.   |                |                |                |                |  | prem            |
| Total Petroleum Hydrocarbons  |          |                |                |                |                |  | 0.8 (0.7)       |

क्षित्रका मित्रीतः 'इस्तिमित्रात

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Page

Eddie L. Clemons, II **QAVQC Manager**  9



### SW- 846 5030/8020 BTEX

Date Validaled: Jul 20, 1998-09:00

Date Analyzed: Jul 17, 1998 09:31

Analyst: HL

Matrix: Solid

|  |         |              | MATR         | X SPIKE! | MATRIX SI | PIKE DUPL  | MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY | ECOVERY      |          |              |           |
|--|---------|--------------|--------------|----------|-----------|------------|--|--------------|----------|--------------|-----------|
| O C Sample IB                          | ¥       | 80           | <u>5</u>     | [6]      | 9         | Matrix     | Œ  | 15           |          | =            | Ξ         |
| ************************************** | Sample  | Matrix Spike | Watrix Spike | Matrix   |           | 뺼          | 20   | သ            | 90       | Mairix Spike | ****      |
|  | Result  | Result       | Duplicate    | Spike    | Delection | Relative   | Spike Relative                                     | Matrix Spike | M.S.D.   | Recovery     | Qualiffer |
| Darameter                              |         |              | Result       | Amount   | Cimi      | Difference | Difference   | Recovery     | Recovery | Range        |           |
|  | mdd.    | wdd          | mdd          | medd     | mad       | **         | *  | *            | ×        | *            |           |
| Reizene                                | 0.040   | 2.240        | 2 2 2 0      | 2.000    | 0.020     | 25.0       | 6.0  | 110.0        | 109.0    | 65-135       | T         |
| Tuluene                                | 0.026   | 1.880        | 1.854        | 2.000    | 0.020     | 25.0       | # T  | 92.7         | 91.4     | 65-135       |           |
| Евурьнене                              | < 0.020 | 1 910        | 1.860        | 2.000    | 0.020     | 25.0       | 1.6  | 95.5         | 94.0     | 65-135       |           |
| ғана, Хубене ş                         | < 0.040 | 4.020        | 3.980        | 4.000    | 0.040     | 25.0       | 1.0  | 100.5        | 99.5     | 65-135       |           |
| o-Xylene                               | < 0.020 | 1,846        | 1.836        | 2.000    | 0.020     | 25.0       | 0.5  | 92.3         | 91.8     | 65-135       |           |
|  |         |              |              |          |           |            |  | 4            |          |              |           |

Syste Relative Difference (F) = 2007(8-Cy(B+C) Multix Syste Decovery (C) = 1007(B-Ayr[D]

M S 13 - Matur Spike Duglicate

LLS D. Recovery [11] = 100°(C.AV[D]

H.B. + Deby delection finit or not detected. All results are travel on MDL and validated for QC purposes.

Thursten Trible, Landberren





### SW- 346 5030/3020 BTEX

Date Validated: Jul 20, 1998 09:00 Date Analyzed: Jul 17, 1998 08:43 Analyst: HL

Matrix: Solid

|              |          |             | BLANK SPII      | KE ANALYS          | SIS                     |            |           |
|--------------|----------|-------------|-----------------|--------------------|-------------------------|------------|-----------|
|              | [A]      | [B]         | (C)             | (D)                | (E)                     | (F)        | [G]       |
|              | Blank    | Blank Spike | Blank           |                    | ac j                    | LIMITS     |           |
| Parameter    | Result   | Result      | Spike<br>Amount | Detection<br>Limit | Blank Spike<br>Recovery | Recovery   | Qualifier |
|              | ppm      | ppm         | ppm             | ppm                | %                       | Range<br>% |           |
| Benzene      | < 0.0010 | 0.1000      | 0.1000 j        | 0.0010             | 100.0                   | 65-135     |           |
| Toluene      | < 0.0010 | 0.0995      | 0.1000          | 0.0010             | 99.5                    | 65-135     |           |
| Ë!hylbenzene | < 0.0010 | 0.0995      | 0.1000          | 0.0010             | 99.5                    | 65-135     |           |
| m,p-Xylenes  | < 0.0020 | 0.2070      | 0.2000          | 0.0020             | 103,5                   | 65-135     |           |
| o-Xylene     | < 0.0010 | 0.1020      | 0.1000          | 0.0010             | 102.0                   | 65-135     |           |

Blank Spike Recovery (E) = 100\*(B-A)/(C)
N.C. = Not objectiated, data below detection limit
N.O. = Below detection limit

All results are pased on MOL and validated for GC purposes only

Ecdie L. Clemons, II CA/QC Manager



## CPA BRI8270 TCLP Semi-volatiles

Date Validated: Aug 3, 1998 16:00

Date Analyzett hil 31, 1098-16:51

Analyst: LC

Matrix: Liquid

|  |          |             | BLA!        | K SPIKE! | BLANK SF | YIKE DUPL | BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY | ECOVERY     |          |             | 5 A       |
|--|----------|-------------|-------------|----------|----------|-----------|--|-------------|----------|-------------|-----------|
|  | [A]      | 183         | [5]         |          | Į.       | i         | 1  |             |          |             |           |
|  | Blank    | Blank Spike | Blank Solke | , de     | <u>;</u> | Blank     | <u></u>  | Œ           | Ξ        | =           | 3         |
| Parameter  | Result   | Result      | Bunicale    | Soile    |          |           | ည  | <b>30</b>   | 36       | Blank Spike |           |
|  |          |             | Result      | Amount   | Limit    | Relative  | Spike Relative                                   | Blank Spike | B.S.D.   |             | Qualifier |
|  | mg/L     | Mg/l,       | mg/L        | mg#L     | Į du     | 3         |  | Кесомелу    | Rесоvегу | Range       |           |
| Acutablithane  | < 0.0020 | 0.0710      | 0.0756      | 0.1000   | 4000     |           | ν.   | %           | **       | *           |           |
| 4-Clidneo-3-methylphenol   | < 0.0006 | 0.0678      | cason       | DOM: 0   | 0.0020   | 310       | 6.3  | 71.0        | 75.6     | 46-110      |           |
| 2-Cidotaphenol   | < 0.0040 | 0.0674      | 3500.0      | 0.000    | 0.0006   | 42.0      | 13.5   | 67.8        | 59.2     | 23-97       |           |
| L.4 Dichkinthenzene  | < 0.0040 | 0.0849      | 2000.0      | 0.1000   | 0.0040   | 40.0      | 13.0   | 69.4        | 59.2     | 7           |           |
| 2.4 Dustrinolnuene   | CO Bone  | 01000       | 0.0622      | 0.1000   | 0.0040   | 28.0      | 9.0  | 61.0        | 62.2     |             |           |
| A Principle of the Control of the Co | Onon n   | D.IIb/d     | 0.0692      | 0.1000   | 0.0000   | 38.0      | 2.0  | 0.03        | i d      |             |           |
| outroscioni-u-ar-nocurus   | < 0.0080 | 0.0672      | 0.0656      | 0.1000   | 0 0080   | 38.5      |  | 0.70        | 2.60     | 24.96       |           |
| CECHNOIN   | < 0.0080 | 0.0364      | 0.0306      | 0.1000   | 0.0090   | 9         | 2.4  | 67.2        | 65.6     | 41-116      |           |
| Pentachloryhenol   | < 0.0012 | 0.0686      | 0.0380      | 0.1000   | 00000    | 30.0      | 17.3   | 36.4        | 30.6     | 10.80       |           |
| Phenol   | < 0.0040 | 0.0326      | 0.0286      | 0.1000   | 0.0010   | 20.00     | 57.4   | 68.6        | 38.0     | 9-103       |           |
| Тунене   | < 0.0040 | 0.0866      | 0.0800      | 0000     | U.UU4U   | 45.0      | 13.1   | 32.6        | 28.6     | 12:89       |           |
| 1,2,4 Triciliorobeazene  | < 0.0040 | 0.0836      | 00000       | O. FUGO  | 0.0040   | 31.0      | 2.5  | 96.6        | 888      | 26-127      |           |
|  |          | 2000        | 0.1042      | 0.1000   | 0.0040   | 28.0      | 6.0  | 63.6        | 64.2     | 39-98       |           |
|  |          |             |             |          |          |           |  |             |          | •           |           |

Spike Relative Difference [F] = 200\*(8-Cy(8+C) Blank Sjake Recuvery [O] = 100\*(8-A)[D]

0.5.0 = Mank Spike Duplicate

B.S.D. Recovery (41) = 180°(C-A)(D) II.D. = Hollow defection Review and Japanese

11.15 \* Hultiw felection limit or not detected. All tustibs are tasted on IMM, and validated (or OC proposes

Cathle L. Clamans, II QA/QC Manager Page

किस्टाक्ट हिक्किट 'उम्हिमिष्क



### SPLP Voluties EPA1312/8260

Date Validated: Aug 17, 1998 13:00

Date Analyzed: Aug 4, 1998 20:08

Analyst: CE

Matrix: Solid

Qualifier = 60-133 59-172 59-139 62-137 66-142 Matrix Spike Recovery Range 30 1058 0.711 109.0 105 8 107.4 Recovery M.S.D. ě # Ç 104.8 112.6 118.0 104.8 122.4 Matrix Spike MATRIX SPIKE I MATRIX SPIKE DUPLICATE AND RECOVERY Recovery ဗ္ဗ ž 9 Spike Relative 6.0 60 4. Difference ဗ 75 **"** 20.0 25.0 20.0 20.0 20.0 Difference Relative Mairix Limit × 0.0000 0.0030 0.0010 0.0040 0.0010 Detection ngL 딤 0.0500 0.050.0 0.0500 0.0500 0.0500 Amount Spike ing/L Matrix ₫ 0.0529 0.0585 0.0589 0.0545 0.0537 Matrix Spike Duplicate ngl Result 0.0563 0.0612 0.0584 0.0590 0.0524 Mairik Spike नातुरी Result 圓 < 0.0040 09000 < 0.0030 < 0.0010 < 0.0010 Sample mg/L Result C.C. Sample 10 182683. 00G Parameter 1.1-Diclinroethene fuction of the rue L'Horulenzene Lishania Seatten:

Spile Metative Difference [F] = 200\*(B-C)((B+C) Malix Spike Recovery [G] = 100 (B.A)/[D]

M S D = Matrix Spake Duplicate

M S D Recovery [11] = 100 (C-A)/[D]

All results the hased on Mill, and validated for QC purposes 111) - Beliny detection final or not detected

OA/QC Manager

Page

Boreker - Doller, - Sam Biltonia



### EPA1312/8260 **SPLP** Volatiles

Date Validated: Aug 17, 1998 13:00 Date Analyzed: Aug 4, 1998 18:52

Analyst: CE Matrix: Solid

|   |                    |          |             | BLANK SPII | KE ANALYS | SIS         |          |           |
|---|--------------------|----------|-------------|------------|-----------|-------------|----------|-----------|
|   |                    | [A]      | [B]         | [C]        | [D]       | (E)         | (F)      | (G)       |
|   |                    | Blank    | Blank Spike | Blank      |           | QC          | LIMITS   |           |
| • | Parameter          | Result   | Result      | Spike      | Detection | Blank Spike | Recovery | Qualifier |
| • |                    |          |             | Amount     | Limit     | Recovery    | Range    |           |
| H |                    | mg/L     | mg/L        | mg/L       | mg/L      | %`          | %        |           |
|   | Benzene            | < 0.0010 | 0.0573      | 0.0500     | 0.0010    | 114.6       | 66-142   |           |
|   | Chlorobenzene      | < 0.0010 | 0.0542      | 0.0500     | 0.0010    | 108.4       | 60-133   |           |
|   | 1.1-Dichloroethene | < 0.0040 | 0.0614      | 0.0500     | 0.0040    | 122.8       | 59-172   |           |
|   | Toluene            | < 0.0010 | 0.0575      | 0.0500     | 0.0010    | 115.0       | 59-139   |           |
| ı | Trichloroethene    | < 0.0030 | 0.0538      | 0.0500     | 0.0030    | 107.8       | 62-137   |           |

Blank Spike Recovery (E) = 1001/8-AWC;

N.C. = Not calculated, pata delow detection amit

N.D. = Below detection limit

All results are based on MDL and validated for QC burdoses only

QA/CC Manager

obini bulkilikan rapansi kandalarana kalebah dalam dalam di

### SPLP TPH EPA 1312/418.1

Dale Validated: Jul 31, 1998-16:45

Date Analyzed: Jul 31, 1998 14:35

Analyst: E2

Matrix: Solid

Qualifier Biank Spike Recovery Range ⊞ Recovery 8.5.0. æ 8 105.5 Blank Spike Recovery BLANK SPIKE / BLANK SPIKE DUPLICATE AND RECOVERY ဗ × Spike Relative 6.0 Difference OC × Difference 20.0 Relative 8lank Limit × 8 Delection ppm Limit 亚 -Spike Amount mdd Blank ã 4.27 Blank Spike Dupitcate tudi Result <u>ত</u> 4.23 Blank Spike mod Result Œ < 0.50 lindi: Resutt Blank Ξ Fotal Pelidenni Hydrocarbons Parameter

豆

55-135

1065

Spike Relative Difference (F) = 200\*(8-C)/(8+C) Ulark Spike Recovery (G) = 100\*(B-A)(D)

U.S.O. = Blank Spike Duplicate

U S D. Recovery [H] = 100°(C.A)(D)

N.D. :: Bekwy detection limit or not detected Attrestits are based on MDi, and validated for QC purposes

Eddie L. Clernons, II QA/QC Manager



### ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

K.E.I. Consultants, inc.

Project Name: Monument Site #18

Project Location: Monument, NM

Project ID: 610057-2-18 Project Manager: Theresa Nix

XENCO COC#: 1-82683

Date Received in Lab: Jul 16, 1998 09:15 by CC

XENCO CONTact: Carlos Castro/Eddie Clemons

| Matter   Method   Method   Method   Method   Method   Units   Matter   Method   Method   Units   Matter   Mat | Me     |                |                    |                    |                     |                           |
|--|--------|----------------|--------------------|--------------------|---------------------|---------------------------|
| AWVIB-8 (D-2)         IS28B3-001         BTEK         SW-846           RRV18-8 (D-2)         1872B3-001         IFP (BG/15M-D)         SW-846 8015 M           RRV18-8 (B-10)         1872B3-002         BTEK         SW-846 8015 M           RRV18-8 (2B-30)         1872B3-003         BTEK         SW-846 8015 M           RAV18-7 (D-2)         1872B3-003         BTEK         SW-846 8015 M           RAV18-7 (D-2)         1822B3-004         BTEK         SW-846 8015 M           RAV18-7 (D-2)         1822B3-005         BTEK         SW-846 8015 M           RAV18-7 (D-2)         1822B3-005         BTEK         SW-846 8015 M           RAV18-7 (D-2)         1822B3-005         BTEK         SW-846 8015 M  |        | Turn           | Sample             | Addition           |                     |                           |
| MW/18 (10-2)         162683-001         GTEX         SW-846         BD           MW/18 (6-10')         402683-002         BTEX         SW-846 8015 M         MR-846 8015 M           MW/18 (28-30')         162683-003         BTEX         SW-846 8015 M         MR-846 8015 M           MW/18 (10-2')         182683-004         BTEX         SW-846 8015 M           MW/18 (10-2')         182683-004         BTEX         SW-846 8015 M           MW/18 (10-2')         182683-005         BTEX         SW-846 8015 M           MW/18 (10-8')         182683-005         BTEX         SW-846 8015 M           MW/18 (10-8')         182683-005         BTEX         SW-846 8015 M           MW/18 (10-8')         182683-005         BTEX         SW-846 8015 M  |        | Around         | Collected          | Requested          | Extraction          | Analysis                  |
| MAVIS 8 (8-101)         102601-002         STEX         SW-846 B015 M           AAVIS 7(0-27)         162681-002         BTEX         SW-846 B015 M           AAVIS 7(0-27)         162681-003         BTEX         SW-846 B015 M           AAVIS 7(0-27)         162681-004         BTEX         SW-846 B015 M           AAVIS 7(0-27)         162681-004         BTEX         SW-846 B015 M           AAVIS 7(0-27)         162681-005         BTEX         SW-846 B015 M  | SW-846 | ppm 10 days    | Jul 15, 1996 08:30 |                    | Jul 17, 1998 by HL  | Jul 17, 1998 13:44 by HL. |
| MAVIR 8 (8-10')         182683-002         BTEX         SW-846         8016 M           RAW18 4 (28-30')         182683-003         BTEX         SW-846         BM           RAW18 7 (0-2')         182683-004         BTEX         SW-846         BO15 M           RAW18 7 (6-8')         182683-005         BTEX         SW-846         BO15 M  | SW-846 | mg/kg 10 days  | Jul 15, 1998 08:30 |                    | Jul 27, 1998 by OG  | Jul 28, 1998 00:34 by AM  |
| MW18 3 [28-30')  | SW 846 | ppm 10 days    | Jul 15, 1998 09:45 |                    | Jul 17, 1998 by 11L | Jul 17, 1996 14:00 tay HL |
| 182683-003   BEX   SW-846    | SW-846 | mg/kg 10 days  | Jul 15, 1998 09:45 |                    | Jul 27, 1998 by OG  | Jul 28, 1998 01:07 by AM  |
| TPH:8015R-D SW-846 B015 M SW | SW-846 | ppm 10 days    | Jul 15, 1598 11:00 |                    | Jul 17, 1998 by 18. | Jul 17, 1998 14:16 by HL  |
| AWV18 7 (0.27) 182683-004 BTEX SW-846 8015 M TPH8015M-D SW-846 8015 M INVIR-7 (6.81) SW-846 8015 M TPH8015M-D SW-846 8015 M  | SW-846 | mg/kg 10 days  | Jul 15, 1998 11:06 |                    | Jul 27, 1998 by OG  | Jul 28, 1998 01:40 by AM  |
| MW18-7 (6 8.) 192683-905 BTEX SW-846 8015 AL TPH8015IR-D SW-846 8015 AL TPH8015IR-D SW-846 8015 AL   |        | ppm 10 days    | Jul 15, 1998 12:30 |                    | Jul 17, 1938 by 11L | Jul 17, 1998 14:37 by HL  |
| MW18-7 (6 8') 192683-005 BTEX SW-846 TPH9015IH-D SW-846 8015 M   | SW-846 | raging 10 days | Jul 15, 1998 12:30 |                    | Jul 27, 1998 by OG  | Jul 28, 1998 02:13 by AM  |
| TP18015R-D SW-346 8015 M   |        | ppm 10 days    | Jul 15, 1998 13:30 |                    | Jed 17, 1998 by FB. | Jul 17, 1998 14:18 by HL  |
|  | SW-846 | mg/kg to days  | Jul 15, 1998 13:30 |                    | Jul 25, 1998 by OG  | Jul 28, 1998 02:45 by A#  |
| 11 MW 18-7 (28-30°) 182683-006 BTEX SW-846 ppm   |        | ppm 10 days    | Jul 15, 1998 15:00 |                    | Jul 17, 1998 by HL  | Jul 17, 1998 15:04 by IIL |
| 12 TPHRO15M-D SW-846 BO15 M mg/kg  | SW 846 | mg/kg 10 days  | Jul 15, 1996 15:00 |                    | Jul 27, 1998 by OG  | Jul 28, 1998 03:18 by AM  |
| 13 SPLP TPH EPA ppm  |        | ppm 18 days    | Jul 15, 1998 15:00 | Jul 29, 1998 15:45 | Jul 31, 1998 by EZ  | Jul 31, 1998 15:40 by EZ  |
| 14 VOA (8260) EPA1312/6260 nightg  | EPA13  | mg/kg t0 days  | Jul 15, 1998 15:00 | Jul29,1998 15:45   | Aug 4, 1998 by CE   | Aug 4, 1998 20:08 by CE   |
| 15 SPLP-SV(FCL) SW846-1312/82 ugfl.  |        | ugft. 10 days  | Jul 15, 1998 15:00 | Jai29,1998 15:45   | Jul 31, 1998 lay SS | Jed 31, 1998 20:45 by LC  |

Page

Received by OCD:

1088 Meadowyen Sufe L. Houslon, Texas 77082 (713) 589-0692 Fax (713) 589-0695

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST FORM

Page / of /

Lab Batch #189683-54

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Precision Analytical Services

\* Pre-scheduling is recommended

E-Mail: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H

Lubbock, Texas 79424 El Paso, Texas 79932

800 + 378 + 1296 888 • 588 • 3443 806 • 794 • 1296 915 • 585 • 3443 FAX 806 • 794 • 1298 FAX 915 • 585 • 4944

### **Analytical and Quality Control Report**

Craig Eschberger

Nova Safety & Environmental

5023 Commerce

Work Order:

Report Date: November 16, 2004

4110905

Midland, TX 79703

Project Location: Monument-Lea Co., NM TNM Monument 18

Project Name: Project Number: TNM Monument 18

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraccAnalysis, Inc.

|        |             |        | Date       | Time  | Date       |
|--------|-------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken      | Taken | Received   |
| 47982  | MW-9 10'    | soil   | 2004-11-04 | 11:05 | 2004-11-09 |
| 47984  | MW-9 20'    | soil   | 2004-11-04 | 11:20 | 2004-11-09 |
| 47986  | MW-9 30'    | soil   | 2004-11-04 | 11:35 | 2004-11-09 |
| 47988  | MW-10 15'   | soil   | 2004-11-04 | 13:35 | 2004-11-09 |
| 47990  | MW-10 30'   | soil   | 2004-11-04 | 13:50 | 2004-11-09 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Report Date: November 16, 2004

TNM Monument 18

Work Order: 4110905 TNM Monument 18 Page Number: 2 of 11 Monument-Lea Co.,NM

### **Analytical Report**

Sample: 47982 - MW-9 10'

Analysis: BTEX QC Batch: 13926 Prep Batch: 12304 Analytical Method: \$ 8021B Date Analyzed: 2004-11-09 Date Prepared: 2004-11-09

Prep Method: S 5035 Analyzed By: MT Prepared By: MT

RLParameter Flag Result Units Dilution RLBenzene <0.0100 mg/Kg 10 0.00100 Toluene < 0.0100 mg/Kg 10 0.00100 Ethylbenzene < 0.0100 mg/Kg 10 0.00100 Xylene < 0.0100 mg/Kg 10 0.00100

| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 0.816  | mg/Kg | 10       | 0.100           | 82                  | 60.1 - 104         |
| 4-Bromofluorobenzene (4-BFB) |      | 0.736  | mg/Kg | 10       | 0.100           | 74                  | 63.1 - 105         |

Sample: 47982 - MW-9 10'

Analysis: TPH DRO QC Batch: 14045 Prep Batch: 12412 Analytical Method: Mod. 8015B Date Analyzed: 2004-11-14 Date Prepared: 2004-11-09

Prep Method: N/A Analyzed By: BP Prepared By: DS

| Surrogate | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-----------|------|--------|-------|----------|-----------------|---------------------|--------------------|
|           |      | 123    |       | J        |                 | 82                  | 69.8 - 106.1       |

Sample: 47982 - MW-9 10'

Analysis: TPH GRO QC Batch: 13931 Prep Batch: 12304 Analytical Method: S 8015B
Date Analyzed: 2004-11-09
Date Prepared: 2004-11-09

Prep Method: S 5035 Analyzed By: MT Prepared By: MT

 Parameter
 Flag
 Result
 Units
 Dilution
 RL

 GRO
 < 1.00</td>
 mg/Kg
 10
 0.100

 Spike
 Percent
 Recovery

|                              |                 |                    |           |          | Spike  | Percent  | Recovery |
|------------------------------|-----------------|--------------------|-----------|----------|--|----------|----------|
| Surrogate                    | Flag            | Result             | Units     | Dilution | Amount   | Recovery | Limits   |
| Trifluorotoluene (TFT)       | 111 174,000 400 | 1.07               | mg/Kg     | 10       | 0.100  | 107      | 0 - 160  |
| 4-Bromofluorobenzene (4-BFB) |                 | 0.973              | mg/Kg     | 10       | 0.100  | 97       | 0 - 174  |
|                              | ,               | V THOUS WAREN WALL | inamora - |          | TO MINISTER TO A STATE OF THE S |          |          |

Sample: 47984 - MW-9 20'

Received by OCD: 6/8/2021 12:21:29 PM

| TNM Monu  | November 16, 200<br>nent 18                         | 4  |   |                                  | ter: 4110905<br>onument 18   |                          |  | Number: 3 of<br>ent-Lea Co.,N                             |
|---|---|--|---|----------------------------------|--|--------------------------|--|---|
| Analysis:<br>QC Batch:<br>Prep Batch:   | BTEX<br>13926<br>12304                              |  | Analytical<br>Date Analy<br>Date Prepa                          | zed:                             | S 8021B<br>2004-11-09<br>2004-11-09                                |                          | Prep Mo<br>Analyzo<br>Prepare                            | d By: MT  |
| Parameter   | Fla   |  | RI<br>Result  |                                  | ¥ 7 : 4  |                          | Phillips I am  |   |
| Benzene   |   | R  | < 0.0100  |                                  | Units  |                          | Dilution   | R   |
| Toluene   |   |  | < 0.0100  |                                  | mg/Kg  |                          | 10   | 0.0010  |
| Ethylbenzene  |   |  | < 0.0100  |                                  | mg/Kg<br>mg/Kg   |                          | 10<br>10   | 0.0010<br>0.0010  |
| Xylene  | · · · · · · · · · · · · · · · · · · ·               | Partiti and the partition and a  | < 0.0100  |                                  | mg/Kg  |                          | 10   | 0.0010  |
|   |   |  |   |                                  |  | Spike                    | Percent  | Recover   |
| Surrogate   |   | Flag   | Result  | Units                            | Dilution   |                          | Recovery   | Limits  |
| Trifluorotolue  | one (TFF)<br>obenzene (4-BFB)                       |  | 0.814<br>0.757  | mg/Kg<br>mg/Kg                   | 10<br>10   | 0.100<br>0.100           | 81<br>76   | 60.1 - 10<br>63.1 - 10                                    |
| Sample: 479   | 84 - MW-9 20'                                       |  |   |                                  |  |                          |  |   |
| Analysis:   | TPH DRO   |  | Analytic  | al Method:                       | Mod. 8015E   | 3                        | Prep l   | Method: N/A   |
| QC Batch:   | 14045   |  | Date An   |                                  | 2004-11-14   | -                        |  | zed By: BP  |
| Prep Batch:   | 12412   |  | Date Pre  |                                  | 2004-11-09   |                          |  | red By: DS  |
| Parameter   | Flag  |  | RL<br>Result  |                                  | 11   |                          | TDillowin-   |   |
| DRO   | riag  |  | <50.0   |                                  | Units  |                          | Dilution   | . RJ  |
| THE THE TWO THE TANK | <b>L</b>  | THE STATE OF THE S | <u> </u>  |                                  | mg/Kg  |                          | 1  | 50.   |
| Surrogate   | Flag  | Result   | Units   | Di                               | lution   | Spike<br>Amount          | Percent<br>Recovery                                      | Recovery<br>Limits  |
| Carrogate   |   | 140  | mg/Kg   |                                  | 1  | 150                      | 93   | 69.8 - 106.   |
|   |   |  |   |                                  |  |                          |  |   |
| n-Triacontane<br>Sample: 4798<br>Analysis:<br>QC Batch:   |   | 1 1000000  | Analytica<br>Date Ana<br>Date Prep                              | yzed:                            | \$ 8015B<br>2004-11-09<br>2004-11-09                               |                          | Prep Me<br>Analyzed<br>Prepared                          | By: MT  |
| n-Triacontane Sample: 4798 Analysis: QC Batch: Prep Batch:  | 34 - MW-9 20'<br>TPH GRO<br>13931<br>12304          |  | Analytica<br>Date Anal<br>Date Prep<br>RL                       | yzed:                            | 2004-11-09<br>2004-11-09   |                          | Analyzed<br>Prepared                                     | dBy: MT<br>By: MT   |
| n-Triacontane Sample: 4798 Analysis: QC Batch: Prep Batch:  | 34 - MW-9 20'<br>TPH GRO<br>13931                   |  | Analytica<br>Date Anal<br>Date Prep<br>RL<br>Result             | yzed:                            | 2004-11-09<br>2004-11-09<br>Units                                  | :                        | Analyzed<br>Prepared<br>Dilution                         | d By: MT<br>By: MT<br>RI                                  |
| n-Triacontane Sample: 4798 Analysis: QC Batch: Prep Batch: Parameter GRO  | 34 - MW-9 20'<br>TPH GRO<br>13931<br>12304          |  | Analytica<br>Date Anal<br>Date Prep<br>RL<br>Result<br><1.00    | yzed:<br>ared:                   | 2004-11-09<br>2004-11-09<br>Units<br>mg/Kg                         | Spike                    | Analyzed Prepared  Dilution  10  Percent                 | By: MT By: MT  RI  0.100  Recovery                        |
| n-Triacontane Sample: 4798 Analysis: QC Batch: Prep Batch: Parameter GRO  | 34 - MW-9 20' TPH GRO 13931 12304 Flag              | Flag   | Analytica<br>Date Anal<br>Date Prep<br>RL<br>Result<br><1.00    | yzed:<br>ared:<br>Units          | 2004-11-09<br>2004-11-09<br>Units<br>mg/K.g                        | Spike<br>Amount          | Analyzed Prepared  Dilution  10  Percent Recovery        | By: MT By: MT  RI  0.100  Recovery Limits                 |
| n-Triacontane Sample: 4798 Analysis: QC Batch: Prep Batch:  | 34 - MW-9 20'<br>TPH GRO<br>13931<br>12304          |  | Analytica<br>Date Anal<br>Date Prep<br>RL                       | yzed:                            | 2004-11-09<br>2004-11-09   |                          | Analyzed<br>Prepared                                     | d By:   |
| Triacontane  umple: 4798  nalysis: C Batch: ep Batch: rameter RO  | 34 - MW-9 20' TPH GRO 13931 12304 Flag              |  | Analytica<br>Date Anal<br>Date Prep<br>RL<br>Result<br><1.00    | yzed:<br>ared:                   | 2004-11-09<br>2004-11-09<br>Units<br>mg/Kg                         | Spike                    | Analyzed Prepared  Dilution  10  Percent                 | By: MT By: MT  Recover Limits 0-160                       |
| Sample: 4798 Analysis: QC Batch: Prep Batch: Parameter GRO Surrogate Frifluorotoluer Bromofluoro  | 34 - MW-9 20' TPH GRO 13931 12304 Flag              |  | Analytica Date Anal Date Prep RL Result <1.00  Result 1.09 1.00 | yzed: ared:  Units  mg/Kg  mg/Kg | 2004-11-09<br>2004-11-09<br>Units<br>mg/Kg<br>Dilution<br>10<br>10 | Spike<br>Amount<br>0.100 | Analyzed Prepared  Dilution 10  Percent Recovery 109 100 | By: MT By: MT  RI  0.100  Recovery Limits 0 - 160 0 - 174 |
| Sample: 4798 Analysis: QC Batch: Prep Batch: Parameter GRO Surrogate Frifluorotoluer Bromofluoro  | Flag  TPH GRO 13931 12304  Flag  Flag  6 - MW-9 30' |  | Analytica Date Anal Date Prep RL Result <1.00  Result 1.09      | yzed: ared:  Units mg/Kg mg/Kg   | 2004-11-09<br>2004-11-09<br>Units<br>mg/Kg<br>Dilution             | Spike<br>Amount<br>0.100 | Analyzed Prepared  Dilution 10  Percent Recovery 109     | By: MT  RI  0.100  Recovery  Limits  0 - 160  0 - 174     |

| <b>Report</b> | Date: | November | 16, | 2004 |
|---------------|-------|----------|-----|------|
|               |       |          |     |      |

TNM Monument 18

Work Order: 4110905 TNM Monument 18 Page Number: 4 of 11 Monument-Lea Co.,NM

|              |      | RL       |       |                   |  |
|--------------|------|----------|-------|-------------------|--|
| Parameter    | Flag | Result   | Units | Dilution          | RL.  |
| Benzene      |      | < 0.0100 | mg/Kg | 10                | 0.00100  |
| Toluene      |      | < 0.0100 | mg/Kg | 10                | 0.00100  |
| Ethylbenzene |      | < 0.0100 | mg/Kg | 10                | 0.00100  |
| Xylene       |      | < 0.0100 | mg/Kg | 10                | 0.00100  |
|              |      |          |       | T - ATT V MANAGEM | TWO THE TOTAL PROPERTY OF THE TOTAL PROPERTY |

|                              |      |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 0.749  | mg/Kg | 10       | 0.100  | 75       | 60.1 - 104 |
| 4-Bromofluorobenzene (4-BFB) |      | 0.698  | mg/Kg | 10       | 0.100  | 70       | 63.1 - 105 |

### Sample: 47986 - MW-9 307

Analysis: TPH DRO QC Batch: 14045 Prep Batch: 12412 Analytical Method: Mod. 8015B Date Analyzed: 2004-11-14 Date Prepared: 2004-11-09

Prep Method: N/A Analyzed By: BP Prepared By: DS

|           |                          | RL     |       |          |      |
|-----------|--------------------------|--------|-------|----------|------|
| Parameter | Flag                     | Result | Units | Dilution | RL   |
| DRO       | volence and a control of | < 50.0 | mg/Kg | 1        | 50.0 |

| _             |      |        |       |          | Spike  | Percent  | Recovery     |
|---------------|------|--------|-------|----------|--------|----------|--------------|
| Surrogate     | Flag | Result | Units | Dilution | Amount | Recovery | Limits       |
| n-Triacontane |      | 152    | mg/Kg | I        | 150    | 101      | 69.8 - 106.1 |

### Sample: 47986 - MW-9 30'

Analysis: TPH GRO QC Batch: 13931 Prep Batch: 12304 Analytical Method: S 8015B
Date Analyzed: 2004-11-09
Date Prepared: 2004-11-09

Prep Method: S 5035 Analyzed By: MT Prepared By: MT

| Parameter | Flag | RL<br>Result | Units |  | lution  | RL       |
|-----------|------|--------------|-------|--|---------|----------|
| GRO       |      | <1.00        | mg/Kg | TO STATE OF THE ST | 10      | 0.100    |
|           |      |              |       | Spike  | Percent | Recovery |

|                              |      |        |       |          | Spike  | Percent  | Recovery |
|------------------------------|------|--------|-------|----------|--------|----------|----------|
| Surrogate                    | Flag | Result | Units | Dilution | Amount | Recovery | Limits   |
| Trifluorotolucne (TFT)       |      | 1.00   | mg/Kg | 10       | 0.100  | 100      | 0 - 160  |
| 4-Bromofluorobenzene (4-BFB) |      | 0.919  | mg/Kg | 10       | 0.100  | 92       | 0 - 174  |
|                              |      |        |       |          |        | winar.c. |          |

### Sample: 47988 - MW-10 15'

Analysis: BTEX QC Batch: 13926 Prep Batch: 12304

Received by OCD: 6/8/2021 12:21:29 PM

Analytical Method: S 8021B
Date Analyzed: 2004-11-09
Date Prepared: 2004-11-09

Prep Method: S 5035 Analyzed By: MT Prepared By: MT

|           |  | RL   |             |          |         |
|-----------|--|--|-------------|----------|---------|
| Parameter | Flag   | Result   | Units       | Dilution | RL      |
| Benzene   |  | < 0.0100   | mg/Kg       | 10       | 0.00100 |
| Toluene   | CHANGE TO LANCE TO LA | < 0.0100   | mg/Kg       | 10       | 0.00100 |
| 11 1 1111 |  | T THE TAXABLE PROPERTY OF THE PARTY OF THE P | - I AMENANA | P4117-1  |         |

continued . . .

Received by OCD: 6/8/2021 12:21:29 PM

Report Date: November 16, 2004

TNM Monument 18

Work Order: 4110905 TNM Monument 18

Page Number: 5 of 11 Monument-Lea Co.,NM

sample 47988 continued . . .

|   | lag                  | Ri<br>Resul                   | _                  | Units    | Di              | lution              | RL.                      |
|---|----------------------|-------------------------------|--------------------|----------|-----------------|---------------------|--------------------------|
| Ethylbenzene<br>Xylene                              | 17 17 - WATER AND BE |                               | <0.0100<br><0.0100 |          | 10<br>10        |                     | 0.00100<br>0.00100       |
| Surrogate   | Flag                 | g Result                      | Units              | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits       |
| Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) |                      | 0.764 <sup>***</sup><br>0.700 | mg/Kg<br>mg/Kg     | 10<br>10 | 0.100<br>0.100  | 76<br>70            | 60.1 - 104<br>63.1 - 105 |

Sample: 47988 - MW-10 15'

Analysis: TPH DRO QC Batch: 14045 Prep Batch: 12412

Analytical Method: Mod. 8015B Date Analyzed: 2004-11-14 Date Prepared: 2004-11-09

Prep Method: N/A
Analyzed By: BP
Prepared By: DS

 Parameter
 Flag
 Result
 Units
 Dilution
 RL

 DRO
 <50.0</td>
 mg/Kg
 1
 50.0

| _             |      |        |       |          | Spike  | Percent  | Recovery     |
|---------------|------|--------|-------|----------|--------|----------|--------------|
| Surrogate     | Flag | Result | Units | Dilution | Amount | Recovery | Limits       |
| n-Triacontane |      | 129    | mg/Kg | ]        | 150    | 86       | 69.8 - 106.1 |

Sample: 47988 - MW-10 15'

Analysis: TPH GRO QC Batch: 13931 Prep Batch: 12304 Analytical Method: S 8015B
Date Analyzed: 2004-11-09
Date Prepared: 2004-I1-09

Prep Method: S 5035 Analyzed By: MT Prepared By: MT

 Parameter
 Flag
 Result
 Units
 Dilution
 RL

 GRO
 <1.00</td>
 mg/Kg
 10
 0.100

 Spike
 Percent
 Recovery

| Surrogate                    | Flag          | Result | Units | Dilution | Spike<br>Amount    | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|---------------|--------|-------|----------|--------------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |               | 1.01   | mg/Kg | 10       | 0.100              | 101                 | 0 - 160            |
| 4-Bromofluorobenzene (4-BFB) | The Francisco | 0.917  | mg/Kg | 10       | 0.100              | 92                  | 0 - 174            |
|                              |               |        |       |          | 7/07/47 (08/4/07/1 | - VALKHER AVAA      |                    |

Sample: 47990 - MW-10 30'

Analysis: BTEX QC Batch: 13926 Prep Batch: 12304 Analytical Method: S 8021B
Date Analyzed: 2004-11-09
Date Prepared: 2004-11-09

Prep Method: S 5035 Analyzed By: MT Prepared By: MT Released to Imaging: 6/8/2021 2:45:07 PM

RLParameter Flag Result Units Dilution RLBenzene < 0.0100 mg/Kg 10 0.00100 Toluene < 0.0100 mg/Kg 10 0.00100

continued ...

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sample 47990 continued ...

| Parameter                   | Clas |          | RL       |       | W V . A. |        | . ,      |            |
|-----------------------------|------|----------|----------|-------|----------|--------|----------|------------|
|                             | Flag |          | Result   | •     | Units    | Di.    | lution   | RL         |
| Ethylbenzene                |      |          | < 0.0100 | )     | mg/K.g   |        | 10       | 0.00100    |
| Xylene                      |      | < 0.0100 |          | mg/Kg | 10       |        | 0.00100  |            |
|                             |      |          |          |       |          | Spike  | Percent  | Recovery   |
| Surrogate                   | Fla  | ng       | Result   | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)      |      |          | 0.774    | mg/Kg | 10       | 0.100  | 77       | 60.1 - 104 |
| 4-Bromofluorobenzene (4-BFE | 3)   |          | 0.733    | mg/Kg | 10       | 0.100  | 73       | 63.1 - 105 |

Sample: 47990 - MW-10 30'

Analysis: TPH DRO QC Batch: 14045 Prep Batch: 12412 Analytical Method: Mod. 8015B
Date Analyzed: 2004-11-14
Date Prepared: 2004-11-09

Prep Method: N/A
Analyzed By: BP
Prepared By: DS

| _             |      |        |       |          | Spike  | Percent  | Recovery     |
|---------------|------|--------|-------|----------|--------|----------|--------------|
| Surrogate     | Flag | Result | Units | Dilution | Amount | Recovery | Limits       |
| n-Triacontane |      | 123    | mg/Kg | I        | 150    | 82       | 69.8 - 106.1 |

Sample: 47990 - MW-10 30'

Analysis: TPH GRO QC Batch: 13931 Prep Batch: 12304 Analytical Method: S 8015B
Date Analyzed: 2004-11-09
Date Prepared: 2004-11-09

Prep Method: S 5035 Analyzed By: MT Prepared By: MT

 Parameter
 Flag
 Result
 Units
 Dilution
 RL

 GRO
 <1.00</td>
 mg/Kg
 10
 0.100

 Spike
 Percent
 Recovery

|                              |           |        |       |               | Spike  | Percent  | Recovery                  |
|------------------------------|-----------|--------|-------|---------------|--------|----------|---------------------------|
| Surrogate                    | Flag      | Result | Units | Dilution      | Amount | Recovery | Limits                    |
| Trifluorotoluene (TFT)       |           | 1.04   | mg/Kg | 10            | 0.100  | 104      | 0 - 160                   |
| 4-Bromofluorobenzene (4-BFB) | 177777414 | 0.987  | mg/Kg | 10            | 0.100  | 99       | 0 - 174                   |
|                              |           |        | ***** | Postalization |        |          | T TEITY LANGE AND A CONT. |

Method Blank (1) QC Batch: 13926

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| Parameter    | Flag                                    | Result  | Units  | RL.   |
|--------------|---|---|--|-------|
| Benzene      | , | < 0.0100  | mg/Kg  | 0,001 |
| Toluene      |   | < 0.0100  | mg/Kg  | 0.001 |
| Ethylbenzene |   | < 0.0100  | mg/Kg  | 0.001 |
| Xylene       | 7770774744                              | < 0.0100  | mg/Kg  | 0.001 |
|              |   | THE THE RESERVE AND ADDRESS OF THE PARTY OF | - V PM AT AT MAINTAINE TO A STATE OF THE STA |       |

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TNM Monument 18

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| Surrogate                    | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT)       |      | 0.906  | mg/Kg | 10       | 0,100           | 91                  | 74.5 - 114         |
| 4-Bromofluorobenzene (4-BFB) |      | 0.467  | mg/Kg | 10       | 0.100           | 47                  | 36.6 - 112         |

Method Blank (1) QC Batch: 13931

| Parameter                    | Flag                                    |        | Result |          | Units           |                     |                    |
|------------------------------|---|--------|--------|----------|-----------------|---------------------|--------------------|
| GRO                          |   | 2.02   |        |          | mg/K            | 0.1                 |                    |
| Surrogate                    | Flag                                    | Result | Units  | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
| Trifluorotoluene (TFT)       | 1                                       | 1.22   | mg/Kg  | 10       | 0.100           | 122                 | 81.8 - 109         |
| 4-Bromofluorobenzene (4-BFB) | *************************************** | 0.605  | mg/Kg  | 10       | 0.100           | 60                  | 50.7 - 113         |

Method Blank (1) QC Batch: 14045

| Parameter     | <del> </del> |        |       | Result   |  | Units    | RL           |  |  |
|---------------|--------------|--------|-------|----------|--|----------|--------------|--|--|
| DRO           |              |        |       | <50.0    | THE CASE OF THE CA | mg/Kg    | 50           |  |  |
|               |              |        |       |          | Spike  | Percent  | Recovery     |  |  |
| Surrogate     | Flag         | Result | Units | Dilution | Amount   | Recovery | Limits       |  |  |
| n-Triacontane |              | 120    | mg/Kg | I        | 150  | 80       | 69.8 - 106.1 |  |  |

Laboratory Control Spike (LCS-1) QC Batch: 13926

|              | LCS    | LCSD   |       |      | Spike  | Matrix   |      |     | Rec.       | RPD   |
|--------------|--------|--------|-------|------|--------|----------|------|-----|------------|-------|
| Param        | Result | Result | Units | Dil. | Amount | Result   | Rec. | RPD | Limit      | Limit |
| Benzene      | 0.962  | 0.978  | mg/Kg | 10   | 0.100  | < 0.0333 | 96   | 2   | 79.8 - 114 | 9,4   |
| Toluene      | 0.918  | 0.936  | mg/Kg | 10   | 0.100  | < 0.0353 | 92   | 2   | 79.7 - 115 | 7.5   |
| Ethylbenzene | 0.906  | 0.928  | mg/Kg | 10   | 0.100  | < 0.0339 | 91   | 2   | 78.7 - 116 | 8     |
| Xylene       | 2.57   | 2.64   | mg/Kg | 10   | 0.300  | < 0.103  | 86   | 3   | 78.7 - 118 | 7.9   |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              | LCS    | LCSD   |       |      | Spike  | LC\$ | LCSD | Rec.       |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 0.927  | 0.912  | mg/Kg | 10   | 0.100  | 93   | 91   | 76.6 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 0.791  | 0.785  | mg/Kg | 10   | 0.100  | 79   | 78   | 72.2 - 111 |

Laboratory Centrol Spike (LCS-1) QC Batch: 13931

| Param | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | Matrix<br>Result | Rec. | RPD | Rec.<br>Limit | RPD<br>Limit |
|-------|---------------|----------------|-------|------|-----------------|------------------|------|-----|---------------|--------------|
| GRO   | 10.2          | 9.88           | mg/Kg | IO   | 1.00            | < 0.381          | 102  | 3   | 72 - 124      | 21           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result,

<sup>&</sup>lt;sup>1</sup>High surrogate recovery due to unknown anomaly. ICV/CCV show the method to be in control.

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| Surrogate                    | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|------------------------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| Trifluorotoluene (TFT)       | 1.06          | 1.07           | mg/Kg | 10   | 0.100           | 106         | 107          | 80.4 - 113    |
| 4-Bromoffuorobenzene (4-BFB) | 0.931         | 1.00           | mg/Kg | 10   | 0.100           | 93          | 100          | 72.2 - 119    |

Laboratory Control Spike (LCS-I) QC Batch: 14045

|       |   | LCS    | LCSD   |        |      | Spike  | Matrix |      |     | Rec.         | RPD   |
|-------|---|--------|--------|--------|------|--------|--------|------|-----|--------------|-------|
| Param |   | Result | Result | Units  | Dil. | Amount | Result | Rec. | RPD | Limit        | Limit |
| DRO   | 2 | 198    | 192    | mg/K.g | ì    | 250    | <12.0  | 79   | 3   | 78.7 - 117.6 | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Sштоgate      | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount | LCS<br>Rec. | LCSD<br>Rec. | Rec.<br>Limit |
|---------------|---------------|----------------|-------|------|-----------------|-------------|--------------|---------------|
| n-Triacontane | 132           | 333            | mg/Kg | 1    | 150             | 88          | 89           | 69.8 - 106.1  |

Standard (CCV-1) QC Batch: 13926

| Param        | Flag | Units  | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|--------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/Kg  | 0.100                 | 0,101                  | 101                         | 85 - 115                      | 2004-11-09       |
| Toluene      |      | mg/K.g | 0.100                 | 0.0947                 | 95                          | 85 - 115                      | 2004-11-09       |
| Ethylbenzene |      | mg/K.g | 0.100                 | 0.0965                 | 96                          | 85 - 115                      | 2004-11-09       |
| Xylene       |      | mg/Kg  | 0.300                 | 0.279                  | 93                          | 85 - 115                      | 2004-11-09       |

Standard (CCV-2) QC Batch: 13926

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Benzene      |      | mg/Kg | 0.100                 | 0.0998                 | 100                         | 85 - 115                      | 2004-11-09       |
| Toluene      |      | mg/Kg | 0.100                 | 0.0956                 | 96                          | 85 - 115                      | 2004-11-09       |
| Ethylbenzene |      | mg/Kg | 0.100                 | 0.0937                 | 94                          | 85 - 115                      | 2004-11-09       |
| Xylene       |      | mg/Kg | 0.300                 | 0.267                  | 89                          | 85 - 115                      | 2004-11-09       |

Standard (CCV-1) QC Batch: 13931

| Param | Flag    | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-------|---------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO   | 7777777 | mg/L  | 1.00                  | 1.00                   | 100                         | 85 - 115                      | 2004-11-09       |

Standard (CCV-2) QC Batch: 13931

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<sup>&</sup>lt;sup>2</sup>LCS is within limits and RPD is within limits.

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|---|---------|-----------------|-----------------------|--------------------------------|---|---|--------------------------------|--|
| Param<br>GRO                                      | Fiag    | Units<br>mg/L   | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc.<br>1.00 | CCVs<br>Percent<br>Recovery                 | Percent<br>Recovery<br>Limits<br>85-115 | Date<br>Analyzed<br>2004-11-09 |  |
| Standard .  | (CCV-1) | QC Batch; 14045 |                       |                                |   |   |                                |  |
|   |         |                 | CCVs                  | CCVs                           | CCVs  | Percent                                 |                                |  |
|   |         |                 | True                  | Found                          | Percent                                     | Recovery                                | Date                           |  |
| Param   | Flag    | Units           | Conc.                 | Conc.                          | Recovery                                    | Limits                                  | Analyzed                       |  |
| DRO   | 1       | mg/Kg           | 250                   | 238                            | 95  | 75 - 125                                | 2004-11-14                     |  |
| Standard (  | (CCV-2) | QC Batch: 14045 |                       |                                |   |   |                                |  |
|   |         |                 | CCV <sub>5</sub>      | CCVs                           | CCVs  | Percent                                 |                                |  |
|   |         |                 | True                  | Found                          | Percent                                     | Recovery                                | Date                           |  |
| Param   | Flag    | Units           | Conc.                 | Conc.                          | Recovery                                    | Limits                                  | Analyzed                       |  |
| DRO   |         | mg/Kg           | 250                   | 229                            | 91  | 75 - 125                                | 2004-11-14                     |  |
| Standard (  | (CCV-3) | QC Batch: 14045 |                       |                                |   |   |                                |  |
|   |         |                 | CCVs                  | $CCV_{\$}$                     | CCVs  | Percent                                 |                                |  |

Found

Conc.

190

Percent

Recovery

76

Recovery

Limits

75 - 125

Date

Analyzed

2004-11-14

True

Conc.

250

Flag

Units

mg/Kg

Param

DRO

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|        | DAN  | 0                                      | SINES            | Hood:                        |                |  | , |                  |            | . 1                    | 309/2808              | :80g                                   |          |                 |                             |                |              |          | ********* |            |        |          | *********** | ,                                      | ~~.  | 15 de 17 18 18 18 18 18 18 18 18 18 18 18 18 18  | 7 Special 1                                      |   |
|        | YAN  | 41                                     | ANALYSIS REQUEST | Circle or Specify Method No. |                |  |   | 929              |            |                        | 2 API 850             |  |          | 10 TA.AAB 115   | \                           |                | $\vdash$     |          |           |            | -      | $\vdash$ |             | $\left  \frac{1}{\hat{y}_{2}} \right $ | A.   | (52/5 to 119)  | Cleack If Special Reporting<br>Limits Are Meeded |   |
|        | 10D  | . !                                    | YSIS             | F                            |                |  |   |                  |            |                        | ebroite994            | toe<br>Koort                           | -        |                 | _                           |                |              | -        |           | POR LANDON |        |          |             | REMARKS                                | A.   | 12/2   | (L.)   | -   |
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|        | CHAIN-OF-CUSTODY AND ANALYSIS REQUEST                                | ₹                                      |                  | -                            | 7 0054         |  |   |                  |            |                        | QA RIGIDIA            | FIPE                                   |          |                 | ******                      | <u> </u>       |              |          |           |            |        |          |             | SS                                     |  | 7  |  | W.  |
|        |  |  |                  | (0v)                         | 2- <i>03</i>   | 7)_                                      | 5109                                    | de               | 17         | 500                    | 9510C                 | -                                      |          | <b>×</b>        |                             | メ              |              | ᅩ        |           | ×          | ļ      | ×        | 8           | AB USE                                 | <b>8</b>   | ) <sub>2</sub>   | Temp 7.5<br>Log-in Review                        | ľ   |
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| t,     | <del>!</del>   |  |                  | Ī                            | T              | Τ  | Ţ.,                                     | T                |            | <del></del>            |                       | MIT                                    | Q://     | 11.05           | 5:11                        | 11.26          | 1.25         | 11.5     | 1.30      | 132        | 36.1   | 8.7      | 7.55        | <u> </u>                               | <u></u>  | <u> </u>   | T  | t   |
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|        | SU MEET<br>FI Pase<br>Talka  | F. S.                                  |                  |                              |                |  | j                                       | 0/               |            | JVE.                   | **********            | NON                                    |          |                 |                             |                | CTTINGATURAS |          |           |            |        |          |             | Tarre:                                 | iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii  |  | Time:<br>4:04                                    | A 4 . A.  |
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|        | 313  | 2                                      | ā.               | E.                           |                |  | 2                                       | 3                |            | MATHIX                 | 3500                  | HIY.                                   |          |                 |                             |                | -            | -        | $\dashv$  |            |        |          |             |  | 3  |  | 200  | drait c   |
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|        | <b>₹</b> [   | 택 ]                                    |                  |                              | 1/4            |  |   |                  | 7          | SA3                    | NIATNO                | ⊃ # \                                  |          |                 | _                           | -              | _            | _        |           |            | -      | -        |             | Ě                                      | 天寶   |  | Hage .   | ) <u> </u>  |
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|        |  | 3                                      |                  | Lat.                         |                |  |   |                  | 7          |                        | ω <sub></sub>         |  |          |                 |                             |                |              |          |           |            | 25     |          |             | Time:                                  | T. James   |  | Time:  | er# to  |
|        |  | •                                      | 5                | Hay Story                    | 1 10           | 1  |   |                  |            |                        | FIELD CODE            |  | :        |                 | <u>,</u>                    | -  -           | ,            | _        |           | L          |        | ò        | 30          |  | <u>.</u>   | J.U  |  | ritesm  |
| 60     |  |  | MINS             | (Sireek, City, 2(p)          | 1 5            | 3  |   | 7,7              |            |                        | FIEL                  |  | 1        | 9               | 15                          | 20             | X            | R        | ٦.        | - 1        | M      | - 30     | 10          |  | Date:  | 11/13  | Date:  | les ad  |
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| Avens  | Lubback, Texas 79424<br>Tef (806) 784-1296                           | 378-12                                 | Ţ                | <u> </u>                     |                | Invoice to:<br>(if different from above) |   | 1                | (Classiff) |                        |                       |  | MWG      | MWG             | mmg                         | mmg            | MWY          | MWG-     | mw 10-    | -almwl     | MIDIO  | almu     | MW10        | 1                                      | 7 3  | AND THE PARTY OF T |  | oles o  |
| adean  | BCK. 1   | (1909)                                 | Матне            |                              | ersoft         | From                                     |   | catig            | 7          |                        |                       | _                                      | -}       | <del>-}</del> - | -}                          | - }            |              |          | _         | -          | -}     | 1        |             |  | Sta party  | 3  | řá p   | Sam   |
| 101 Ab | 营产,  | <br>                                   | Сотралу мате:    | Address:                     | Contact Person | Invoice to:<br>(if different             | Project #:                              | Project Location |            |                        | LAB USE               | ŠĘ,                                    | 7981     | 60              | $\mathcal{G}_{\mathcal{G}}$ | 20/            | 3            | 00       | ة<br>مرا  | S.         | 2      | 8        | 2           | Hellingus Specifor.                    | Parks and Delivery of the Control of | 3  | Hekingurshed by:                                 | Submittal of samples constitutes agreement to Terms and Condition |
| 6      |  | ,                                      | 503              | Age                          | 5              | P P                                      | Proj                                    | Proj             |            |                        | 7 🗓                   |  | -        |                 |                             |                |              |          |           |            |        |          |             |  | Relind   |  | Je je  | Subn  |

# **Analytical Report 466779**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Camille Bryant
Plains TNM Monument 18

19-JUL-13

Collected By: Client





### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-14-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

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Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





19-JUL-13

Project Manager: Camille Bryant
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): 466779

**Plains TNM Monument 18**Project Address: Lea County, NM

### **Camille Bryant**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 466779. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 466779 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectiony,

**Kelsey Brooks** 

Project Manager

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# **Sample Cross Reference 466779**



## PLAINS ALL AMERICAN EH&S, Midland, TX

Plains TNM Monument 18

| Sample Id       | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|-----------------|--------|-----------------------|--------------|---------------|
| North S/W @ 14' | S      | 07-12-13 15:30        | N/A          | 466779-001    |



### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Plains TNM Monument 18

Project ID: Report Date: 19-JUL-13 Work Order Number(s): 466779 Date Received: 07/16/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-918682 BTEX by EPA 8021

SW8021BM

Batch 918682, Benzene recovered below QC limits in the Matrix Spike.

Samples affected are: 466779-001.

The Laboratory Control Sample for Benzene is within laboratory Control Limits



# Hits Summary 466779



## PLAINS ALL AMERICAN EH&S, Midland, TX

Plains TNM Monument 18

Project Location: Lea County, NM

# **Certificate of Analysis Summary 466779**

### PLAINS ALL AMERICAN EH&S, Midland, TX



Page 157 of 613

**Project Id:** 

**Contact:** Camille Bryant

**Project Name: Plains TNM Monument 18** 

**Date Received in Lab:** Tue Jul-16-13 01:06 pm

**Report Date:** 19-JUL-13

**Project Manager:** Kelsey Brooks

|            |  |   |   | 1 Toject Manager.   | Reisey Brooks |   |
|------------|--|---|---|---|---------------|---|
| Lab Id:    | 466779-001   |   |   |   |               |   |
| Field Id:  | North S/W @ 14'  |   |   |   |               |   |
| Depth:     |  |   |   |   |               |   |
| Matrix:    | SOIL   |   |   |   |               |   |
| Sampled:   | Jul-12-13 15:30  |   |   |   |               |   |
| Extracted: | Jul-18-13 09:52  |   |   |   |               |   |
| Analyzed:  | Jul-18-13 18:08  |   |   |   |               |   |
| Units/RL:  | mg/kg RL   |   |   |   |               |   |
|            | ND 0.00199   |   |   |   |               |   |
|            | ND 0.00398   |   |   |   |               |   |
|            | ND 0.00199   |   |   |   |               |   |
|            | ND 0.00398   |   |   |   |               |   |
|            | ND 0.00199   |   |   |   |               |   |
|            | ND 0.00199   |   |   |   |               |   |
|            | ND 0.00199   |   |   |   |               |   |
| Extracted: |  |   |   |   |               |   |
| Analyzed:  | Jul-18-13 16:45  |   |   |   |               |   |
| Units/RL:  | % RL   |   |   |   |               |   |
|            | 14.7 1.00  |   |   |   |               |   |
| Extracted: | Jul-18-13 11:25  |   |   |   |               |   |
| Analyzed:  | Jul-18-13 20:23  |   |   |   |               |   |
| Units/RL:  | mg/kg RL   |   |   |   |               |   |
| '          | ND 14.9  |   |   |   |               |   |
|            | ND 14.9  |   |   |   |               |   |
|            | ND 14.9  |   |   |   |               |   |
|            | ND 14.9  |   |   |   |               |   |
|            | Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Analyzed: | Field Id:     Depth:     Matrix:    SOIL Sampled:    Jul-12-13 15:30  Extracted:    Jul-18-13 09:52 Analyzed:    Jul-18-13 18:08 Units/RL:    mg/kg    RL     ND    0.00199     ND    0.00398     ND    0.00199     Extracted: Analyzed:    Jul-18-13 16:45 Units/RL:    %    RL     14.7    1.00  Extracted:    Jul-18-13 11:25 Analyzed:    Jul-18-13 20:23 Units/RL:    mg/kg    RL     ND    14.9     ND    14.9     ND    14.9 | Field Id: Depth: Matrix: SOIL Sampled: Jul-12-13 15:30  Extracted: Jul-18-13 09:52 Analyzed: Jul-18-13 18:08 Units/RL: mg/kg RL ND 0.00199 ND 0.00398 ND 0.00199 Extracted: Analyzed: Jul-18-13 16:45 Units/RL: % RL 14.7 1.00  Extracted: Jul-18-13 11:25 Analyzed: Jul-18-13 20:23 Units/RL: mg/kg RL ND 14.9 ND 14.9 ND 14.9 ND 14.9 | Field Id: Depth: Matrix: SOIL Sampled: Jul-12-13 15:30  Extracted: Jul-18-13 09:52 Analyzed: Jul-18-13 18:08 Units/RL: mg/kg RL ND 0.00199 ND 0.00398 ND 0.00199 Extracted: Analyzed: Jul-18-13 16:45 Units/RL: % RL 14.7 1.00  Extracted: Analyzed: Jul-18-13 11:25 Analyzed: Jul-18-13 20:23 Units/RL: mg/kg RL ND 14.9 ND 14.9 ND 14.9 ND 14.9 | Lab Id:       | Field Id: Depth: Matrix: SOIL Sampled: Jul-12-13 15:30  Extracted: Jul-18-13 18:08 Units/RL: mg/kg RL  ND 0.00199  ND 0.00398  ND 0.00199  ND 0.00199  ND 0.00199  ND 0.00199  Extracted: Analyzed: Jul-18-13 16:45 Units/RL: % RL  14.7 1.00  Extracted: Jul-18-13 11:25 Analyzed: Jul-18-13 12:25 Analyzed: Jul-18-13 20:23 Units/RL: mg/kg RL  ND 14.9  

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks Project Manager

## Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- RL Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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| 9701 Harry Hines Blvd, Dallas, TX 75220     | (214) 902 0300 | (214) 351-9139 |
| 5332 Blackberry Drive, San Antonio TX 78238 | (210) 509-3334 | (210) 509-3335 |
| 2505 North Falkenburg Rd, Tampa, FL 33619   | (813) 620-2000 | (813) 620-2033 |
| 12600 West I-20 East, Odessa, TX 79765      | (432) 563-1800 | (432) 563-1713 |
| 6017 Financial Drive, Norcross, GA 30071    | (770) 449-8800 | (770) 449-5477 |
| 3725 E. Atlanta Ave, Phoenix, AZ 85040      | (602) 437-0330 |                |



# Form 2 - Surrogate Recoveries

**Project Name: Plains TNM Monument 18** 

Work Orders: 466779, Project ID:

Lab Batch #: 918682 Sample: 466779-001 / SMP Batch: 1 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/18/13 18:08 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|--|--|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |  |  |
| Analytes   |                          |                       | [D]            |                         |       |  |  |  |  |
| 1,4-Difluorobenzene                                      | 0.0295                   | 0.0300                | 98             | 80-120                  |       |  |  |  |  |
| 4-Bromofluorobenzene                                     | 0.0266                   | 0.0300                | 89             | 80-120                  |       |  |  |  |  |

Lab Batch #: 918771 Sample: 466779-001 / SMP Batch: 1 Matrix: Soil

| Units: mg/kg Date Analyzed: 07/18/13 20:23 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| TPH by SW8015 Mod                          | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                        |                       | [D]            |                         |       |
| 1-Chlorooctane                             | 75.7                   | 99.1                  | 76             | 70-135                  |       |
| o-Terphenyl                                | 46.7                   | 49.6                  | 94             | 70-135                  |       |

Lab Batch #: 918682 Sample: 641245-1-BLK / BLK Batch: 1 Matrix: Solid

| Units: mg/kg Date Analyzed: 07/17/13 20:26 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021                           | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                        | 0.0297                 | 0.0300                | 99             | 80-120                  |       |
| 4-Bromofluorobenzene                       | 0.0247                 | 0.0300                | 82             | 80-120                  |       |

Lab Batch #: 918771 Sample: 641277-1-BLK / BLK Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/18/13 11:49 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
| TPH by SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| Analytes   |                          |                       |                       |                         |       |  |
| 1-Chlorooctane   | 77.0                     | 100                   | 77                    | 70-135                  |       |  |
| o-Terphenyl  | 48.0                     | 50.0                  | 96                    | 70-135                  |       |  |

Lab Batch #: 918682 Sample: 641245-1-BKS / BKS Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/17/13 19:23 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
| Analytes   |                          |                       | [D]            |                         |       |  |  |
| 1,4-Difluorobenzene                                      | 0.0340                   | 0.0300                | 113            | 80-120                  |       |  |  |
| 4-Bromofluorobenzene                                     | 0.0289                   | 0.0300                | 96             | 80-120                  |       |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



# Form 2 - Surrogate Recoveries

**Project Name: Plains TNM Monument 18** 

Work Orders: 466779,

Lab Batch #: 918771

Sample: 641277-1-BKS / BKS

Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/18/13 12:10 | SU                     | RROGATE RI            | ECOVERY S             | STUDY                   |       |
|--|------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH by SW8015 Mod  Analytes                              | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane   | 88.9                   | 100                   | 89                    | 70-135                  |       |
| o-Ternhenyl  | 51.0                   | 50.0                  | 104                   | 70 125                  |       |

Lab Batch #: 918682 Sample: 641245-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/17/13 19:38 | mg/kg Date Analyzed: 07/17/13 19:38 SURROGATE RECOVERY STUDY |                       |             |                         |       |  |
|--|--|-----------------------|-------------|-------------------------|-------|--|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]                                       | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |  |
| Analytes   |  |                       | [D]         |                         |       |  |
| 1,4-Difluorobenzene                                      | 0.0349   | 0.0300                | 116         | 80-120                  |       |  |
| 4-Bromofluorobenzene                                     | 0.0356   | 0.0300                | 119         | 80-120                  |       |  |

Lab Batch #: 918771 Sample: 641277-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/18/13 12:32 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
| TPH by SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| Analytes   |                          |                       | [-]                   |                         |       |  |  |
| 1-Chlorooctane   | 87.4                     | 100                   | 87                    | 70-135                  |       |  |  |
| o-Terphenyl  | 52.0                     | 50.0                  | 104                   | 70-135                  |       |  |  |

**Lab Batch #:** 918682 **Sample:** 466585-006 S / MS **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/18/13 18:24 | Units: mg/kg Date Analyzed: 07/18/13 18:24 SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |
|--|---|-----------------------|----------------|-------------------------|-------|--|--|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]  | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
| Analytes   |   |                       | [D]            |                         |       |  |  |
| 1,4-Difluorobenzene                                      | 0.0299  | 0.0300                | 100            | 80-120                  |       |  |  |
| 4-Bromofluorobenzene                                     | 0.0354  | 0.0300                | 118            | 80-120                  |       |  |  |

| Units: mg/kg Date Analyzed: 07/18/13 18:40 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|
| BTEX by EPA 8021                           | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
| Analytes                                   |                          |                       | [D]            |                         |       |  |  |
| 1,4-Difluorobenzene                        | 0.0333                   | 0.0300                | 111            | 80-120                  |       |  |  |
| 4-Bromofluorobenzene                       | 0.0356                   | 0.0300                | 119            | 80-120                  |       |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 466779

Project ID:

Analyst: MAB

**Date Prepared:** 07/17/2013 **Batch #:** 1

**Date Analyzed:** 07/17/2013

**Lab Batch ID:** 918682

**Sample:** 641245-1-BKS

Matrix: Solid

| Units: mg/kg | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY |
|--------------|---|

| Units. mg ng     |                               |                       |                                 |                             |                       |   |                               |          |                         |                           |      |
|------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| BTEX by EPA 8021 | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes         |                               | [D]                   | [C]                             | [D]                         | [E]                   | Kesuit [F]                                | [0]                           |          |                         |                           |      |
| Benzene          | <0.000998                     | 0.0998                | 0.0904                          | 91                          | 0.0994                | 0.0809                                    | 81                            | 11       | 70-130                  | 35                        |      |
| Toluene          | < 0.00200                     | 0.0998                | 0.0884                          | 89                          | 0.0994                | 0.0814                                    | 82                            | 8        | 70-130                  | 35                        |      |
| Ethylbenzene     | <0.000998                     | 0.0998                | 0.0935                          | 94                          | 0.0994                | 0.0888                                    | 89                            | 5        | 71-129                  | 35                        |      |
| m_p-Xylenes      | < 0.00200                     | 0.200                 | 0.183                           | 92                          | 0.199                 | 0.176                                     | 88                            | 4        | 70-135                  | 35                        |      |
| o-Xylene         | <0.000998                     | 0.0998                | 0.0929                          | 93                          | 0.0994                | 0.0940                                    | 95                            | 1        | 71-133                  | 35                        |      |

Analyst: KAN Date Prepared: 07/18/2013 Date Analyzed: 07/18/2013

Lab Batch ID: 918771 Sample: 641277-1-BKS Batch #: 1 Matrix: Solid

| Units: mg/kg                       |                               | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY |                                 |                             |                       |   |                               |          |                         |                           |      |
|------------------------------------|-------------------------------|---|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| TPH by SW8015 Mod Analytes         | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B]                                     | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Tindiy tes                         |                               |   |                                 |                             |                       |   |                               |          |                         |                           |      |
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000  | 1060                            | 106                         | 1000                  | 982                                       | 98                            | 8        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000  | 856                             | 86                          | 1000                  | 914                                       | 91                            | 7        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes



### Form 3 - MS / MSD Recoveries

**Project Name: Plains TNM Monument 18** 



Work Order #:

Lab Batch ID:

**Reporting Units:** 

466779

mg/kg

918682

**QC- Sample ID:** 466585-006 S

Batch #:

Matrix: Soil

**Project ID:** 

07/18/2013 **Date Analyzed:** 

**Date Prepared:** 07/18/2013

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | <0.00200                          | 0.200                 | 0.130                          | 65                            | 0.200                 | 0.161                                    | 81                          | 21       | 70-130                  | 35                        | X    |
| Toluene                    | < 0.00399                         | 0.200                 | 0.160                          | 80                            | 0.200                 | 0.169                                    | 85                          | 5        | 70-130                  | 35                        |      |
| Ethylbenzene               | < 0.00200                         | 0.200                 | 0.163                          | 82                            | 0.200                 | 0.193                                    | 97                          | 17       | 71-129                  | 35                        |      |
| m_p-Xylenes                | < 0.00399                         | 0.399                 | 0.307                          | 77                            | 0.400                 | 0.383                                    | 96                          | 22       | 70-135                  | 35                        |      |
| o-Xylene                   | < 0.00200                         | 0.200                 | 0.170                          | 85                            | 0.200                 | 0.206                                    | 103                         | 19       | 71-133                  | 35                        |      |



# **Sample Duplicate Recovery**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 466779

 Lab Batch #:
 918802
 Project ID:

 Date Analyzed:
 07/18/2013 16:45
 Date Prepared:
 07/18/2013
 Analyst:
 WRU

 QC- Sample ID:
 466970-001 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: % | SAMPLE / SAMPLE DUPLICATE RECOVERY |                                      |     |                           |      |  |
|--------------------|------------------------------------|--------------------------------------|-----|---------------------------|------|--|
|                    | Parent Sample<br>Result<br>[A]     | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |
| Analyte            |                                    | [2]                                  |     |                           |      |  |
| Percent Moisture   | 1.88                               | 1.88                                 | 0   | 20                        |      |  |

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

### Page 164 of 613

### **XENCO Laboratories**

# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 07/16/2013 01:06:00 PM

Work Order #: 466779

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

| Sample Receipt Checklist   |     | Comments |
|--|-----|----------|
| #1 *Temperature of cooler(s)?                                    | 1   |          |
| #2 *Shipping container in good condition?                        | Yes |          |
| #3 *Samples received on ice?                                     | Yes |          |
| #4 *Custody Seals intact on shipping container/ cooler?          | Yes |          |
| #5 Custody Seals intact on sample bottles?                       | Yes |          |
| #6 *Custody Seals Signed and dated?                              | Yes |          |
| #7 *Chain of Custody present?                                    | Yes |          |
| #8 Sample instructions complete on Chain of Custody?             | Yes |          |
| #9 Any missing/extra samples?                                    | No  |          |
| #10 Chain of Custody signed when relinquished/ received?         | Yes |          |
| #11 Chain of Custody agrees with sample label(s)?                | Yes |          |
| #12 Container label(s) legible and intact?                       | Yes |          |
| #13 Sample matrix/ properties agree with Chain of Custody?       | Yes |          |
| #14 Samples in proper container/ bottle?                         | Yes |          |
| #15 Samples properly preserved?                                  | Yes |          |
| #16 Sample container(s) intact?                                  | Yes |          |
| #17 Sufficient sample amount for indicated test(s)?              | Yes |          |
| #18 All samples received within hold time?                       | Yes |          |
| #19 Subcontract of sample(s)?                                    | Yes |          |
| #20 VOC samples have zero headspace (less than 1/4 inch bubble)? | N/A |          |
| #21 <2 for all samples preserved with HNO3,HCL, H2SO4?           | N/A |          |
| #22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?   | N/A |          |

| Analyst:    | PH D         | evice/Lot#:   |                         |
|-------------|--------------|---------------|-------------------------|
| Checklist c | ompleted by: | Kelsey Brooks | Date: <u>07/16/2013</u> |
| Checklist ı | reviewed by: | Kelsey Brooks | Date: 07/16/2013        |

#### Page Project Manager: Received by: Charlinguished by: Received by: ORDER #: (lab use only) LAB # (lab use only) Company Address: Company Name Project Manager: City/State/Zip: Sampler Signature: Telephone No: North S/W @ 14' FIELD CODE 2057 Commerce Nova Safety and Environmental 432,520.7720 Midland, TX 79703 Date Camille Bryant **Beginning Depth** I Ime Time Ending Depth Received by: Received by 7/12/2013 **Date Sampled** 15:30 Fax No: Time Sampled e-mail: Field Filtered 432.520.7701 Total # of Containers Odessa, Texas 79765 12600 West I-20 East cbryant@novatraining.cc Preservation & # of Containers HNO<sub>3</sub> henry@paalp.com H<sub>2</sub>SO<sub>4</sub> CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST NaOH Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None -16-13 13:06 Temperature Upon Receipt: Other (Specify) Date DW=Drinking Water SL=Sludge Soil Report Format: GW = Groundwater S=Soil/Solid Project Name: NP=Non-Potable **Project Loc:** 82 Time 8015M 8015B TPH: 418.1 Project #: TX 1005 TX 1006 PO #: Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) VOCs Free of Headspace? Sample Containers Intact? **Laboratory Comments:** Cations (Ca, Mg, Na, K) X Standard Anions (CI, SO4, Alkalinity) TOTAL TCLP: SAR / ESP / CEC Phone: 432-563-1800 Fax: 432-563-1713 Metals: As Ag Ba Cd Cr Pb Hg Se Analyze For: Volatiles Plains TNM Monument 18 Lea County, New Mexico BTEX 8021B/5030 or BTEX 8260 TRRP N.O.R.M. **~~~~~~** NP P ZZZZZZZ RUSH TAT (Pre-Schedule) 24, 48, 72 hrs Standard TAT Released to Imaging: 6/8/2021 2:45:07 PM Page 14 of 15 Final 1.000



## **XENCO Laboratories**

## Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 07/16/2013 01:06:00 PM

Work Order #: 466779

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

| Sample Receipt Checklist   |     | Comments |
|--|-----|----------|
| #1 *Temperature of cooler(s)?                                    | 1   |          |
| #2 *Shipping container in good condition?                        | Yes |          |
| #3 *Samples received on ice?                                     | Yes |          |
| #4 *Custody Seals intact on shipping container/ cooler?          | Yes |          |
| #5 Custody Seals intact on sample bottles?                       | Yes |          |
| #6 *Custody Seals Signed and dated?                              | Yes |          |
| #7 *Chain of Custody present?                                    | Yes |          |
| #8 Sample instructions complete on Chain of Custody?             | Yes |          |
| #9 Any missing/extra samples?                                    | No  |          |
| #10 Chain of Custody signed when relinquished/ received?         | Yes |          |
| #11 Chain of Custody agrees with sample label(s)?                | Yes |          |
| #12 Container label(s) legible and intact?                       | Yes |          |
| #13 Sample matrix/ properties agree with Chain of Custody?       | Yes |          |
| #14 Samples in proper container/ bottle?                         | Yes |          |
| #15 Samples properly preserved?                                  | Yes |          |
| #16 Sample container(s) intact?                                  | Yes |          |
| #17 Sufficient sample amount for indicated test(s)?              | Yes |          |
| #18 All samples received within hold time?                       | Yes |          |
| #19 Subcontract of sample(s)?                                    | Yes |          |
| #20 VOC samples have zero headspace (less than 1/4 inch bubble)? | N/A |          |
| #21 <2 for all samples preserved with HNO3,HCL, H2SO4?           | N/A |          |
| #22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?   | N/A |          |
|  |     |          |

| Analyst:     | PH D         | evice/Lot#:   |                         |
|--------------|--------------|---------------|-------------------------|
| Checklist co | ompleted by: | Kelsey Brooks | Date: 07/16/2013        |
| Checklist re | eviewed by:  | Kelsey Brooks | Date: <u>07/16/2013</u> |

# **Analytical Report 467303**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Camille Bryant
Plains TNM Monument 18

29-JUL-13

Collected By: Client





### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-14-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)





29-JUL-13

Project Manager: Camille Bryant
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): 467303

**Plains TNM Monument 18**Project Address: Lea County, NM

### **Camille Bryant**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 467303. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 467303 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectionly,

**Kelsey Brooks** 

Project Manager

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# **Sample Cross Reference 467303**



## PLAINS ALL AMERICAN EH&S, Midland, TX

Plains TNM Monument 18

| Sample Id | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------------|--------------|---------------|
| ESW @ 14' | S      | 07-24-13 13:50        | N/A          | 467303-001    |



### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Plains TNM Monument 18

Project ID: Report Date: 29-JUL-13 Work Order Number(s): 467303 Date Received: 07/25/2013

### Sample receipt non conformances and comments:

### Sample receipt non conformances and comments per sample:

None

### Analytical non conformances and comments:

Batch: LBA-919235 BTEX by EPA 8021

SW8021BM

Batch 919235, Benzene, Ethylbenzene, Toluene, m\_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 467303-001.

The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene,  $m_p$ -Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 919235, m\_p-Xylenes RPD was outside QC limits.

Samples affected are: 467303-001

Project Location: Lea County, NM

# Certificate of Analysis Summary 467303

### PLAINS ALL AMERICAN EH&S, Midland, TX



Page 171 of 613

Project Id:

Contact: Camille Bryant

**Project Name: Plains TNM Monument 18** 

**Date Received in Lab:** Thu Jul-25-13 09:26 am

**Report Date:** 29-JUL-13

Project Manager: Kelsey Brooks

|            |  |  |   | 1 Toject Manager.  | Reisey Brooks |  |
|------------|--|--|---|--|---------------|--|
| Lab Id:    | 467303-001   |  |   |  |               |  |
| Field Id:  | ESW @ 14'  |  |   |  |               |  |
| Depth:     |  |  |   |  |               |  |
| Matrix:    | SOIL   |  |   |  |               |  |
| Sampled:   | Jul-24-13 13:50  |  |   |  |               |  |
| Extracted: | Jul-25-13 10:00  |  |   |  |               |  |
| Analyzed:  | Jul-25-13 14:33  |  |   |  |               |  |
| Units/RL:  | mg/kg RL   |  |   |  |               |  |
|            | ND 0.00100   |  |   |  |               |  |
|            | 0.00245 0.00200  |  |   |  |               |  |
|            | 0.00385 0.00100  |  |   |  |               |  |
|            | 0.0103 0.00200   |  |   |  |               |  |
|            | 0.00303 0.00100  |  |   |  |               |  |
|            | 0.0133 0.00100   |  |   |  |               |  |
|            | 0.0196 0.00100   |  |   |  |               |  |
| Extracted: |  |  |   |  |               |  |
| Analyzed:  | Jul-25-13 15:15  |  |   |  |               |  |
| Units/RL:  | % RL   |  |   |  |               |  |
|            | 19.2 1.00  |  |   |  |               |  |
| Extracted: | Jul-26-13 11:24  |  |   |  |               |  |
| Analyzed:  | Jul-26-13 23:46  |  |   |  |               |  |
| Units/RL:  | mg/kg RL   |  |   |  |               |  |
|            | 15.8 14.9  |  |   |  |               |  |
|            | 119 14.9   |  |   |  |               |  |
|            | 29.1 14.9  |  |   |  |               |  |
|            | 164 14.9   |  |   |  |               |  |
|            | Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Analyzed: | Field Id:       ESW @ 14'         Depth:       Matrix:       SOIL         Sampled:       Jul-24-13 13:50         Extracted:       Jul-25-13 10:00         Analyzed:       Jul-25-13 14:33         Units/RL:       mg/kg       RL         ND       0.00100         0.00245       0.00200         0.0103       0.00200         0.0103       0.00100         0.0133       0.00100         Extracted:       Analyzed:         Jul-25-13 15:15       Units/RL:       %       RL         19.2       1.00         Extracted:       Jul-26-13 23:46       Units/RL:       mg/kg       RL         Units/RL:       mg/kg       RL       15.8       14.9         119       14.9       29.1       14.9 | Field Id: Depth: Matrix: SOIL Sampled: Jul-24-13 13:50  Extracted: Jul-25-13 10:00 Analyzed: Jul-25-13 14:33 Units/RL: MD 0.00100 0.00245 0.00200 0.00385 0.00100 0.0103 0.00200 0.00303 0.00100 0.0133 0.00100 0.0196 0.00100  Extracted: Analyzed: Jul-25-13 15:15 Units/RL: % RL 19.2 1.00  Extracted: Jul-26-13 11:24 Analyzed: Jul-26-13 23:46 Units/RL: mg/kg RL 15.8 14.9 119 14.9 29.1 14.9 | Field Id: Depth: Matrix: SOIL Sampled: Jul-24-13 13:50  Extracted: Jul-25-13 10:00 Analyzed: Jul-25-13 14:33 Units/RL: mg/kg RL  ND 0.00100 0.00245 0.00200 0.00385 0.00100 0.0103 0.00200 0.00303 0.00100 0.0133 0.00100 0.0133 0.00100 0.0196 0.00100  Extracted: Analyzed: Jul-25-13 15:15 Units/RL: % RL 19.2 1.00  Extracted: Jul-26-13 11:24 Analyzed: Jul-26-13 23:46 Units/RL: mg/kg RL 15.8 14.9 119 14.9 29.1 14.9 | Lab Id:       | Field Id: Depth: Matrix: SOIL Sampled: Jul-24-13 13:50  Extracted: Jul-25-13 10:00 Analyzed: Jul-25-13 14:33 Units/RL: mg/kg RL  ND 0:00100 0:00245 0:00200 0:00385 0:00100 0:00385 0:00100 0:00380 0:00100 0:00103 0:00200 0:00103 0:00100 0:00103 0:00100 0:00103 0:00100 0:00103 0:00100 0:00103 0:00100 0:00103 0:00100 0:00103 0:00100 0:00104 0:00100 0:00105 0:00100 0: |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Knishoah

Kelsey Brooks Project Manager

## Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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| 9701 Harry Hines Blvd , Dallas, TX 75220    | (214) 902 0300 | (214) 351-9139 |
| 5332 Blackberry Drive, San Antonio TX 78238 | (210) 509-3334 | (210) 509-3335 |
| 2505 North Falkenburg Rd, Tampa, FL 33619   | (813) 620-2000 | (813) 620-2033 |
| 12600 West I-20 East, Odessa, TX 79765      | (432) 563-1800 | (432) 563-1713 |
| 6017 Financial Drive, Norcross, GA 30071    | (770) 449-8800 | (770) 449-5477 |
| 3725 E. Atlanta Ave, Phoenix, AZ 85040      | (602) 437-0330 |                |



# Form 2 - Surrogate Recoveries

**Project Name: Plains TNM Monument 18** 

Work Orders: 467303,

Project ID:

**Lab Batch #:** 919235 **Sample:** 467303-001 / SMP

Batch: 1 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/25/13 14:33 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0275                   | 0.0300                | 92             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0356                   | 0.0300                | 119            | 80-120                  |       |

**Lab Batch #:** 919320 **Sample:** 467303-001 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/26/13 23:46 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane   | 85.2                     | 99.3                  | 86             | 70-135                  |       |
| o-Terphenyl  | 49.2                     | 49.7                  | 99             | 70-135                  |       |

Lab Batch #: 919235 Sample: 641566-1-BLK / BLK Batch: 1 Matrix: Solid

| Units: mg/kg Date Analyzed: 07/25/13 15:21 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021                           | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                        | 0.0283                   | 0.0300                | 94             | 80-120                  |       |
| 4-Bromofluorobenzene                       | 0.0278                   | 0.0300                | 93             | 80-120                  |       |

Lab Batch #: 919320 Sample: 641647-1-BLK / BLK Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/26/13 11:21 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]         |                         |       |
| 1-Chlorooctane   | 82.9                     | 100                   | 83          | 70-135                  |       |
| o-Terphenyl  | 46.6                     | 50.0                  | 93          | 70-135                  |       |

Lab Batch #: 919235 Sample: 641566-1-BKS / BKS Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/25/13 10:33 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0244                   | 0.0300                | 81             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0339                   | 0.0300                | 113            | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



# Form 2 - Surrogate Recoveries

**Project Name: Plains TNM Monument 18** 

Sample: 641647-1-BKS / BKS

Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/26/13 11:45 | SU                     | RROGATE RI            | ECOVERY        | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                        |                       | [D]            |                         |       |
| 1-Chlorooctane   | 84.3                   | 100                   | 84             | 70-135                  |       |
| o-Terphenyl  | 50.1                   | 50.0                  | 100            | 70-135                  |       |

Lab Batch #: 919235 Sample: 641566-1-BSD / BSD Batch: 1 Matrix: Solid

| Units: mg/kg Date Analyzed: 07/25/13 11:21 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021                           | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                        | 0.0296                 | 0.0300                | 99             | 80-120                  |       |
| 4-Bromofluorobenzene                       | 0.0292                 | 0.0300                | 97             | 80-120                  |       |

Lab Batch #: 919320 Sample: 641647-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/26/13 12:08 | Su                     | RROGATE RI            | ECOVERY               | STUDY                   |       |
|--|------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| Analytes   |                        |                       | [2]                   |                         |       |
| 1-Chlorooctane   | 128                    | 100                   | 128                   | 70-135                  |       |
| o-Terphenyl  | 62.6                   | 50.0                  | 125                   | 70-135                  |       |

**Lab Batch #:** 919235 **Sample:** 467191-002 S / MS **Batch:** 1 **Matrix:** Soil

| Units: mg/kg Date Analyzed: 07/25/13 13:29 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021                           | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                        | 0.0271                 | 0.0300                | 90             | 80-120                  |       |
| 4-Bromofluorobenzene                       | 0.0359                 | 0.0300                | 120            | 80-120                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 07/25/13 13:45 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021   | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0288                 | 0.0300                | 96             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0348                 | 0.0300                | 116            | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



## **BS / BSD Recoveries**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 467303

Project ID:

Analyst: MAB

**Date Prepared:** 07/25/2013

**Batch #:** 1

**Date Analyzed:** 07/25/2013

**Lab Batch ID:** 919235

**Sample:** 641566-1-BKS

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021 Analytes | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|---------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| Benzene                   | <0.00100                      | 0.100                 | 0.0807                          | 81                          | 0.100                 | 0.0979                                    | 98                            | 19       | 70-130                  | 35                        |      |
| Toluene                   | <0.00200                      | 0.100                 | 0.0806                          | 81                          | 0.100                 | 0.100                                     | 100                           | 21       | 70-130                  | 35                        |      |
| Ethylbenzene              | < 0.00100                     | 0.100                 | 0.0905                          | 91                          | 0.100                 | 0.111                                     | 111                           | 20       | 71-129                  | 35                        |      |
| m_p-Xylenes               | <0.00200                      | 0.200                 | 0.183                           | 92                          | 0.201                 | 0.218                                     | 108                           | 17       | 70-135                  | 35                        |      |
| o-Xylene                  | <0.00100                      | 0.100                 | 0.0977                          | 98                          | 0.100                 | 0.111                                     | 111                           | 13       | 71-133                  | 35                        |      |

Analyst: KAN Date Prepared: 07/26/2013 Date Analyzed: 07/26/2013

Lab Batch ID: 919320 Sample: 641647-1-BKS Batch #: 1 Matrix: Solid

| Units: mg/kg                       |                               | BLAN                  | K /BLANK S                      | SPIKE / E                   | BLANK S               | PIKE DUPL                                 | ICATE 1                       | RECOVE   | ERY STUD                | Y                         |      |
|------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| TPH by SW8015 Mod Analytes         | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000                  | 940                             | 94                          | 1000                  | 917                                       | 92                            | 2        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000                  | 768                             | 77                          | 1000                  | 815                                       | 82                            | 6        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



### Form 3 - MS / MSD Recoveries

**Project Name: Plains TNM Monument 18** 



Work Order #: 467303

Lab Batch ID:

**Date Analyzed:** 

**Reporting Units:** 

mg/kg

919235

**QC- Sample ID:** 467191-002 S

Batch #:

Matrix: Soil

**Project ID:** 

07/25/2013

**Date Prepared:** 07/25/2013

Analyst: MAB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | <0.00130                          | 0.130                 | 0.0725                         | 56                            | 0.129                 | 0.0567                                   | 44                          | 24       | 70-130                  | 35                        | X    |
| Toluene                    | < 0.00260                         | 0.130                 | 0.0742                         | 57                            | 0.129                 | 0.0576                                   | 45                          | 25       | 70-130                  | 35                        | X    |
| Ethylbenzene               | < 0.00130                         | 0.130                 | 0.0726                         | 56                            | 0.129                 | 0.0558                                   | 43                          | 26       | 71-129                  | 35                        | X    |
| m_p-Xylenes                | 0.00829                           | 0.260                 | 0.139                          | 50                            | 0.258                 | 0.0970                                   | 34                          | 36       | 70-135                  | 35                        | XF   |
| o-Xylene                   | 0.00629                           | 0.130                 | 0.0802                         | 57                            | 0.129                 | 0.0581                                   | 40                          | 32       | 71-133                  | 35                        | X    |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# **Sample Duplicate Recovery**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 467303

 Lab Batch #: 919275
 Project ID:

 Date Analyzed: 07/25/2013 15:15
 Date Prepared: 07/25/2013
 Analyst: WRU

 QC- Sample ID: 467298-001 D
 Batch #: 1
 Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY **Reporting Units:** % Sample Control **Percent Moisture** Parent Sample Duplicate RPD Limits Result Flag Result %RPD [A] [B] Analyte Percent Moisture 27.6 28.6 4 20

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

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### **XENCO Laboratories**

## Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 07/25/2013 09:26:00 AM

Work Order #: 467303

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

| Sample F  | Receipt Checklist   | Comments |
|---|---------------------|----------|
| #1 *Temperature of cooler(s)?                           | 2.5                 |          |
| #2 *Shipping container in good condition?               | Yes                 |          |
| #3 *Samples received on ice?                            | Yes                 |          |
| #4 *Custody Seals intact on shipping container/ coole   | r? Yes              |          |
| #5 Custody Seals intact on sample bottles?              | Yes                 |          |
| #6 *Custody Seals Signed and dated?                     | Yes                 |          |
| #7 *Chain of Custody present?                           | Yes                 |          |
| #8 Sample instructions complete on Chain of Custody     | ? Yes               |          |
| #9 Any missing/extra samples?                           | No                  |          |
| #10 Chain of Custody signed when relinquished/ received | ived? Yes           |          |
| #11 Chain of Custody agrees with sample label(s)?       | Yes                 |          |
| #12 Container label(s) legible and intact?              | Yes                 |          |
| #13 Sample matrix/ properties agree with Chain of Cu    | stody? Yes          |          |
| #14 Samples in proper container/ bottle?                | Yes                 |          |
| #15 Samples properly preserved?                         | Yes                 |          |
| #16 Sample container(s) intact?                         | Yes                 |          |
| #17 Sufficient sample amount for indicated test(s)?     | Yes                 |          |
| #18 All samples received within hold time?              | Yes                 |          |
| #19 Subcontract of sample(s)?                           | Yes                 |          |
| #20 VOC samples have zero headspace (less than 1/4      | 4 inch bubble)? N/A |          |
| #21 <2 for all samples preserved with HNO3,HCL, H2      | SO4? <b>N/A</b>     |          |
| #22 >10 for all samples preserved with NaAsO2+NaO       | H, ZnAc+NaOH? N/A   |          |

| Analyst:    | PH D         | evice/Lot#:              |                         |
|-------------|--------------|--------------------------|-------------------------|
| Checklist c | ompleted by: | Muny Moah  Kelsey Brooks | Date: 07/25/2013        |
| Checklist   | reviewed by: | Kelsey Brooks            | Date: <u>07/25/2013</u> |

#### enco Laboratories The Environmental Lab of Texas Page Representation of Texas Page Representation of Texas Received by Receilinguished by: OC gelinquished by: ORDER #: (lab use only) apecial Instructions: LAB # (lab use only) Project Manager: Company Address: Company Name Sampler Signature: Telephone No: City/State/Zip: Deen FIELD CODE ESW @ 14' Camille Bryant 2057 Commerce Nova Safety and Environmental Midland, TX 79703 432.520.7720 125 126/ 200 926 Beginning Depth Time Time **Ending Depth** Received by ELOT Received by: 7/24/2013 **Date Sampled** 13:50 Time Sampled Fax No: e-mail: Field Filtered menrye paul p. com 432.520.7701 Total #. of Containers Odessa, Texas 79765 12600 West I-20 East cbryant@novatraining.cc Preservation & # of Containers HNO<sub>3</sub> HCI H<sub>2</sub>SO<sub>4</sub> CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST NaOH Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None W Other (Specify) Date DW=Drinking Water SL=Sludge Report Format: 900 Project Name: NP=Non-Potable Specify Othe Project Loc: Time TPH: 418.1 8015M 8015B Project #: TX 1006 TX 1005 PO #: TPH: Labels on container(s) Custody seals on cooler(s) Custody seals on cooler(s) Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS Sample Containers Intact? Temperature Upon Receipt: VOCs Free of Headspace? **Laboratory Comments:** Cations (Ca, Mg, Na, K) **Standard** Anions (CI, SO4, Alkalinity) TOTAL: TCLP: 6 SAR / ESP / CEC Phone: 432-563-1800 Fax: 432-563-1713 Metals: As Ag Ba Cd Cr Pb Hg Se Plains TNM Monument #18 Analyze For: Volatiles TNM Monument #18 Semivolatiles Lea County, NM BTEX 8021B/5030 or BTEX 8260 TRRP RCI N.O.R.M. Chlorides E 300.1 NPDES Lone Star ZZZZZZ RUSH TAT (Pre-Schedule) 24, 48, 72 hrs Standard TAT Released to Imaging: 6/8/2021 2:45:07 PM Page 13 of 14 Final 1.000

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# **XENCO Laboratories**



Prelogin/Nonconformance Report- Sample Log-In

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 07/25/2013 09:26:00 AM

Work Order #: 467303

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

| Sample Receipt Check   | klist Comments |
|--|----------------|
| #1 *Temperature of cooler(s)?                                    | 2.5            |
| #2 *Shipping container in good condition?                        | Yes            |
| #3 *Samples received on ice?                                     | Yes            |
| #4 *Custody Seals intact on shipping container/ cooler?          | Yes            |
| #5 Custody Seals intact on sample bottles?                       | Yes            |
| #6 *Custody Seals Signed and dated?                              | Yes            |
| #7 *Chain of Custody present?                                    | Yes            |
| #8 Sample instructions complete on Chain of Custody?             | Yes            |
| #9 Any missing/extra samples?                                    | No             |
| #10 Chain of Custody signed when relinquished/ received?         | Yes            |
| #11 Chain of Custody agrees with sample label(s)?                | Yes            |
| #12 Container label(s) legible and intact?                       | Yes            |
| #13 Sample matrix/ properties agree with Chain of Custody?       | Yes            |
| #14 Samples in proper container/ bottle?                         | Yes            |
| #15 Samples properly preserved?                                  | Yes            |
| #16 Sample container(s) intact?                                  | Yes            |
| #17 Sufficient sample amount for indicated test(s)?              | Yes            |
| #18 All samples received within hold time?                       | Yes            |
| #19 Subcontract of sample(s)?                                    | Yes            |
| #20 VOC samples have zero headspace (less than 1/4 inch bubble)? | N/A            |
| #21 <2 for all samples preserved with HNO3,HCL, H2SO4?           | N/A            |
| #22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH    | 1? <b>N/A</b>  |

| Analyst:            | PH Device/Lot#:              |                         |
|---------------------|------------------------------|-------------------------|
| Checklist completed | by: Mury hoah  Kelsey Brooks | Date: <u>07/25/2013</u> |
| Checklist reviewed  | by: Marah Kalsay Brooks      | Date: <u>07/25/2013</u> |

# **Analytical Report 468608**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Camille Bryant
Plains TNM Monument 18

21-AUG-13

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-14-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





21-AUG-13

Project Manager: Camille Bryant PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No(s): 468608

Plains TNM Monument 18
Project Address: Lea County, NM

#### **Camille Bryant**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 468608. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 468608 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

respectfully,

**Kelsey Brooks** 

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



# **Sample Cross Reference 468608**



### PLAINS ALL AMERICAN EH&S, Midland, TX

Plains TNM Monument 18

| Sample Id | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------------|--------------|---------------|
| SP-1      | S      | 08-14-13 09:30        |              | 468608-001    |
| SP-2      | S      | 08-14-13 09:50        |              | 468608-002    |



#### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Plains TNM Monument 18

Project ID: Report Date: 21-AUG-13 Work Order Number(s): 468608 Date Received: 08/15/2013

#### Sample receipt non conformances and comments:

#### Sample receipt non conformances and comments per sample:

None

#### **Analytical non conformances and comments:**

Batch: LBA-920988 BTEX by EPA 8021

SW8021BM

Batch 920988, Ethylbenzene, m\_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Toluene recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 468608-002, -001.

The Laboratory Control Sample for Toluene, Ethylbenzene,  $m_p$ -Xylenes , o-Xylene is within laboratory Control Limits

# **Certificate of Analysis Summary 468608**

#### PLAINS ALL AMERICAN EH&S, Midland, TX



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Project Id:

Contact: Camille Bryant

**Project Name: Plains TNM Monument 18** 

Project Location: Lea County, NM

**Date Received in Lab:** Thu Aug-15-13 11:30 am

**Report Date:** 21-AUG-13

Project Manager: Kelsey Brooks

|                                    |            |                 |                 |   | 1 Toject Manager. |  |
|------------------------------------|------------|-----------------|-----------------|---|-------------------|--|
|                                    | Lab Id:    | 468608-001      | 468608-002      |   |                   |  |
| Analysis Requested                 | Field Id:  | SP-1            | SP-2            |   |                   |  |
| Anatysis Requested                 | Depth:     |                 |                 |   |                   |  |
|                                    | Matrix:    | SOIL            | SOIL            |   |                   |  |
|                                    | Sampled:   | Aug-14-13 09:30 | Aug-14-13 09:50 |   |                   |  |
| BTEX by EPA 8021                   | Extracted: | Aug-19-13 08:50 | Aug-19-13 08:50 |   |                   |  |
|                                    | Analyzed:  | Aug-19-13 12:38 | Aug-19-13 12:55 |   |                   |  |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        |   |                   |  |
| Benzene                            |            | ND 0.000992     | ND 0.000992     |   |                   |  |
| Toluene                            |            | ND 0.00198      | ND 0.00198      |   |                   |  |
| Ethylbenzene                       |            | ND 0.000992     | ND 0.000992     |   |                   |  |
| m_p-Xylenes                        |            | ND 0.00198      | ND 0.00198      |   |                   |  |
| o-Xylene                           |            | ND 0.000992     | ND 0.000992     |   |                   |  |
| Xylenes, Total                     |            | ND 0.000992     | ND 0.000992     |   |                   |  |
| Total BTEX                         |            | ND 0.000992     | ND 0.000992     |   |                   |  |
| Percent Moisture                   | Extracted: |                 |                 |   |                   |  |
|                                    | Analyzed:  | Aug-15-13 15:20 | Aug-15-13 15:20 |   |                   |  |
|                                    | Units/RL:  | % RL            | % RL            |   |                   |  |
| Percent Moisture                   |            | 1.95 1.00       | 5.96 1.00       |   |                   |  |
| TPH by SW8015 Mod                  | Extracted: | Aug-19-13 17:00 | Aug-19-13 17:00 |   |                   |  |
|                                    | Analyzed:  | Aug-20-13 02:11 | Aug-20-13 02:37 |   |                   |  |
|                                    | Units/RL:  | mg/kg RL        | mg/kg RL        |   |                   |  |
| C6-C12 Gasoline Range Hydrocarbons |            | ND 15.0         | ND 15.0         |   |                   |  |
| C12-C28 Diesel Range Hydrocarbons  |            | 26.2 15.0       | 22.1 15.0       | · |                   |  |
| C28-C35 Oil Range Hydrocarbons     |            | ND 15.0         | ND 15.0         |   |                   |  |
| Total TPH                          |            | 26.2 15.0       | 22.1 15.0       |   |                   |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks

### Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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**Project Name: Plains TNM Monument 18** 

Work Orders: 468608, Project ID:

 Lab Batch #: 920988
 Sample: 468608-001 / SMP
 Batch: 1
 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/19/13 12:38 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0308                   | 0.0300                | 103            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0266                   | 0.0300                | 89             | 80-120                  |       |

| Units: mg/kg Date Analyzed: 08/19/13 12:55 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|
| BTEX by EPA 8021                           | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                          |                       | [D]         |                         |       |
| 1,4-Difluorobenzene                        | 0.0310                   | 0.0300                | 103         | 80-120                  |       |
| 4-Bromofluorobenzene                       | 0.0264                   | 0.0300                | 88          | 80-120                  |       |

**Lab Batch #:** 921023 **Sample:** 468608-001 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/20/13 02:11 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH by SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane   | 86.1                     | 100                   | 86                    | 70-135                  |       |
| o-Terphenyl  | 46.7                     | 50.0                  | 93                    | 70-135                  |       |

**Lab Batch #:** 921023 **Sample:** 468608-002 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/20/13 02:37 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]                   |                         |       |
| 1-Chlorooctane   | 88.6                     | 100                   | 89                    | 70-135                  |       |
| o-Terphenyl  | 48.8                     | 50.0                  | 98                    | 70-135                  |       |

Lab Batch #: 920988 Sample: 642741-1-BLK / BLK Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/19/13 10:29 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0311                   | 0.0300                | 104            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0264                   | 0.0300                | 88             | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 468608,

Project ID:

Matrix: Solid

**Lab Batch #:** 921023 **Sample:** 642764-1-BLK / BLK **Batch:** 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/19/13 20:34 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane   | 90.4                     | 100                   | 90             | 70-135                  |       |
| o-Terphenyl  | 49.8                     | 50.0                  | 100            | 70-135                  |       |

Lab Batch #: 920988 Sample: 642741-1-BKS / BKS Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/19/13 09:41 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021   | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0350                 | 0.0300                | 117            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0279                 | 0.0300                | 93             | 80-120                  |       |

Lab Batch #: 921023 Sample: 642764-1-BKS / BKS Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/19/13 19:41 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH by SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane   | 96.3                     | 100                   | 96                    | 70-135                  |       |
| o-Terphenyl  | 53.6                     | 50.0                  | 107                   | 70-135                  |       |

Lab Batch #: 920988 Sample: 642741-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/19/13 09:57 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|
| BTEX by EPA 8021   | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
| Analytes   |                          |                       | [D]            |                         |       |  |  |
| 1,4-Difluorobenzene                                      | 0.0345                   | 0.0300                | 115            | 80-120                  |       |  |  |
| 4-Bromofluorobenzene                                     | 0.0273                   | 0.0300                | 91             | 80-120                  |       |  |  |

Lab Batch #: 921023 Sample: 642764-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/19/13 20:08 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
| Analytes   |                          |                       | [D]            |                         |       |  |  |
| 1-Chlorooctane   | 91.2                     | 100                   | 91             | 70-135                  |       |  |  |
| o-Terphenyl  | 51.3                     | 50.0                  | 103            | 70-135                  |       |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 468608,

**Project ID: Lab Batch #:** 920988 **Sample:** 468537-003 S / MS Batch: Matrix: Soil

| Units: mg/kg Date Analyzed: 08/19/13 15:46 SURROGATE RECOVERY STUDY |                        |                       |                |                         |       |
|---|------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021  | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes  |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene   | 0.0358                 | 0.0300                | 119            | 80-120                  |       |
| 4-Bromofluorobenzene  | 0.0274                 | 0.0300                | 91             | 80-120                  |       |

**Lab Batch #:** 921023 **Sample:** 468745-001 S / MS Matrix: Water Batch: 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/20/13 06:08 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |  |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|--|
| TPH by SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |  |
| 1 111 tes  |                          |                       |                       |                         |       |  |  |  |  |  |
| 1-Chlorooctane   | 92.0                     | 100                   | 92                    | 70-135                  |       |  |  |  |  |  |
| o-Terphenyl  | 53.5                     | 50.0                  | 107                   | 70-135                  |       |  |  |  |  |  |

**Sample:** 468537-003 SD / MSD Batch: 1 **Lab Batch #:** 920988 Matrix: Soil

| Units: mg/kg Date Analyzed: 08/19/13 16:03 SURROGATE RECOVERY STUDY |                        |                       |                |                         |       |  |
|---|------------------------|-----------------------|----------------|-------------------------|-------|--|
| BTEX by EPA 8021  | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
| Analytes  |                        |                       | [D]            |                         |       |  |
| 1,4-Difluorobenzene   | 0.0344                 | 0.0300                | 115            | 80-120                  |       |  |
| 4-Bromofluorobenzene  | 0.0276                 | 0.0300                | 92             | 80-120                  |       |  |

**Sample:** 468745-001 SD / MSD **Lab Batch #:** 921023 Batch: 1 Matrix: Water

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 08/20/13 06:34 | ECOVERY                | STUDY                 |                |                         |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| TPH by SW8015 Mod  | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                        |                       | [D]            |                         |       |
| 1-Chlorooctane   | 89.0                   | 100                   | 89             | 70-135                  |       |
| o-Terphenyl  | 52.7                   | 50.0                  | 105            | 70-135                  |       |

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **BS / BSD Recoveries**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 468608

**Date Prepared:** 08/19/2013 **Batch #:** 1

**Project ID:** 

Analyst: KEB

**Date Analyzed:** 08/19/2013

**Lab Batch ID:** 920988

**Sample:** 642741-1-BKS

Matrix: Solid

|              | DI ANIZ DI ANIZ ODIZE / DI ANIZ ODIZE DI DI LOADE DECOVEDIZ ODIDIZ |
|--------------|--|
| Units: mg/kg | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY          |
| emes. e e    |  |

| BTEX by EPA 8021 | Blank<br>Sample Result<br>[A] |        | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------|-------------------------------|--------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| Analytes         |                               | [B]    | [C]                      | [D]                  | [E]            | Result [F]                  | [G]                    |          |                         |                           |      |
| Benzene          | <0.000998                     | 0.0998 | 0.0982                   | 98                   | 0.100          | 0.0966                      | 97                     | 2        | 70-130                  | 35                        |      |
| Toluene          | < 0.00200                     | 0.0998 | 0.0908                   | 91                   | 0.100          | 0.0897                      | 90                     | 1        | 70-130                  | 35                        |      |
| Ethylbenzene     | <0.000998                     | 0.0998 | 0.0889                   | 89                   | 0.100          | 0.0879                      | 88                     | 1        | 71-129                  | 35                        |      |
| m_p-Xylenes      | <0.00200                      | 0.200  | 0.177                    | 89                   | 0.201          | 0.175                       | 87                     | 1        | 70-135                  | 35                        |      |
| o-Xylene         | <0.000998                     | 0.0998 | 0.0884                   | 89                   | 0.100          | 0.0873                      | 87                     | 1        | 71-133                  | 35                        |      |

**Date Prepared:** 08/19/2013 **Date Analyzed:** 08/19/2013 Analyst: JUM

Matrix: Solid **Lab Batch ID:** 921023 **Sample:** 642764-1-BKS **Batch #:** 1

| Units: mg/kg                          |                               | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY |                                 |                             |                       |   |                               |          |                         |                           |      |
|---------------------------------------|-------------------------------|---|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| TPH by SW8015 Mod Analytes            | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B]                                     | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| , , , , , , , , , , , , , , , , , , , | 1.7.0                         |   |                                 |                             |                       |   |                               |          |                         |                           |      |
| C6-C12 Gasoline Range Hydrocarbons    | <15.0                         | 1000  | 924                             | 92                          | 1000                  | 913                                       | 91                            | 1        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons     | <15.0                         | 1000  | 936                             | 94                          | 1000                  | 918                                       | 92                            | 2        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E] All results are based on MDL and Validated for QC Purposes



mg/kg

#### Form 3 - MS / MSD Recoveries

**Project Name: Plains TNM Monument 18** 



468608 Work Order #:

**Project ID:** 

Lab Batch ID: 920988 **QC- Sample ID:** 468537-003 S

Batch #:

Matrix: Soil

**Date Analyzed: Reporting Units:** 

08/19/2013

**Date Prepared:** 08/19/2013

Analyst: KEB

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | < 0.00103                         | 0.103                 | 0.0887                         | 86                            | 0.104                 | 0.0839                                   | 81                          | 6        | 70-130                  | 35                        |      |
| Toluene                    | < 0.00207                         | 0.103                 | 0.0756                         | 73                            | 0.104                 | 0.0697                                   | 67                          | 8        | 70-130                  | 35                        | X    |
| Ethylbenzene               | < 0.00103                         | 0.103                 | 0.0672                         | 65                            | 0.104                 | 0.0604                                   | 58                          | 11       | 71-129                  | 35                        | X    |
| m_p-Xylenes                | < 0.00207                         | 0.207                 | 0.132                          | 64                            | 0.208                 | 0.118                                    | 57                          | 11       | 70-135                  | 35                        | X    |
| o-Xylene                   | < 0.00103                         | 0.103                 | 0.0661                         | 64                            | 0.104                 | 0.0591                                   | 57                          | 11       | 71-133                  | 35                        | X    |

Lab Batch ID: 921023 **QC- Sample ID:** 468745-001 S

Batch #:

Matrix: Water

**Date Analyzed:** 

08/20/2013

**Date Prepared:** 08/19/2013

Analyst: JUM

**Reporting Units:** 

mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

1

| TPH by SW8015 Mod Analytes         | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| C6-C12 Gasoline Range Hydrocarbons | <15.4                             | 1030                  | 906                            | 88                            | 1030                  | 901                                      | 87                          | 1        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.4                             | 1030                  | 934                            | 91                            | 1030                  | 946                                      | 92                          | 1        | 70-135                  | 35                        |      |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# **Sample Duplicate Recovery**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 468608

 Lab Batch #:
 920902
 Project ID:

 Date Analyzed:
 08/15/2013 15:20
 Date Prepared:
 08/15/2013
 Analyst:
 WRU

 QC- Sample ID:
 468467-001 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: %        | SAMPLE / SAMPLE DUPLICATE RECOVERY |                                      |     |                           |      |  |  |  |
|---------------------------|------------------------------------|--------------------------------------|-----|---------------------------|------|--|--|--|
| Percent Moisture  Analyte | Parent Sample<br>Result<br>[A]     | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |  |  |
| Percent Moisture          | <1.00                              | 1.00                                 | NC  | 20                        |      |  |  |  |

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

Client: PLAINS ALL AMERICAN EH&S

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#### **XENCO Laboratories**



### Prelogin/Nonconformance Report- Sample Log-In

Date/ Time Received: 08/15/2013 11:30:00 AM

Work Order #: 468608

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

**Temperature Measuring device used:** 

|   | Sample Receipt Checklist                    | Comments                |
|---|---|-------------------------|
| #1 *Temperature of cooler(s)?           |   | 3                       |
| #2 *Shipping container in good of       | condition?                                  |                         |
| #3 *Samples received on ice?            |   |                         |
| #4 *Custody Seals intact on ship        | ping container/ cooler?                     |                         |
| #5 Custody Seals intact on samp         | ole bottles?                                |                         |
| #6 *Custody Seals Signed and d          | ated?                                       |                         |
| #7 *Chain of Custody present?           |   |                         |
| #8 Sample instructions complete         | on Chain of Custody?                        |                         |
| #9 Any missing/extra samples?           |   |                         |
| #10 Chain of Custody signed wh          | en relinquished/ received?                  |                         |
| #11 Chain of Custody agrees with        | th sample label(s)?                         |                         |
| #12 Container label(s) legible an       | d intact?                                   |                         |
| #13 Sample matrix/ properties a         | gree with Chain of Custody?                 |                         |
| #14 Samples in proper contained         | r/ bottle?                                  |                         |
| #15 Samples properly preserved          | <b>!</b> ?                                  |                         |
| #16 Sample container(s) intact?         |   |                         |
| #17 Sufficient sample amount fo         | r indicated test(s)?                        |                         |
| #18 All samples received within         | hold time?                                  |                         |
| #19 Subcontract of sample(s)?           |   |                         |
| #20 VOC samples have zero he            | adspace (less than 1/4 inch bubble)?        |                         |
| #21 <2 for all samples preserved        | with HNO3,HCL, H2SO4?                       |                         |
| #22 >10 for all samples preserve        | ed with NaAsO2+NaOH, ZnAc+NaOH?             |                         |
| Must be completed for after-ho          | ours delivery of samples prior to placing   | g in the refrigerator   |
| Checklist completed  Checklist reviewed | by: Many Moah  Kelsey Brooks  Kelsey Brooks | Date: 08/16/2013        |
|   | Kelsey Brooks                               | Date: <u>08/16/2013</u> |

# **Analytical Report 470265**

# for PLAINS ALL AMERICAN EH&S

**Project Manager: Camille Bryant Plains TNM Monument 18** 

20-SEP-13

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-14-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135) Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



20-SEP-13

Project Manager: Camille Bryant
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): 470265

Plains TNM Monument 18
Project Address: Lea County, NM

#### **Camille Bryant**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 470265. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 470265 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Julian Martinez

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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# **Sample Cross Reference 470265**



### PLAINS ALL AMERICAN EH&S, Midland, TX

Plains TNM Monument 18

| Sample Id     | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|---------------|--------|-----------------------|--------------|---------------|
| NE Ramp SP    | S      | 09-12-13 13:50        |              | 470265-001    |
| Central Ramp  | S      | 09-12-13 13:55        |              | 470265-002    |
| ESW-1 @ 18'   | S      | 09-12-13 14:00        |              | 470265-003    |
| ESW-2 @ 18'   | S      | 09-12-13 14:05        |              | 470265-004    |
| ESW-3 @ 18'   | S      | 09-12-13 14:10        |              | 470265-005    |
| ESW-4 @ 18'   | S      | 09-12-13 14:15        |              | 470265-006    |
| SSW-1 @ 18'   | S      | 09-12-13 14:20        |              | 470265-007    |
| SSW-2 @ 18'   | S      | 09-12-13 14:25        |              | 470265-008    |
| SSW-3 @ 18'   | S      | 09-12-13 14:30        |              | 470265-009    |
| NSW-1 @ 18'   | S      | 09-12-13 14:35        |              | 470265-010    |
| NWS-2 @ 18'   | S      | 09-12-13 14:40        |              | 470265-011    |
| NSW-3 @ 18'   | S      | 09-12-13 14:45        |              | 470265-012    |
| WSW-1 @ 18'   | S      | 09-12-13 14:50        |              | 470265-013    |
| WSW-2 @ 18'   | S      | 09-12-13 14:55        |              | 470265-014    |
| WSW-3 @ 18'   | S      | 09-12-13 15:00        |              | 470265-015    |
| WSW-4 @ 18'   | S      | 09-12-13 15:05        |              | 470265-016    |
| Floor-1 @ 19' | S      | 09-12-13 15:10        |              | 470265-017    |
| Floor-2 @ 19' | S      | 09-12-13 15:15        |              | 470265-018    |
| Floor-3 @ 19' | S      | 09-12-13 15:20        |              | 470265-019    |
| Floor-4 @ 19' | S      | 09-12-13 15:25        |              | 470265-020    |
| Floor-5 @ 19' | S      | 09-12-13 15:30        |              | 470265-021    |
| Floor-6 @ 19' | S      | 09-12-13 15:35        |              | 470265-022    |
| Floor-7 @ 19' | S      | 09-12-13 15:40        |              | 470265-023    |
| Floor-8 @ 19' | S      | 09-12-13 15:45        |              | 470265-024    |



#### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Plains TNM Monument 18

Project ID: Report Date: 20-SEP-13 Work Order Number(s): 470265 Date Received: 09/13/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-923154 TPH By SW8015 Mod

MS and/or MSD were not analyzed due to high concentration of target analyte(s) in the parent sample. No

additional action is required

Project Location: Lea County, NM

# **Certificate of Analysis Summary 470265**

#### PLAINS ALL AMERICAN EH&S, Midland, TX



Page 199 of 613

Project Id:

Contact: Camille Bryant

**Project Name: Plains TNM Monument 18** 

**Report Date:** 20-SEP-13

**Project Manager:** Kelsey Brooks

Date Received in Lab: Fri Sep-13-13 11:18 am

|                                    | Lab Id:    | 470265-0  | 001     | 470265-0    | 02      | 470265-0  | 003     | 470265-0  | 004     | 470265-0  | 005     | 470265-   | 006     |
|------------------------------------|------------|-----------|---------|-------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
| Analusia Daguastad                 | Field Id:  | NE Ramp   | SP      | Central Ra  | ımp     | ESW-1 @   | 18'     | ESW-2 @   | 18'     | ESW-3 @   | 18'     | ESW-4 @   | 9 18'   |
| Analysis Requested                 | Depth:     |           |         |             |         |           |         |           |         |           |         |           |         |
|                                    | Matrix:    | SOIL      |         | SOIL        |         | SOIL      |         | SOIL      |         | SOIL      |         | SOIL      |         |
|                                    | Sampled:   | Sep-12-13 | 13:50   | Sep-12-13   | 13:55   | Sep-12-13 | 14:00   | Sep-12-13 | 14:05   | Sep-12-13 | 14:10   | Sep-12-13 | 14:15   |
| BTEX by EPA 8021B                  | Extracted: | Sep-17-13 | 14:00   | Sep-17-13   | 14:00   | Sep-17-13 | 14:00   | Sep-17-13 | 14:00   | Sep-17-13 | 14:00   | Sep-17-13 | 14:00   |
|                                    | Analyzed:  | Sep-17-13 | 23:13   | Sep-17-13   | 23:29   | Sep-17-13 | 23:45   | Sep-18-13 | 00:01   | Sep-18-13 | 00:17   | Sep-18-13 | 01:05   |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg     | RL      |
| Benzene                            |            | ND        | 0.00132 | ND          | 0.00131 | ND        | 0.00117 | ND        | 0.00111 | ND        | 0.00108 | ND        | 0.00108 |
| Toluene                            |            | ND        | 0.00263 | ND          | 0.00262 | ND        | 0.00233 | ND        | 0.00222 | ND        | 0.00216 | ND        | 0.00217 |
| Ethylbenzene                       |            | ND        | 0.00132 | ND          | 0.00131 | ND        | 0.00117 | ND        | 0.00111 | ND        | 0.00108 | ND        | 0.00108 |
| m_p-Xylenes                        |            | ND        | 0.00263 | ND          | 0.00262 | ND        | 0.00233 | ND        | 0.00222 | ND        | 0.00216 | ND        | 0.00217 |
| o-Xylene                           |            | ND        | 0.00132 | ND          | 0.00131 | ND        | 0.00117 | ND        | 0.00111 | ND        | 0.00108 | ND        | 0.00108 |
| Total Xylenes                      |            | ND        | 0.00132 | ND          | 0.00131 | ND        | 0.00117 | ND        | 0.00111 | ND        | 0.00108 | ND        | 0.00108 |
| Total BTEX                         |            | ND        | 0.00132 | ND          | 0.00131 | ND        | 0.00117 | ND        | 0.00111 | ND        | 0.00108 | ND        | 0.00108 |
| Percent Moisture                   | Extracted: |           |         |             |         |           |         |           |         |           |         |           |         |
|                                    | Analyzed:  | Sep-16-13 | 15:25   | Sep-16-13   | 15:25   | Sep-16-13 | 15:25   | Sep-16-13 | 15:25   | Sep-16-13 | 15:25   | Sep-16-13 | 15:25   |
|                                    | Units/RL:  | %         | RL      | %           | RL      | %         | RL      | %         | RL      | %         | RL      | %         | RL      |
| Percent Moisture                   |            | 24.2      | 1.00    | 24.1        | 1.00    | 14.6      | 1.00    | 10.7      | 1.00    | 7.66      | 1.00    | 8.09      | 1.00    |
| TPH By SW8015 Mod                  | Extracted: | Sep-18-13 | 10:00   | Sep-18-13   | 10:00   | Sep-18-13 | 10:00   | Sep-18-13 | 10:00   | Sep-18-13 | 10:00   | Sep-18-13 | 10:00   |
|                                    | Analyzed:  | Sep-18-13 | 20:31   | Sep-18-13 2 | 20:55   | Sep-18-13 | 21:19   | Sep-18-13 | 21:42   | Sep-18-13 | 22:06   | Sep-18-13 | 22:31   |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg     | RL      |
| C6-C12 Gasoline Range Hydrocarbons |            | ND        | 19.8    | ND          | 19.7    | ND        | 17.5    | ND        | 16.8    | ND        | 16.2    | ND        | 81.4    |
| C12-C28 Diesel Range Hydrocarbons  |            | ND        | 19.8    | ND          | 19.7    | ND        | 17.5    | 611       | 16.8    | 981       | 16.2    | 884       | 81.4    |
| C28-C35 Oil Range Hydrocarbons     |            | ND        | 19.8    | ND          | 19.7    | ND        | 17.5    | ND        | 16.8    | ND        | 16.2    | ND        | 81.4    |
| Total TPH                          |            | ND        | 19.8    | ND          | 19.7    | ND        | 17.5    | 611       | 16.8    | 981       | 16.2    | 884       | 81.4    |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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And .



Contact: Camille Bryant

Project Location: Lea County, NM

**Project Id:** 

# **Certificate of Analysis Summary 470265**

#### PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Plains TNM Monument 18** 

Date Received in Lab: Fri Sep-13-13 11:18 am

**Report Date:** 20-SEP-13

Project Manager: Kelsey Brooks

|                                    |            |           |         |             |         |           | I Toject Mia | mager.    | Keisey Diook |           |         |           |         |
|------------------------------------|------------|-----------|---------|-------------|---------|-----------|--------------|-----------|--------------|-----------|---------|-----------|---------|
|                                    | Lab Id:    | 470265-0  | 007     | 470265-0    | 08      | 470265-0  | 009          | 470265-0  | 010          | 470265-0  | 011     | 470265-   | 012     |
| Analysis Paguested                 | Field Id:  | SSW-1 @   | 18'     | SSW-2 @     | 18'     | SSW-3 @   | 18'          | NSW-1 @   | 18'          | NWS-2 @   | 18'     | NSW-3 @   | @ 18'   |
| Analysis Requested                 | Depth:     |           |         |             |         |           |              |           |              |           |         |           |         |
|                                    | Matrix:    | SOIL      | ,       | SOIL        |         | SOIL      | ,            | SOIL      |              | SOIL      |         | SOIL      | _       |
|                                    | Sampled:   | Sep-12-13 | 14:20   | Sep-12-13 1 | 4:25    | Sep-12-13 | 14:30        | Sep-12-13 | 14:35        | Sep-12-13 | 14:40   | Sep-12-13 | 14:45   |
| BTEX by EPA 8021B                  | Extracted: | Sep-17-13 | 14:00   | Sep-17-13 1 | 4:00    | Sep-17-13 | 14:00        | Sep-17-13 | 14:00        | Sep-17-13 | 14:00   | Sep-17-13 | 14:00   |
|                                    | Analyzed:  | Sep-18-13 | 01:21   | Sep-18-13 0 | 01:37   | Sep-18-13 | 01:53        | Sep-18-13 | 02:09        | Sep-18-13 | 02:25   | Sep-18-13 | 03:29   |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg     | RL           | mg/kg     | RL           | mg/kg     | RL      | mg/kg     | RL      |
| Benzene                            |            | ND        | 0.00111 | ND          | 0.00114 | ND        | 0.00112      | ND        | 0.00110      | ND        | 0.00110 | ND        | 0.00103 |
| Toluene                            |            | ND        | 0.00222 | ND          | 0.00229 | ND        | 0.00224      | ND        | 0.00220      | ND        | 0.00219 | ND        | 0.00206 |
| Ethylbenzene                       |            | ND        | 0.00111 | ND          | 0.00114 | ND        | 0.00112      | ND        | 0.00110      | ND        | 0.00110 | ND        | 0.00103 |
| m_p-Xylenes                        |            | ND        | 0.00222 | ND          | 0.00229 | ND        | 0.00224      | ND        | 0.00220      | ND        | 0.00219 | ND        | 0.00206 |
| o-Xylene                           |            | ND        | 0.00111 | ND          | 0.00114 | ND        | 0.00112      | ND        | 0.00110      | ND        | 0.00110 | ND        | 0.00103 |
| Total Xylenes                      |            | ND        | 0.00111 | ND          | 0.00114 | ND        | 0.00112      | ND        | 0.00110      | ND        | 0.00110 | ND        | 0.00103 |
| Total BTEX                         |            | ND        | 0.00111 | ND          | 0.00114 | ND        | 0.00112      | ND        | 0.00110      | ND        | 0.00110 | ND        | 0.00103 |
| Percent Moisture                   | Extracted: |           |         |             |         |           |              |           |              |           |         |           |         |
|                                    | Analyzed:  | Sep-16-13 | 15:25   | Sep-16-13 1 | 5:25    | Sep-16-13 | 15:25        | Sep-16-13 | 15:25        | Sep-16-13 | 15:25   | Sep-16-13 | 15:25   |
|                                    | Units/RL:  | %         | RL      | %           | RL      | %         | RL           | %         | RL           | %         | RL      | %         | RL      |
| Percent Moisture                   |            | 10.1      | 1.00    | 13.0        | 1.00    | 10.9      | 1.00         | 9.41      | 1.00         | 8.94      | 1.00    | 3.80      | 1.00    |
| TPH By SW8015 Mod                  | Extracted: | Sep-18-13 | 10:00   | Sep-18-13 1 | 0:00    | Sep-18-13 | 10:00        | Sep-18-13 | 10:00        | Sep-18-13 | 10:00   | Sep-18-13 | 10:00   |
|                                    | Analyzed:  | Sep-18-13 | 22:54   | Sep-18-13 2 | 23:18   | Sep-18-13 | 23:42        | Sep-19-13 | 00:06        | Sep-19-13 | 01:19   | Sep-19-13 | 01:44   |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg     | RL           | mg/kg     | RL           | mg/kg     | RL      | mg/kg     | RL      |
| C6-C12 Gasoline Range Hydrocarbons |            | ND        | 16.7    | ND          | 17.2    | ND        | 16.8         | 79.0      | 16.5         | ND        | 16.4    | ND        | 15.5    |
| C12-C28 Diesel Range Hydrocarbons  |            | ND        | 16.7    | ND          | 17.2    | ND        | 16.8         | 1450      | 16.5         | 80.8      | 16.4    | ND        | 15.5    |
| C28-C35 Oil Range Hydrocarbons     |            | ND        | 16.7    | ND          | 17.2    | ND        | 16.8         | ND        | 16.5         | ND        | 16.4    | ND        | 15.5    |
| Total TPH                          |            | ND        | 16.7    | ND          | 17.2    | ND        | 16.8         | 1530      | 16.5         | 80.8      | 16.4    | ND        | 15.5    |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Page 201 of 613

Project Location: Lea County, NM

# **Certificate of Analysis Summary 470265**

#### PLAINS ALL AMERICAN EH&S, Midland, TX





**Project Id:** 

**Contact:** Camille Bryant

Date Received in Lab: Fri Sep-13-13 11:18 am

**Report Date:** 20-SEP-13

**Project Manager:** Kelsey Brooks

|                                    | Lab Id:    | 470265-0  | )13     | 470265-0    | 014     | 470265-0  | )15     | 470265-0  | 016     | 470265-0  | )17     | 470265-0        | 018     |
|------------------------------------|------------|-----------|---------|-------------|---------|-----------|---------|-----------|---------|-----------|---------|-----------------|---------|
| A malanda D amanda I               | Field Id:  | WSW-1 @   | 18'     | WSW-2 @     | 18'     | WSW-3 @   | 9 18'   | WSW-4 @   | 9 18'   | Floor-1 @ | 19'     | Floor-2 @       | 9 19'   |
| Analysis Requested                 | Depth:     |           |         |             |         |           |         |           |         |           |         |                 |         |
|                                    | Matrix:    | SOIL      |         | SOIL        |         | SOIL      |         | SOIL      |         | SOIL      |         | SOIL            |         |
|                                    | Sampled:   | Sep-12-13 | 14:50   | Sep-12-13   | 14:55   | Sep-12-13 | 15:00   | Sep-12-13 | 15:05   | Sep-12-13 | 15:10   | Sep-12-13 15:15 |         |
| BTEX by EPA 8021B                  | Extracted: | Sep-17-13 | 14:00   | Sep-17-13   | 14:00   | Sep-17-13 | 14:00   | Sep-17-13 | 17:00   | Sep-17-13 | 17:00   | Sep-17-13       | 17:00   |
|                                    | Analyzed:  | Sep-18-13 | 02:41   | Sep-18-13 ( | 02:57   | Sep-18-13 | 03:13   | Sep-18-13 | 10:33   | Sep-18-13 | 11:37   | Sep-18-13       | 11:53   |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg           | RL      |
| Benzene                            |            | ND        | 0.00114 | ND          | 0.00117 | ND        | 0.00118 | ND        | 0.00115 | ND        | 0.00124 | ND              | 0.00117 |
| Toluene                            |            | ND        | 0.00228 | ND          | 0.00233 | 0.00312   | 0.00236 | ND        | 0.00230 | ND        | 0.00248 | ND              | 0.00234 |
| Ethylbenzene                       |            | 0.00478   | 0.00114 | ND          | 0.00117 | 0.0395    | 0.00118 | 0.0230    | 0.00115 | ND        | 0.00124 | ND              | 0.00117 |
| m_p-Xylenes                        |            | 0.0338    | 0.00228 | ND          | 0.00233 | 0.188     | 0.00236 | 0.254     | 0.00230 | ND        | 0.00248 | ND              | 0.00234 |
| o-Xylene                           |            | ND        | 0.00114 | ND          | 0.00117 | ND        | 0.00118 | 0.117     | 0.00115 | ND        | 0.00124 | ND              | 0.00117 |
| Total Xylenes                      |            | 0.0338    | 0.00114 | ND          | 0.00117 | 0.188     | 0.00118 | 0.371     | 0.00115 | ND        | 0.00124 | ND              | 0.00117 |
| Total BTEX                         |            | 0.0386    | 0.00114 | ND          | 0.00117 | 0.231     | 0.00118 | 0.394     | 0.00115 | ND        | 0.00124 | ND              | 0.00117 |
| Percent Moisture                   | Extracted: |           |         |             |         |           |         |           |         |           |         |                 |         |
|                                    | Analyzed:  | Sep-16-13 | 15:25   | Sep-16-13   | 15:25   | Sep-16-13 | 15:25   | Sep-16-13 | 15:25   | Sep-16-13 | 15:25   | Sep-16-13       | 15:25   |
|                                    | Units/RL:  | %         | RL      | %           | RL      | %         | RL      | %         | RL      | %         | RL      | %               | RL      |
| Percent Moisture                   |            | 13.2      | 1.00    | 14.2        | 1.00    | 15.2      | 1.00    | 13.7      | 1.00    | 19.6      | 1.00    | 14.7            | 1.00    |
| TPH By SW8015 Mod                  | Extracted: | Sep-18-13 | 10:00   | Sep-18-13   | 10:00   | Sep-18-13 | 10:00   | Sep-18-13 | 10:00   | Sep-18-13 | 10:00   | Sep-18-13       | 10:00   |
|                                    | Analyzed:  | Sep-19-13 | 02:56   | Sep-19-13 ( | 03:21   | Sep-19-13 | 03:46   | Sep-19-13 | 04:10   | Sep-19-13 | 04:34   | Sep-19-13       | 04:58   |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg     | RL      | mg/kg           | RL      |
| C6-C12 Gasoline Range Hydrocarbons |            | 299       | 17.2    | 279         | 17.4    | 2060      | 88.1    | 1470      | 17.4    | ND        | 18.6    | ND              | 17.6    |
| C12-C28 Diesel Range Hydrocarbons  |            | 1320      | 17.2    | 1230        | 17.4    | 5480      | 88.1    | 4320      | 17.4    | ND        | 18.6    | ND              | 17.6    |
| C28-C35 Oil Range Hydrocarbons     |            | ND        | 17.2    | ND          | 17.4    | ND        | 88.1    | ND        | 17.4    | ND        | 18.6    | ND              | 17.6    |
| Total TPH                          |            | 1620      | 17.2    | 1510        | 17.4    | 7540      | 88.1    | 5790      | 17.4    | ND        | 18.6    | ND              | 17.6    |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Contact: Camille Bryant

Project Location: Lea County, NM

**Project Id:** 

# Certificate of Analysis Summary 470265

#### PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Plains TNM Monument 18** 

Date Received in Lab: Fri Sep-13-13 11:18 am

**Report Date:** 20-SEP-13

Project Manager: Kelsev Brooks

|                                    |            |               |                  |           |         |               |        | Project Ma    | nager: | Kelsey Brook  | S      |           |         |
|------------------------------------|------------|---------------|------------------|-----------|---------|---------------|--------|---------------|--------|---------------|--------|-----------|---------|
|                                    | Lab Id:    | 470265-0      | 019              | 470265-0  | )20     | 470265-0      | )21    | 470265-0      | )22    | 470265-0      | )23    | 470265-   | 024     |
| Analusis Bossessod                 | Field Id:  | Floor-3 @ 19' |                  | Floor-4 @ | 19'     | Floor-5 @ 19' |        | Floor-6 @ 19' |        | Floor-7 @ 19' |        | Floor-8   | @ 19'   |
| Analysis Requested                 | Depth:     |               |                  |           |         |               |        |               |        |               |        |           |         |
|                                    | Matrix:    | SOIL          | ,                | SOIL      |         | SOIL          |        | SOIL          |        | SOIL          |        | SOIL      |         |
|                                    | Sampled:   | Sep-12-13     | 15:20            | Sep-12-13 | 15:25   | Sep-12-13     | 15:30  | Sep-12-13     | 15:35  | Sep-12-13     | 15:40  | Sep-12-13 | 15:45   |
| BTEX by EPA 8021B                  | Extracted: | Sep-17-13     | 17:00            | Sep-17-13 | 17:00   | Sep-17-13     | 17:00  | Sep-17-13     | 17:00  | Sep-17-13     | 17:00  | Sep-17-13 | 17:00   |
|                                    | Analyzed:  | Sep-18-13     | -18-13 12:09 Sep |           | 12:25   | Sep-19-13     | 13:11  | Sep-19-13     | 13:27  | Sep-19-13     | 13:43  | Sep-18-13 | 13:30   |
|                                    | Units/RL:  | mg/kg         | RL               | mg/kg     | RL      | mg/kg         | RL     | mg/kg         | RL     | mg/kg         | RL     | mg/kg     | RL      |
| Benzene                            |            | ND            | 0.00117          | ND        | 0.00118 | ND            | 0.0588 | ND            | 0.0221 | ND            | 0.0257 | ND        | 0.00109 |
| Toluene                            |            | ND            | 0.00234          | ND        | 0.00236 | ND            | 0.118  | ND            | 0.0441 | ND            | 0.0514 | ND        | 0.00218 |
| Ethylbenzene                       |            | 0.257         | 0.00117          | 0.00319   | 0.00118 | 17.4          | 0.0588 | 4.14          | 0.0221 | 1.97          | 0.0257 | 0.0255    | 0.00109 |
| m_p-Xylenes                        |            | 0.291         | 0.00234          | 0.0115    | 0.00236 | 34.2          | 0.118  | 7.72          | 0.0441 | 4.44          | 0.0514 | 0.0404    | 0.00218 |
| o-Xylene                           |            | ND            | 0.00117          | ND        | 0.00118 | 7.18          | 0.0588 | ND            | 0.0221 | 1.34          | 0.0257 | ND        | 0.00109 |
| Total Xylenes                      |            | 0.291         | 0.00117          | 0.0115    | 0.00118 | 41.4          | 0.0588 | 7.72          | 0.0221 | 5.78          | 0.0257 | 0.0404    | 0.00109 |
| Total BTEX                         |            | 0.548         | 0.00117          | 0.0147    | 0.00118 | 58.8          | 0.0588 | 11.9          | 0.0221 | 7.75          | 0.0257 | 0.0659    | 0.00109 |
| Percent Moisture                   | Extracted: |               |                  |           |         |               |        |               |        |               |        |           |         |
|                                    | Analyzed:  | Sep-16-13     | 15:25            | Sep-16-13 | 15:25   | Sep-16-13     | 16:30  | Sep-16-13     | 16:30  | Sep-16-13     | 16:30  | Sep-16-13 | 16:30   |
|                                    | Units/RL:  | %             | RL               | %         | RL      | %             | RL     | %             | RL     | %             | RL     | %         | RL      |
| Percent Moisture                   |            | 15.3          | 1.00             | 15.8      | 1.00    | 15.4          | 1.00   | 9.71          | 1.00   | 22.2          | 1.00   | 8.96      | 1.00    |
| TPH By SW8015 Mod                  | Extracted: | Sep-18-13     | 10:00            | Sep-18-13 | 10:00   | Sep-18-13     | 12:00  | Sep-18-13     | 12:00  | Sep-18-13     | 12:00  | Sep-18-13 | 12:00   |
|                                    | Analyzed:  | Sep-19-13     | 05:23            | Sep-19-13 | 05:48   | Sep-19-13 (   | 08:17  | Sep-19-13     | 08:43  | Sep-19-13     | 09:07  | Sep-19-13 | 09:32   |
|                                    | Units/RL:  | mg/kg         | RL               | mg/kg     | RL      | mg/kg         | RL     | mg/kg         | RL     | mg/kg         | RL     | mg/kg     | RL      |
| C6-C12 Gasoline Range Hydrocarbons |            | 1110          | 17.7             | 71.4      | 17.8    | 1130          | 88.2   | 1170          | 83.1   | 583           | 19.2   | 247       | 16.4    |
| C12-C28 Diesel Range Hydrocarbons  |            | 3610          | 17.7             | 210       | 17.8    | 2230          | 88.2   | 6220          | 83.1   | 1470          | 19.2   | 3920      | 16.4    |
| C28-C35 Oil Range Hydrocarbons     |            | ND            | 17.7             | ND        | 17.8    | ND            | 88.2   | ND            | 83.1   | ND            | 19.2   | ND        | 16.4    |
| Total TPH                          |            | 4720          | 17.7             | 281       | 17.8    | 3360          | 88.2   | 7390          | 83.1   | 2050          | 19.2   | 4170      | 16.4    |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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AR.

### Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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**Project Name: Plains TNM Monument 18** 

Work Orders: 470265, Project ID:

Lab Batch #: 922941 Sample: 470265-001 / SMP Batch: 1 Matrix: Soil

| Units: mg/kg Date Analyzed: 09/17/13 23:13 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B                          | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                        | 0.0305                 | 0.0300                | 102            | 80-120                  |       |
| 4-Bromofluorobenzene                       | 0.0304                 | 0.0300                | 101            | 80-120                  |       |

**Lab Batch #:** 922941 **Sample:** 470265-002 / SMP **Batch:** 1 **Matrix:** Soil

SURROGATE RECOVERY STUDY Units: mg/kg Date Analyzed: 09/17/13 23:29 Amount True Control BTEX by EPA 8021B Found Amount Recovery Limits Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0306 0.0300 102 80-120 4-Bromofluorobenzene 0.0304 0.0300 101 80-120

**Lab Batch #:** 922941 **Sample:** 470265-003 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/17/13 23:45 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|--|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |  |
| Analytes   |                          |                       | [D]            |                         |       |  |  |  |
| 1,4-Difluorobenzene                                      | 0.0298                   | 0.0300                | 99             | 80-120                  |       |  |  |  |
| 4-Bromofluorobenzene                                     | 0.0302                   | 0.0300                | 101            | 80-120                  |       |  |  |  |

**Lab Batch #:** 922941 **Sample:** 470265-004 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 00:01 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|--|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |  |
| Analytes   |                          |                       | [D]            |                         |       |  |  |  |
| 1,4-Difluorobenzene                                      | 0.0290                   | 0.0300                | 97             | 80-120                  |       |  |  |  |
| 4-Bromofluorobenzene                                     | 0.0284                   | 0.0300                | 95             | 80-120                  |       |  |  |  |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 00:17 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|--|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |  |
| Analytes   |                          |                       | [D]            |                         |       |  |  |  |
| 1,4-Difluorobenzene                                      | 0.0293                   | 0.0300                | 98             | 80-120                  |       |  |  |  |
| 4-Bromofluorobenzene                                     | 0.0281                   | 0.0300                | 94             | 80-120                  |       |  |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265, Project ID:

**Lab Batch #:** 922941 **Sample:** 470265-006 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 01:05 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0281                   | 0.0300                | 94             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0290                   | 0.0300                | 97             | 80-120                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 01:21 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0295                   | 0.0300                | 98             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0314                   | 0.0300                | 105            | 80-120                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 01:37 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0303                   | 0.0300                | 101            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0310                   | 0.0300                | 103            | 80-120                  |       |

**Lab Batch #:** 922941 **Sample:** 470265-009 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 01:53 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0302                   | 0.0300                | 101            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0302                   | 0.0300                | 101            | 80-120                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 02:09 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0295                   | 0.0300                | 98             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0316                   | 0.0300                | 105            | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265.

**Project ID:** 

Lab Batch #: 922941

**Sample:** 470265-011 / SMP

Batch:

Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 02:25 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0300                   | 0.0300                | 100            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0316                   | 0.0300                | 105            | 80-120                  |       |

Lab Batch #: 922941

**Sample:** 470265-013 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg

Date Analyzed: 09/18/13 02:41

SURROGATE RECOVERY STUDY Amount True Control BTEX by EPA 8021B Found Amount Recovery Limits Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0250 0.0300 80-120 4-Bromofluorobenzene 0.0305 0.0300 102 80-120

Lab Batch #: 922941

Sample: 470265-014 / SMP

Batch:

Matrix: Soil 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 02:57 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0267                   | 0.0300                | 89             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0309                   | 0.0300                | 103            | 80-120                  |       |

Lab Batch #: 922941

Sample: 470265-015 / SMP

Batch: 1

Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 03:13 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0265                   | 0.0300                | 88             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0309                   | 0.0300                | 103            | 80-120                  |       |

Lab Batch #: 922941

Sample: 470265-012 / SMP

Batch: 1

Matrix: Soil CLIDDOCATE DECOVEDY CTUDY

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 03:29 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]         |                         |       |
| 1,4-Difluorobenzene                                      | 0.0272                   | 0.0300                | 91          | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0299                   | 0.0300                | 100         | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265.

**Project ID:** 

**Lab Batch #:** 923092

**Sample:** 470265-016 / SMP

Batch:

Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 10:33 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0272                   | 0.0300                | 91             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0322                   | 0.0300                | 107            | 80-120                  |       |

**Lab Batch #:** 923092

**Sample:** 470265-017 / SMP

Batch: 1

Matrix: Soil

Units: mg/kg

Date Analyzed: 09/18/13 11:37

BTEX by EPA 8021B

**Analytes** 

0.0308

SURROGATE RECOVERY STUDY Amount True Control Found Amount Recovery Limits Flags [A] [B] %R %R [D] 0.0286 0.0300 95 80-120

103

80-120

4-Bromofluorobenzene **Lab Batch #:** 923092

1,4-Difluorobenzene

Sample: 470265-018 / SMP

Batch:

Matrix: Soil

0.0300

1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 11:53 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0278                   | 0.0300                | 93             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0289                   | 0.0300                | 96             | 80-120                  |       |

Lab Batch #: 923092

**Sample:** 470265-019 / SMP

Batch:

Matrix: Soil 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 12:09 | 12:09 SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]         | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                                |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0269                         | 0.0300                | 90             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0278                         | 0.0300                | 93             | 80-120                  |       |

**Lab Batch #:** 923092

Sample: 470265-020 / SMP

Batch:

Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 12:25 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| BTEX by EPA 8021B  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | . 1                   |                         |       |
| 1,4-Difluorobenzene                                      | 0.0251                   | 0.0300                | 84                    | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0295                   | 0.0300                | 98                    | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265.

**Project ID:** Sample: 470265-024 / SMP **Lab Batch #:** 923092 Batch: 1 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 13:30 | SURROGATE RECOVERY STUDY |                       |             |                         |       |  |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|--|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |  |
| Analytes   |                          |                       | [D]         |                         |       |  |
| 1,4-Difluorobenzene                                      | 0.0244                   | 0.0300                | 81          | 80-120                  |       |  |
| 4-Bromofluorobenzene                                     | 0.0311                   | 0.0300                | 104         | 80-120                  |       |  |

**Sample:** 470265-001 / SMP Lab Batch #: 923150 Batch: 1 Matrix: Soil

SURROGATE RECOVERY STUDY Units: mg/kg Date Analyzed: 09/18/13 20:31 Amount True Control TPH By SW8015 Mod Found Amount Recovery Limits **Flags** [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 101 99.8 101 70-135 o-Terphenyl 56.0 49.9 112 70-135

Lab Batch #: 923150 Sample: 470265-002 / SMP Matrix: Soil Batch: 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 20:55 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
| Analytes   |                          |                       | [D]            |                         |       |  |
| 1-Chlorooctane   | 105                      | 99.5                  | 106            | 70-135                  |       |  |
| o-Terphenyl  | 58.8                     | 49.8                  | 118            | 70-135                  |       |  |

**Lab Batch #:** 923150 Sample: 470265-003 / SMP Matrix: Soil Batch:

| Units: mg/kg   | <b>Date Analyzed:</b> 09/18/13 21:19 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|----------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
| TPH 1          | By SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooctane |                                      | 105                      | 99.9                  | 105                   | 70-135                  |       |  |
| o-Terphenyl    |                                      | 59.3                     | 50.0                  | 119                   | 70-135                  |       |  |

**Lab Batch #:** 923150 Sample: 470265-004 / SMP Matrix: Soil Batch: 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 21:42 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane   | 108                      | 99.8                  | 108            | 70-135                  |       |
| o-Terphenyl  | 59.9                     | 49.9                  | 120            | 70-135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

**Project ID:** 

Matrix: Soil

Work Orders: 470265. Lab Batch #: 923150

**Sample:** 470265-005 / SMP Batch:

| Units: mg/kg Date Analyzed: 09/18/13 22:06 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod                          | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane                             | 107                      | 99.5                  | 108            | 70-135                  |       |
| o-Terphenyl                                | 56.9                     | 49.8                  | 114            | 70-135                  |       |

**Lab Batch #:** 923150 **Sample:** 470265-006 / SMP Matrix: Soil Batch: 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 22:31 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]         |                         |       |
| 1-Chlorooctane   | 106                      | 99.8                  | 106         | 70-135                  |       |
| o-Terphenyl  | 56.4                     | 49.9                  | 113         | 70-135                  |       |

Sample: 470265-007 / SMP **Lab Batch #:** 923150 Matrix: Soil Batch: 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 22:54 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
| TPH By SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooctane   | 110                      | 100                   | 110                   | 70-135                  |       |  |
| o-Terphenyl  | 62.5                     | 50.0                  | 125                   | 70-135                  |       |  |

**Sample:** 470265-008 / SMP **Lab Batch #:** 923150 Batch: Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 23:18 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane   | 104                      | 99.7                  | 104            | 70-135                  |       |
| o-Terphenyl  | 56.4                     | 49.9                  | 113            | 70-135                  |       |

**Lab Batch #:** 923150 Sample: 470265-009 / SMP Batch: 1 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 23:42 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
| Analytes   |                          |                       | [D]            |                         |       |  |
| 1-Chlorooctane   | 97.0                     | 100                   | 97             | 70-135                  |       |  |
| o-Terphenyl  | 53.3                     | 50.0                  | 107            | 70-135                  |       |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265.

**Project ID:** Lab Batch #: 923150 **Sample:** 470265-010 / SMP Batch: Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 00:06 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
| Analytes   |                          |                       | [D]            |                         |       |  |
| 1-Chlorooctane   | 103                      | 99.9                  | 103            | 70-135                  |       |  |
| o-Terphenyl  | 56.1                     | 50.0                  | 112            | 70-135                  |       |  |

**Lab Batch #:** 923150 **Sample:** 470265-011 / SMP Matrix: Soil Batch: 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 01:19 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH By SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| ·  |                          |                       |                       |                         |       |
| 1-Chlorooctane   | 103                      | 99.6                  | 103                   | 70-135                  |       |
| o-Terphenyl  | 59.9                     | 49.8                  | 120                   | 70-135                  | ·     |

Sample: 470265-012 / SMP Lab Batch #: 923150 Matrix: Soil Batch:

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 01:44 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
| TPH By SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooctane   | 111                      | 99.6                  | 111                   | 70-135                  |       |  |
| o-Terphenyl  | 58.7                     | 49.8                  | 118                   | 70-135                  |       |  |

**Sample:** 470265-013 / SMP **Lab Batch #:** 923150 Matrix: Soil Batch:

| Units: mg/kg Date Analyzed: 09/19/13 02:56 SURROGATE RECOVERY STUDY |                        |                       |                |                         |       |  |
|---|------------------------|-----------------------|----------------|-------------------------|-------|--|
| TPH By SW8015 Mod   | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
| Analytes  |                        |                       | [D]            |                         |       |  |
| 1-Chlorooctane  | 122                    | 99.5                  | 123            | 70-135                  |       |  |
| o-Terphenyl   | 64.1                   | 49.8                  | 129            | 70-135                  |       |  |

**Sample:** 470265-014 / SMP **Lab Batch #:** 923150 Batch: 1 Matrix: Soil

| Units: mg/kg Date Analyzed: 09/19/13 03:21 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod                          | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane                             | 107                      | 99.8                  | 107            | 70-135                  |       |
| o-Terphenyl                                | 60.3                     | 49.9                  | 121            | 70-135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265.

**Project ID: Lab Batch #:** 923150 **Sample:** 470265-015 / SMP Batch: Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 03:46 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|--|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
| Analytes   |                          |                       | [D]            |                         |       |  |
| 1-Chlorooctane   | 126                      | 99.7                  | 126            | 70-135                  |       |  |
| o-Terphenyl  | 62.8                     | 49.9                  | 126            | 70-135                  |       |  |

**Lab Batch #:** 923150 **Sample:** 470265-016 / SMP Matrix: Soil Batch: 1

| Units: mg/kg Date Analyzed: 09/19/13 04:10 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
| TPH By SW8015 Mod                          | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| Analytes                                   |                          |                       | נטן                   |                         |       |  |
| 1-Chlorooctane                             | 125                      | 99.9                  | 125                   | 70-135                  |       |  |
| o-Terphenyl                                | 61.4                     | 50.0                  | 123                   | 70-135                  |       |  |

Lab Batch #: 923150 **Sample:** 470265-017 / SMP Matrix: Soil Batch:

| Units: mg/kg   | <b>Date Analyzed:</b> 09/19/13 04:34 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|----------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|
|                | y SW8015 Mod<br>Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane |                                      | 101                      | 99.7                  | 101                   | 70-135                  |       |
| o-Terphenyl    |                                      | 56.9                     | 49.9                  | 114                   | 70-135                  |       |

**Sample:** 470265-018 / SMP **Lab Batch #:** 923150 Matrix: Soil Batch: 1

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 04:58 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane   | 99.2                     | 100                   | 99             | 70-135                  |       |
| o-Terphenyl  | 52.9                     | 50.0                  | 106            | 70-135                  |       |

**Lab Batch #:** 923150 Sample: 470265-019 / SMP Batch: 1 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 05:23 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]         |                         |       |
| 1-Chlorooctane   | 129                      | 99.8                  | 129         | 70-135                  |       |
| o-Terphenyl  | 60.3                     | 49.9                  | 121         | 70-135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265,

Project ID:

**Lab Batch #:** 923150

**Sample:** 470265-020 / SMP

Batch: 1 Matrix: Soil

| Units: mg/kg   | <b>Date Analyzed:</b> 09/19/13 05:48 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|----------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| ТРН            | By SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane |                                      | 107                      | 99.9                  | 107                   | 70-135                  |       |
| o-Terphenyl    |                                      | 58.1                     | 50.0                  | 116                   | 70-135                  |       |

**Lab Batch #:** 923154

**Sample:** 470265-021 / SMP

Batch: 1

Matrix: Soil

| Units: mg/kg   | <b>Date Analyzed:</b> 09/19/13 08:17 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |
|----------------|--------------------------------------|--------------------------|-----------------------|----------------|-------------------------|-------|--|
| ТРН            | By SW8015 Mod                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
|                | Analytes                             |                          |                       | [D]            |                         |       |  |
| 1-Chlorooctane |                                      | 115                      | 99.5                  | 116            | 70-135                  |       |  |

56.2

**Lab Batch #:** 923154

o-Terphenyl

Sample: 470265-022 / SMP

Batch:

1 Matrix: Soil

113

70-135

49.8

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 08:43 | SU                     | SURROGATE RECOVERY STUDY |                       |                         |       |  |  |
|--|------------------------|--------------------------|-----------------------|-------------------------|-------|--|--|
| TPH By SW8015 Mod  Analytes                              | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1-Chlorooctane   | 120                    | 100                      | 120                   | 70-135                  |       |  |  |
| o-Terphenyl  | 62.4                   | 50.0                     | 125                   | 70-135                  |       |  |  |

**Lab Batch #:** 923154

**Sample:** 470265-023 / SMP

Batch:

Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 09:07 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane   | 125                      | 99.5                  | 126            | 70-135                  |       |
| o-Terphenyl  | 61.9                     | 49.8                  | 124            | 70-135                  |       |

**Lab Batch #:** 923154

**Sample:** 470265-024 / SMP

Batch: 1

Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 09:32 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH By SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane   | 113                      | 99.6                  | 113                   | 70-135                  |       |
| o-Terphenyl  | 62.9                     | 49.8                  | 126                   | 70-135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265,

Project ID:

Lab Batch #: 923092 Sample: 470265-021 / SMP Batch: 1 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 13:11 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0268                   | 0.0300                | 89             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0306                   | 0.0300                | 102            | 80-120                  |       |

| Units: mg/kg Date Analyzed: 09/19/13 13:27 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B                          | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                        | 0.0255                   | 0.0300                | 85             | 80-120                  |       |
| 4-Bromofluorobenzene                       | 0.0258                   | 0.0300                | 86             | 80-120                  |       |

**Lab Batch #:** 923092 **Sample:** 470265-023 / SMP **Batch:** 1 **Matrix:** Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 13:43 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0254                   | 0.0300                | 85             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0289                   | 0.0300                | 96             | 80-120                  |       |

Lab Batch #: 922941 Sample: 643984-1-BLK / BLK Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/17/13 21:21 | Analyzed: 09/17/13 21:21 SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|---|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]                            | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |   |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0306  | 0.0300                | 102            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0295  | 0.0300                | 98             | 80-120                  |       |

Lab Batch #: 923092 Sample: 644057-1-BLK / BLK Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 09:29 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0290                   | 0.0300                | 97             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0296                   | 0.0300                | 99             | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265.

**Project ID: Lab Batch #:** 923150 **Sample:** 644090-1-BLK / BLK Batch: Matrix: Solid

| Units: mg/kg Date Analyzed: 09/19/13 18:58 | SU                     | SURROGATE RECOVERY STUDY |                       |                         |       |  |
|--|------------------------|--------------------------|-----------------------|-------------------------|-------|--|
| TPH By SW8015 Mod  Analytes                | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooctane                             | 90.8                   | 100                      | 91                    | 70-135                  |       |  |
| o-Terphenyl                                | 46.1                   | 50.0                     | 92                    | 70-135                  |       |  |

**Sample:** 644091-1-BLK / BLK **Lab Batch #:** 923154 Matrix: Solid Batch: 1

| Units: mg/kg Date Analyzed: 09/19/13 20:11 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH By SW8015 Mod                          | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                          |                       | [2]                   |                         |       |
| 1-Chlorooctane                             | 94.3                     | 100                   | 94                    | 70-135                  |       |
| o-Terphenyl                                | 46.6                     | 50.0                  | 93                    | 70-135                  |       |

Matrix: Solid Lab Batch #: 922941 **Sample:** 643984-1-BKS / BKS Batch:

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/17/13 20:34 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0297                   | 0.0300                | 99             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0293                   | 0.0300                | 98             | 80-120                  |       |

**Sample:** 644057-1-BKS / BKS Lab Batch #: 923092 Batch: Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 08:41 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0294                   | 0.0300                | 98             | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0294                   | 0.0300                | 98             | 80-120                  |       |

Lab Batch #: 923150 **Sample:** 644090-1-BKS / BKS Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 18:10 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH By SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane   | 108                      | 100                   | 108                   | 70-135                  |       |
| o-Terphenyl  | 45.8                     | 50.0                  | 92                    | 70-135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265,
Lab Batch #: 923154
Sample: 644091-1-BKS / BKS
Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 19:22 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]         |                         |       |
| 1-Chlorooctane   | 108                      | 100                   | 108         | 70-135                  |       |
| o-Terphenyl  | 48.8                     | 50.0                  | 98          | 70-135                  |       |

Lab Batch #: 922941 Sample: 643984-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/17/13 20:50 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|--|--------------------------|-----------------------|-------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]         |                         |       |
| 1,4-Difluorobenzene                                      | 0.0295                   | 0.0300                | 98          | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0291                   | 0.0300                | 97          | 80-120                  |       |

Lab Batch #: 923092 Sample: 644057-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 08:57 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0301                   | 0.0300                | 100            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0302                   | 0.0300                | 101            | 80-120                  |       |

Lab Batch #: 923150 Sample: 644090-1-BSD / BSD Batch: 1 Matrix: Solid

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 18:34 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane   | 118                      | 100                   | 118            | 70-135                  |       |
| o-Terphenyl  | 52.6                     | 50.0                  | 105            | 70-135                  |       |

Lab Batch #: 923154 Sample: 644091-1-BSD / BSD Batch: 1 Matrix: Solid

| Units: mg/kg Date Analyzed: 09/19/13 19:48 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod                          | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes                                   |                          |                       | [D]            |                         |       |
| 1-Chlorooctane                             | 115                      | 100                   | 115            | 70-135                  |       |
| o-Terphenyl                                | 49.6                     | 50.0                  | 99             | 70-135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

Work Orders: 470265, Project ID:

Lab Batch #: 922941 Sample: 470265-012 S / MS Batch: 1 Matrix: Soil

SUPPOCATE PECOVERY STUDY

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 03:45 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0309                   | 0.0300                | 103            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0321                   | 0.0300                | 107            | 80-120                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 17:34 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0309                   | 0.0300                | 103            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0316                   | 0.0300                | 105            | 80-120                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 20:36 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|--|--------------------------|-----------------------|-----------------------|-------------------------|-------|
| TPH By SW8015 Mod  Analytes                              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane   | 111                      | 99.9                  | 111                   | 70-135                  |       |
| o-Terphenyl  | 45.2                     | 50.0                  | 90                    | 70-135                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 04:01 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0307                   | 0.0300                | 102            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0312                   | 0.0300                | 104            | 80-120                  |       |

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/18/13 17:50 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|--|--------------------------|-----------------------|----------------|-------------------------|-------|
| BTEX by EPA 8021B  | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                          |                       | [D]            |                         |       |
| 1,4-Difluorobenzene                                      | 0.0315                   | 0.0300                | 105            | 80-120                  |       |
| 4-Bromofluorobenzene                                     | 0.0320                   | 0.0300                | 107            | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains TNM Monument 18** 

 Work Orders: 470265,
 Project ID:

 Lab Batch #: 923150
 Sample: 470265-012 SD / MSD
 Batch: 1 Matrix: Soil

| <b>Units:</b> mg/kg <b>Date Analyzed:</b> 09/19/13 21:00 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|--|------------------------|-----------------------|----------------|-------------------------|-------|
| TPH By SW8015 Mod  | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
| Analytes   |                        |                       | [D]            |                         |       |
| 1-Chlorooctane   | 107                    | 99.5                  | 108            | 70-135                  |       |
| o-Terphenyl  | 45.0                   | 49.8                  | 90             | 70-135                  |       |

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



#### **BS / BSD Recoveries**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 470265

Project ID:

Analyst: ARM

**Date Prepared:** 09/17/2013 **Batch #:** 1

**Date Analyzed:** 09/17/2013

Lab Batch ID: 922941

**Sample:** 643984-1-BKS

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| Cinto. C C        |                               |                       |                                 |                             |                       |   |                               |          |                         |                           |      |
|-------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| BTEX by EPA 8021B | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes          |                               |                       |                                 |                             |                       |   |                               |          |                         |                           |      |
| Benzene           | < 0.00100                     | 0.100                 | 0.104                           | 104                         | 0.100                 | 0.103                                     | 103                           | 1        | 70-130                  | 35                        |      |
| Toluene           | < 0.00200                     | 0.100                 | 0.102                           | 102                         | 0.100                 | 0.101                                     | 101                           | 1        | 70-130                  | 35                        |      |
| Ethylbenzene      | < 0.00100                     | 0.100                 | 0.0971                          | 97                          | 0.100                 | 0.0965                                    | 97                            | 1        | 71-129                  | 35                        |      |
| m_p-Xylenes       | < 0.00200                     | 0.200                 | 0.195                           | 98                          | 0.200                 | 0.193                                     | 97                            | 1        | 70-135                  | 35                        |      |
| o-Xylene          | < 0.00100                     | 0.100                 | 0.0988                          | 99                          | 0.100                 | 0.0976                                    | 98                            | 1        | 71-133                  | 35                        |      |

Analyst: ARM Date Prepared: 09/17/2013 Date Analyzed: 09/18/2013

**Lab Batch ID:** 923092

**Sample:** 644057-1-BKS

**Batch #:** 1

Matrix: Solid

Matrix: Solid

Units: mg/kg

#### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021B | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|-------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| Analytes          |                               | [B]            | [C]                      | [D]                  | [E]            | Result [F]                  | [G]                    |          |                         |                           |      |
| Benzene           | < 0.00100                     | 0.100          | 0.103                    | 103                  | 0.100          | 0.106                       | 106                    | 3        | 70-130                  | 35                        |      |
| Toluene           | < 0.00200                     | 0.100          | 0.101                    | 101                  | 0.100          | 0.105                       | 105                    | 4        | 70-130                  | 35                        |      |
| Ethylbenzene      | < 0.00100                     | 0.100          | 0.0962                   | 96                   | 0.100          | 0.100                       | 100                    | 4        | 71-129                  | 35                        |      |
| m_p-Xylenes       | < 0.00200                     | 0.200          | 0.193                    | 97                   | 0.200          | 0.201                       | 101                    | 4        | 70-135                  | 35                        |      |
| o-Xylene          | <0.00100                      | 0.100          | 0.0958                   | 96                   | 0.100          | 0.101                       | 101                    | 5        | 71-133                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100\*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]
All results are based on MDL and Validated for QC Purposes



#### **BS / BSD Recoveries**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 470265 Analyst: ARM

**Batch #:** 1

**Project ID:** 

**Date Prepared:** 09/18/2013

**Date Analyzed:** 09/19/2013

**Lab Batch ID:** 923150

**Sample:** 644090-1-BKS

Matrix: Solid

| Units: mg/kg | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY |
|--------------|---|
|              |   |

| TPH By SW8015 Mod Analytes         | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000                  | 910                             | 91                          | 1000                  | 945                                       | 95                            | 4        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000                  | 1050                            | 105                         | 1000                  | 986                                       | 99                            | 6        | 70-135                  | 35                        |      |

**Date Prepared:** 09/18/2013 Analyst: ARM **Date Analyzed:** 09/19/2013

Matrix: Solid **Lab Batch ID:** 923154 **Batch #:** 1 **Sample:** 644091-1-BKS

| Units: mg/kg                       |                               | BLAN           | K/BLANK S                | SPIKE / E            | BLANK S        | SPIKE DUPI                  | ICATE 1                | RECOVE   | ERY STUD                | Y                         |      |
|------------------------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| TPH By SW8015 Mod                  | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
| Analytes                           |                               | [B]            | [C]                      | [D]                  | [E]            | Result [F]                  | [G]                    |          |                         |                           |      |
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000           | 880                      | 88                   | 1000           | 757                         | 76                     | 15       | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000           | 1030                     | 103                  | 1000           | 1010                        | 101                    | 2        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E] All results are based on MDL and Validated for QC Purposes



mg/kg

#### Form 3 - MS / MSD Recoveries

**Project Name: Plains TNM Monument 18** 



**Work Order #:** 470265

**Project ID:** 

**Lab Batch ID:** 922941

22941 QC

**QC- Sample ID:** 470265-012 S

Batch #:

Matrix: Soil

Date Analyzed: Reporting Units:

09/18/2013

**Date Prepared:** 09/17/2013 **Analyst:** ARM

MATERIX CRIZE / MATERI

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021B | Parent<br>Sample | Spike        | Spiked Sample<br>Result | Sample    | Spike        | Duplicate<br>Spiked Sample |           | RPD | Control<br>Limits | Control<br>Limits | Flag |
|-------------------|------------------|--------------|-------------------------|-----------|--------------|----------------------------|-----------|-----|-------------------|-------------------|------|
| Analytes          | Result<br>[A]    | Added<br>[B] | [C]                     | %R<br>[D] | Added<br>[E] | Result [F]                 | %R<br>[G] | %   | %R                | %RPD              |      |
| Benzene           | < 0.00104        | 0.104        | 0.0928                  | 89        | 0.103        | 0.0928                     | 90        | 0   | 70-130            | 35                |      |
| Toluene           | < 0.00207        | 0.104        | 0.0901                  | 87        | 0.103        | 0.0899                     | 87        | 0   | 70-130            | 35                |      |
| Ethylbenzene      | < 0.00104        | 0.104        | 0.0839                  | 81        | 0.103        | 0.0833                     | 81        | 1   | 71-129            | 35                |      |
| m_p-Xylenes       | < 0.00207        | 0.207        | 0.167                   | 81        | 0.206        | 0.166                      | 81        | 1   | 70-135            | 35                |      |
| o-Xylene          | < 0.00104        | 0.104        | 0.0841                  | 81        | 0.103        | 0.0838                     | 81        | 0   | 71-133            | 35                |      |

**Lab Batch ID:** 923092 **QC- Sample ID:** 470388-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 09/18/2013 Date Prepared: 09/17/2013 Analyst: ARM

Reporting Units: mg/kg MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021B | Parent<br>Sample<br>Result | Spike<br>Added | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R | Spike<br>Added | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R | RPD | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|-------------------|----------------------------|----------------|--------------------------------|------------------------|----------------|--|----------------------|-----|-------------------------|---------------------------|------|
| Analytes          | [A]                        | [B]            | [0]                            | [D]                    | [E]            | Trestare [2]                             | [G]                  | , • | , , ,                   | , , , , ,                 |      |
| Benzene           | < 0.00103                  | 0.103          | 0.0864                         | 84                     | 0.102          | 0.0906                                   | 89                   | 5   | 70-130                  | 35                        |      |
| Toluene           | < 0.00206                  | 0.103          | 0.0855                         | 83                     | 0.102          | 0.0892                                   | 87                   | 4   | 70-130                  | 35                        |      |
| Ethylbenzene      | < 0.00103                  | 0.103          | 0.0806                         | 78                     | 0.102          | 0.0838                                   | 82                   | 4   | 71-129                  | 35                        |      |
| m_p-Xylenes       | < 0.00206                  | 0.206          | 0.161                          | 78                     | 0.204          | 0.168                                    | 82                   | 4   | 70-135                  | 35                        |      |
| o-Xylene          | < 0.00103                  | 0.103          | 0.0807                         | 78                     | 0.102          | 0.0845                                   | 83                   | 5   | 71-133                  | 35                        |      |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



#### Form 3 - MS / MSD Recoveries

**Project Name: Plains TNM Monument 18** 



**Work Order #:** 470265

Lab Batch ID:

923150 **QC- Sample ID:** 470265-012 S

Batch #:

Project ID:

Matrix: Soil

**Date Analyzed:** 09/19/2013

**Date Prepared:** 09/18/2013 **Analyst:** ARM

**Reporting Units:** mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH By SW8015 Mod                  | Parent<br>Sample<br>Result | Spike<br>Added | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R | Spike<br>Added | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R | RPD | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|----------------------------|----------------|--------------------------------|------------------------|----------------|--|----------------------|-----|-------------------------|---------------------------|------|
| Analytes                           | [A]                        | [B]            | [6]                            | [D]                    | [E]            | Kesuit [F]                               | [G]                  | 70  | / <b>0K</b>             | /UKI D                    |      |
| C6-C12 Gasoline Range Hydrocarbons | <15.6                      | 1040           | 791                            | 76                     | 1030           | 779                                      | 76                   | 2   | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.6                      | 1040           | 961                            | 92                     | 1030           | 917                                      | 89                   | 5   | 70-135                  | 35                        |      |



## **Sample Duplicate Recovery**



**Project Name: Plains TNM Monument 18** 

**Work Order #:** 470265

 Lab Batch #:
 922818
 Project ID:

 Date Analyzed:
 09/16/2013 15:25
 Date Prepared:
 09/16/2013
 Analyst:
 WRU

 QC- Sample ID:
 470265-001 D
 Batch #:
 1
 Matrix:
 Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY **Reporting Units: %** Sample Control **Percent Moisture** Parent Sample RPD Duplicate Limits Result Flag Result %RPD [A] [B] **Analyte** Percent Moisture 24.2 23.7

**Lab Batch #:** 922822

 Date Analyzed:
 09/16/2013 16:30
 Date Prepared:
 09/16/2013
 Analyst:
 WRU

 QC- Sample ID:
 470265-021 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: %        | SAMPLE A                       | / SAMPLE                             | DUPLIC | ATE REC                   | OVERY |
|---------------------------|--------------------------------|--------------------------------------|--------|---------------------------|-------|
| Percent Moisture  Analyte | Parent Sample<br>Result<br>[A] | Sample<br>Duplicate<br>Result<br>[B] | RPD    | Control<br>Limits<br>%RPD | Flag  |
| Percent Moisture          | 15.4                           | 15.6                                 | 1      | 20                        |       |

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit

#### Page 223 Project Manager: Cal 6/8/9ecial Instructions: OCInquished (lab use only) ORDER #: 470765 Received & Xenco Laboratories inquished by LAB # (lab use only) ndurshed by Sampler Signature: City/State/Zip: Company Address: Telephone No: Company Name Central Ramp SP ESW-4 @ 18' ESW-3 @ 18' ESW-2 @ 18' ESW-1 @ 18' NSW-1 @ 18' SSW-3 @ 18' SSW-2 @ 18' SSW-1 @ 18' NE Ramp SP FIELD CODE 2057 Commerce Camille Bryant Midland, TX 79703 Nova Safety and Environmental 200 21/12/ Date **Beginning Depth** ACE 10=3 Time 00 **Ending Depth** Received by ELOT Received by: Received by: 9/12/2013 9/12/2013 9/12/2013 9/12/2013 9/12/2013 9/12/2013 9/12/2013 9/12/2013 9/12/2013 9/12/2013 Date Sampled 1435 1415 1410 1430 1425 1420 1405 1400 1355 1350 Fax No: Time Sampled e-mail: Field Filtered Total #. of Containers 432.520.770 Odessa, Texas 79765 12600 West I-20 East × cbryant@novatraining.cc HNO: smharris@paalp.com HCI H<sub>2</sub>SO<sub>4</sub> CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST NaOH Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> None ENEN X Other (Specify) DW=Drinking Water SL=Sludge Soil Report Format: Project Name: Project Loc: 8 Time × × 8015M 8015B × × $\times$ × × × 418.1 Project #: TX 1006 TPH: TX 1005 PO #: Temperature Upon Receipt Sample Hand Delivered Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) Sample Containers Intact? VOCs Free of Headspace? **Laboratory Comments:** Cations (Ca, Mg, Na, K) by Sampler/Client Rep. ? by Courier? UPS Anions (CI, SO4, Alkalinity) TOTAL TCLP SAR / ESP / CEC PAA - Shawn Harris Phone: 432-563-1800 Metals: As Ag Ba Cd Cr Pb Hg Se Analyze For: SRS# TNM-Monument 18 432-563-1713 Lea County, NM Monument #18 BTEX 8021B/5030 or BTEX 8260 × × ☐ TRRP × × × × × × × RCI N.O.R.M. **~~~~~~** ☐ NPDES I ZZZZZZ RUSH TAT (Pre-Schedule) 24, 48, 72 hrs Released to Imaging: 6/8/202 Standard TAT Page 29 of 32 Final 1.000

| Date   Date   Date   Time   Received by:   Date   Date   Time   Received by:   Date   Dat   |        | eived          | y Och Induished        | 6/8/8<br>ecia | 021         | 12:           | 21:2          | 9 P           | M           |             | V           |             |             |             | LAB # (lab use only)                                  | ORDER #: | (lab use only) |      |  |                |              |          |           | Page       | 2245of <b>Q</b>       |
|--|--------|----------------|------------------------|---------------|-------------|---------------|---------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|---|----------|----------------|------|--|----------------|--------------|----------|-----------|------------|-----------------------|
| CHAIM OF CUSTODY RECORD AND AMALYSIS REQUEST   12000 West L20 East   Phone: 422-553-1900   Phone: 422-553-19   | 100.00 |                | 6.                     | Instructions: |             | Floor-3 @ 19' | Floor-2 @ 19' | Floor-1 @ 19' | WSW-4 @ 18' | WSW-3 @ 18' | WSW-2 @ 18' | WSW-1 @ 18' | NSW-3 @ 18' | NSW-2 @ 18' | FIELD CODE  | 1100     | 4707           |      | Sampler Signature:   |                |              |          | any Name  | t Manager: |                       |
| CHAIM OF CUSTODY RECORD AND AMALYSIS REQUEST   12000 West L20 East   Phone: 422-553-1900   Phone: 422-553-19   |        | 117/13<br>Date | Date<br>Date           |               |             |               |               |               |             |             |             |             |             |             |   |          | (              |      | The state of the s |                | ۵            |          | Environme |            | -4-                   |
| CHAIM OF CUSTODY RECORD AND ANALYSIS REQUEST   12600 West 1-20 East   Phone: 432-583-1900   Odessa, Toxas 79765   Phone: 432-583-1900   Phone: 432-583-1900   Phone: 432-583-1900   Project 4s::   Sandard   TRRP   Project 4s::   SARS#TNIN-Monument 18   SAR / ESP / CEC   Analyze For:   SARS#TNIN-Monument 18   Project 4s::   SARS#TNIN-Monument 18   SAR / ESP / CEC   Analyze For:   SARS#TNIN-Monument 18   SAR / ESP / CEC   Analyze For:   SARS#TNIN-Monument 18   SAR / ESP / CEC   SARSHOW SAR / ESP / CEC   SARSH   |        | = ==           | 101                    |               |             |               |               |               |             |             |             |             |             |             | Beginning Depth                                       |          | C              | 7    |  |                |              |          | ntal      |            | A                     |
| CHAIM OF CUSTODY RECORD AND ANALYSIS REQUEST   12600 West 1-20 East   Phone: 432-583-1900   Odessa, Toxas 79765   Phone: 432-583-1900   Phone: 432-583-1900   Phone: 432-583-1900   Project 4s::   Sandard   TRRP   Project 4s::   SARS#TNIN-Monument 18   SAR / ESP / CEC   Analyze For:   SARS#TNIN-Monument 18   Project 4s::   SARS#TNIN-Monument 18   SAR / ESP / CEC   Analyze For:   SARS#TNIN-Monument 18   SAR / ESP / CEC   Analyze For:   SARS#TNIN-Monument 18   SAR / ESP / CEC   SARSHOW SAR / ESP / CEC   SARSH   |        | me   ≪         | # 0 m                  |               |             |               |               |               |             |             |             |             |             |             | Ending Depth  | ]        |                |      | 1  |                |              |          |           |            | 2                     |
| CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST   12600 West 1-20 East   Phone: 432-563-1400   Odessa, Taxas 79765   Phone: 432-563-1400   Phone: 432-563-1701   Phone: 432-563-1701   Project Name:   Chain find County   Project Name:   Chain find County   Name   Project Name:     | andle  | Received by EL | Received by:           |               | 9/12/2013   | 9/12/2013     | 9/12/2013     | 9/12/2013     | 9/12/2013   | 9/12/2013   | 9/12/2013   | 9/12/2013   | 9/12/2013   | 9/12/2013   | Date Sampled  |          |                |      |  |                |              |          |           |            | U 50                  |
| CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST   12600 West 1-20 East   Phone: 432-563-17800   | has    | OT:            | Rone                   |               | 1525        | 1520          | 1515          | 1510          | 1505        | 1500        | 1455        | 1450        | 1445        | 1440        | Time Sampled  |          |                |      | e-mail:  | Fax No:        |              |          |           |            |                       |
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| None   None   A22-563-1800   Fax: 432-563-1800   Fax: 432-563-1713   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   SRS# TNM-Monument 18   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   SRS# TNM-Monument 18   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   SRS# TNM-Monument 18   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   NP=Non-Potable   Speeth, Other (Specify)   NP=Non-Potable   Specify, Other (Specify)   NP=Non-Potable   NP=Non-Potable   Specify, Other (Specify)   NP=Non-Potable   NP=Non-Pot   |        | 1              |                        |               | $\vdash$    | $\vdash$      | +             | <del> </del>  | $\vdash$    |             |             | ┢           | $\vdash$    | $\vdash$    |   | serva    |                |      | yan  | 701            |              |          |           |            | sa,                   |
| None   None   A22-563-1800   Fax: 432-563-1800   Fax: 432-563-1713   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   SRS# TNM-Monument 18   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   SRS# TNM-Monument 18   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   SRS# TNM-Monument 18   Project Loc:   Lea County, NIM   PO #: PAA - Shawn Harris   NP=Non-Potable   Speeth, Other (Specify)   NP=Non-Potable   Specify, Other (Specify)   NP=Non-Potable   NP=Non-Potable   Specify, Other (Specify)   NP=Non-Potable   NP=Non-Pot   |        |                |                        |               |             |               | $\vdash$      |               |             |             | Т           | Н           |             | T           | H <sub>2</sub> SO <sub>4</sub>                        | tion &   |                | Y    | 9  |                |              |          |           |            | C/<br>stl.            |
| None   None   A32-563-1800   Fax: 432-563-1800   Fax: 432-563-18   |        |                |                        |               |             |               |               |               |             |             |             |             |             |             | NaOH  |          | (0)            | 0 0  | 10Va   |                |              |          |           |            | 4AII<br>-20 I         |
| None   None   A32-563-1800   Fax: 432-563-1800   Fax: 432-563-18   |        |                |                        |               |             |               |               |               |             |             |             |             |             |             | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>         | Conta    | dalo           | 1 2  | traii  |                |              |          |           |            | V 0,<br>East<br>9765  |
| Project Name:   Monument #18   | ie     | 0              |                        |               |             |               |               |               |             |             |             |             |             |             |   | ainers   |                |      | ning   |                |              |          |           |            | ο Ε                   |
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| Rec                       | ived to inquished by:  | OCALIDAQUIShe   | 56/8/20<br>ecial                                  | 921      | 12:2      | 21:2     | 9 P      | M        |          |               |           |           |              | LAB # (lab use only)   | ORDER #:         | (lab use only)        |                          |                    |                   |                    | -                              |                               | Page                | 225 Environme   |
|---------------------------|--|---|---|----------|-----------|----------|----------|----------|----------|---------------|-----------|-----------|--------------|--|------------------|-----------------------|--------------------------|--------------------|-------------------|--------------------|--------------------------------|-------------------------------|---------------------|---|
| sned by:                  | hed by:  |   | 6/8/Pecial Instructions:                          |          |           |          |          |          |          | Floor-8 @ 19' | Floor-7 @ | Floor-6 @ | Floor-5 @ 19 | FIELD CODE   | -                | 5.10014 (Alua         |                          | Sampler Signature: | Telephone No: 432 | City/State/Zip: Mi | Company Address: 2057 Commerce | Company Name No               | Project Manager: Ca | Senco Laboratories  The Environmental Lab of Texas  |
| Cala                      | 9/17/13  | Date 9/17   |   |          |           |          |          |          |          | @ 19'         | @ 19'     | @ 19'     | @ 19'        | CODE   |                  |                       |                          | 1-12               | 2.\$20.7720       | Midland, TX 79703  | 57 Commerce                    | Nova Safety and Environmental | Camille Bryant      | tories  |
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| n Mr                      | OT   | Rem   |   |          |           |          |          |          |          | 1545          | 1540      | 1535      | 1530         | Time Sampled   |                  |                       |                          | e-mail:            | Fax No:           |                    |                                |                               |                     | N   |
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|                           |  |   |   |          | $\dagger$ |          | $\vdash$ |          |          |               | $\vdash$  | $\vdash$  | $\vdash$     | NaOH   | *                | (0)                   | Non                      | NOV                |                   |                    |                                |                               |                     | HAI<br>I-20<br>as 7   |
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| 10                        |  |   | 1   |          |           |          |          |          |          |               |           |           |              | None   | of Containers    | SIIIIIaIIIS@paaip.com | cstanley@novatraining.cc | vatraining.cc      |                   |                    |                                |                               | 1                   | 0 T D   |
| W                         | Date   | Date 9/1/3  |   |          | Ц         |          |          |          |          |               |           |           |              | Other ( Specify)   | L"               | ]  3                  | g.cc                     | .cc                |                   |                    |                                |                               |                     | US  |
| W                         | D O  | 183   |   |          |           |          |          |          |          | Soil          | Soil      | Soil      | Soil         | DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other | Matrix           |                       |                          |                    | Report Format:    |                    | 70                             |                               | Pro                 | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST<br>t I-20 East Phone: 432-563-1800<br>ras: 432-563-1713; |
| 1118                      | Time   | Time<br>11 Oo   |   |          | П         |          |          |          |          | ×             | ×         | ×         | ×            | TPH: 418.1 8015M 80  | )15B             |                       | Γ                        |                    | For               |                    | roje                           | Pro                           | ject                | 22  |
|                           |  |   |   | _        | $\perp$   |          | _        | _        |          |               |           |           |              | TPH: TX 1005 TX 1006   |                  | 11                    |                          |                    | mat:              | PO #:              | Project Loc:                   | Project #:                    | Project Name:       | R   |
| emp                       | Samı<br>b  | abe<br>Susto  | abo<br>Samp                                       | -        | $\vdash$  | $\vdash$ |          | $\vdash$ |          |               | -         | ⊢         | -            | Cations (Ca, Mg, Na, K)  |                  |                       | ı                        |                    |                   | .#<br>             | ĭ                              | .#                            | ı.                  | AN  |
| berat                     | y Sa<br>y Co   | ls or<br>ody s  | ole C<br>S Fre                                    | -        | ₩         | $\vdash$ |          | $\vdash$ |          | $\vdash$      | $\vdash$  | $\vdash$  | $\vdash$     | Anions (CI, SO4, Alkalinity) SAR / ESP / CEC   | _                | TOTAL:                |                          |                    | S                 | ٦,                 |                                |                               |                     | DA  |
| ure                       | nple Hand I<br>by Sampler<br>by Courier?                           | eals  | onta<br>e of                                      | $\vdash$ | +         | -        | $\vdash$ | $\vdash$ |          |               | $\vdash$  | $\vdash$  | -            | Metals: As Ag Ba Cd Cr Pb Hg   | Se               | F3                    | ٦                        |                    | Standard          | PAA -              |                                |                               |                     | PA NAI  |
| Upor                      | Sample Hand Delivered<br>by Sampler/Client Re<br>by Courier? UPS   | on  | Sample Containers Intact? VOCs Free of Headspace? | <u> </u> | +         |          | $\vdash$ |          |          | $\vdash$      | ┢         | $\vdash$  |              | Volatiles  | , 00             | +                     | Analyze                  |                    | ard               | Sha                |                                | SR                            | 1                   | 4LYS<br>hone<br>Fax:  |
| 1 Re                      | vered<br>int Rep<br>UPS  | conta<br>coole  | s Inta  |          | $\Box$    |          |          |          |          |               |           |           |              | Semivolatiles  |                  | $\vdash$              | /ze F                    |                    |                   | wn T               | _                              | ¥                             |                     | IS F<br>: 43  |
| Temperature Upon Receipt: | nple Hand Delivered<br>by Sampler/Client Rep. ?<br>by Courier? UPS | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | act?  |          |           |          |          |          |          | ×             | ×         | ×         | ×            | BTEX 8021B/5030 or BTEX 82   | 260              | x                     | For:                     |                    |                   | Shawn Harris       | Lea County, NM                 | N N                           | Monument #18        | IALYSIS REQUEST<br>Phone: 432-563-1800<br>Fax: 432-563-1713   |
|                           | 旦  | (s)   |   |          |           |          |          |          |          |               |           |           |              | RCI  |                  |                       |                          |                    | ☐ TRRP            | S                  | oun                            | 1-Mc                          | ımer                | UE:<br>3-1:<br>3-1:   |
|                           |  |   |   |          |           |          |          |          |          |               |           |           |              | N.O.R.M.   |                  |                       |                          |                    | 4                 |                    | Ý,<br>Z                        | Jun                           | nt #1               | ST<br>800<br>713  |
| -                         | FedEx  | ~ ~ ~   |   | L        | $\sqcup$  | _        | _        | _        | _        |               | _         | _         |              |  |                  |                       | 1                        |                    |                   |                    | 3                              | SRS# TNM-Monument 18          | ~                   |   |
| 1                         | -  |   |   | -        | +         | -        | -        | -        | _        | _             | -         | -         | -            |  |                  |                       | 1                        |                    |                   |                    |                                | t 18                          |                     |   |
| റ്                        | N<br>One Star  | zzz   | zz  | -        | +         | -        | -        | $\vdash$ | _        | _             | -         | $\vdash$  | $\vdash$     | RUSH TAT (Pre-Schedule) 24   | 40               | 70                    | 上                        | 1                  | NPDES             |                    |                                |                               |                     |   |
|                           | Star   |   |   | -        | ++        | +        | -        | $\vdash$ | -        | ×             | ×         | ×         | ×            | Standard TAT   | , 48,            | 12 nrs                |                          | ı                  | S                 |                    |                                |                               |                     |   |
| Rele                      | ased to  | Imag  | ing: 6/8  | 8/20     | 21 2      | 1.45     | 107      | PM       |          | 12            | 12        | 10        |              | e 31 of 32   | J                |                       |                          | Fina               | l 1.000           | <u>I</u>           | 1                              | ı                             | I                   |   |



#### **XENCO Laboratories**

#### Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 09/13/2013 11:18:00 AM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 470265 Temperature Measuring device used :

|   | Sample Receipt Checklist            | Comments            |
|---|-------------------------------------|---------------------|
| #1 *Temperature of cooler(s)?           | Campio Recoipt Checking             | 4                   |
| #2 *Shipping container in good conditi  | on?                                 | Yes                 |
| #3 *Samples received on ice?            |                                     | Yes                 |
| #4 *Custody Seals intact on shipping of | container/ cooler?                  | N/A                 |
| #5 Custody Seals intact on sample bo    |                                     | N/A                 |
| #6 *Custody Seals Signed and dated?     |                                     | N/A                 |
| #7 *Chain of Custody present?           |                                     | Yes                 |
| #8 Sample instructions complete on C    | hain of Custody?                    | Yes                 |
| #9 Any missing/extra samples?           | •                                   | No                  |
| #10 Chain of Custody signed when rel    | inquished/ received?                | Yes                 |
| #11 Chain of Custody agrees with sam    | nple label(s)?                      | Yes                 |
| #12 Container label(s) legible and inta | ct?                                 | Yes                 |
| #13 Sample matrix/ properties agree v   | vith Chain of Custody?              | Yes                 |
| #14 Samples in proper container/ bottl  | e?                                  | Yes                 |
| #15 Samples properly preserved?         |                                     | Yes                 |
| #16 Sample container(s) intact?         |                                     | Yes                 |
| #17 Sufficient sample amount for indic  | ated test(s)?                       | Yes                 |
| #18 All samples received within hold ti | me?                                 | Yes                 |
| #19 Subcontract of sample(s)?           |                                     | No                  |
| #20 VOC samples have zero headspa       | ce (less than 1/4 inch bubble)?     | N/A                 |
| #21 <2 for all samples preserved with   | HNO3,HCL, H2SO4?                    | N/A                 |
| #22 >10 for all samples preserved with  | n NaAsO2+NaOH, ZnAc+NaOH?           | N/A                 |
| Must be completed for after-hours d     | elivery of samples prior to placing | in the refrigerator |
| Analyst: PH D                           | evice/Lot#:                         |                     |
| Checklist completed by:                 | Candau James  Candace James         | Date: 09/13/2013    |
| Checklist reviewed by:                  |                                     | Date: 09/13/2013    |

## **Analytical Report 471804**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Camille Bryant
Plains Monument
TNM Monument 18
23-OCT-13

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)





23-OCT-13

Project Manager: Camille Bryant
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): 471804

**Plains Monument** 

Project Address: Lea County, New Mexico

#### **Camille Bryant**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 471804. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 471804 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully, Hoah

**Kelsey Brooks** 

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



## **Sample Cross Reference 471804**



## PLAINS ALL AMERICAN EH&S, Midland, TX

#### Plains Monument

| Sample Id    | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|--------------|--------|-----------------------|--------------|---------------|
| ESW-2 @ 2'   | S      | 10-08-13 09:30        | - 2 ft       | 471804-001    |
| ESW-2 @ 10'  | S      | 10-08-13 09:35        | - 10 ft      | 471804-002    |
| ESW-2A @ 18' | S      | 10-08-13 09:40        | - 18 ft      | 471804-003    |
| ESW-2 @ 2'   | S      | 10-08-13 11:40        | - 2 ft       | 471804-008    |
| ESW-3 @ 10'  | S      | 10-08-13 11:45        | - 10 ft      | 471804-009    |
| ESW-3A @ 18' | S      | 10-08-13 11:50        | - 18 ft      | 471804-010    |
| NSW-1 @ 2'   | S      | 10-08-13 12:45        | - 2 ft       | 471804-015    |
| NSW-1 @ 10'  | S      | 10-08-13 12:50        | - 10 ft      | 471804-016    |
| NSW-1A @ 18' | S      | 10-08-13 12:55        | - 18 ft      | 471804-017    |
| ESW-4 @ 2'   | S      | 10-08-13 13:50        | - 2 ft       | 471804-022    |
| ESW-4 @ 10'  | S      | 10-08-13 13:55        | - 10 ft      | 471804-023    |
| ESW-4A @ 18' | S      | 10-08-13 14:00        | - 18 ft      | 471804-024    |
| ESW-4B @ 18' | S      | 10-08-13 14:10        | - 18 ft      | 471804-025    |
| ESW-2B @ 18' | S      | 10-08-13 09:50        | - 18 ft      | Not Analyzed  |
| ESW-2C @ 18' | S      | 10-08-13 10:00        | - 18 ft      | Not Analyzed  |
| ESW-2D @ 18' | S      | 10-08-13 10:15        | - 18 ft      | Not Analyzed  |
| ESW-2E @ 18' | S      | 10-08-13 10:35        | - 18 ft      | Not Analyzed  |
| ESW-3B @ 18' | S      | 10-08-13 12:00        | - 18 ft      | Not Analyzed  |
| ESW-3C @ 18' | S      | 10-08-13 12:10        | - 18 ft      | Not Analyzed  |
| ESW-3D @ 18' | S      | 10-08-13 12:20        | - 18 ft      | Not Analyzed  |
| ESW-3E @ 18' | S      | 10-08-13 12:30        | - 18 ft      | Not Analyzed  |
| NSW-1B @ 18' | S      | 10-08-13 13:00        | - 18 ft      | Not Analyzed  |
| NSW-1C @ 18' | S      | 10-08-13 13:10        | - 18 ft      | Not Analyzed  |
| NSW-1D @ 18' | S      | 10-08-13 13:20        | - 18 ft      | Not Analyzed  |
| NSW-1E @ 18' | S      | 10-08-13 13:30        | - 18 ft      | Not Analyzed  |
| ESW-4C @ 18' | S      | 10-08-13 14:25        | - 18 ft      | Not Analyzed  |
| ESW-4D @ 18' | S      | 10-08-13 14:35        | - 18 ft      | Not Analyzed  |
| ESW-4E @ 18' | S      | 10-08-13 14:45        | - 18 ft      | Not Analyzed  |



#### CASE NARRATIVE



23-OCT-13

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Plains Monument

Project ID: TNM Monument 18

Report Date: Work Order Number(s): 471804 Date Received: 10/09/2013

#### Sample receipt non conformances and comments:

Call with verbals.

#### Sample receipt non conformances and comments per sample:

None

#### **Analytical non conformances and comments:**

Batch: LBA-925052 BTEX by EPA 8021

SW8021BM

Batch 925052, Benzene, Ethylbenzene, Toluene, m\_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 471804-008, -001, -009, -016, -002, -015, -022, -023.

The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m\_p-Xylenes , o-Xylene is within laboratory Control Limits



## Hits Summary 471804



#### PLAINS ALL AMERICAN EH&S, Midland, TX

Plains Monument

Sample Id: ESW-4A @ 18' Matrix:

Soil

% Moisture: 8.34

Lab Sample Id: 471804-024

Date Collected: 10.08.13 14.00

Dry Weight

Sample Depth: 18 ft

Date Received: 10.09.13 14.08

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Seq Number 925733 Date Prep:

Basis:

10.09.13 17.00

| Parameter                          | Cas Numbe | Result | Units | <b>Analysis Date</b> | Flag | Dil |
|------------------------------------|-----------|--------|-------|----------------------|------|-----|
| C6-C12 Gasoline Range Hydrocarbons | PHC612    | 31.3   | mg/kg | 10.09.13 23.25       |      | 1   |
| C12-C28 Diesel Range Hydrocarbons  | PHCG1028  | 1440   | mg/kg | 10.09.13 23.25       |      | 1   |
| Total TPH                          | PHC635    | 1470   | mg/kg | 10.09.13 23.25       |      | 1   |



**Project Id:** TNM Monument 18

**Contact:** Camille Bryant

**Project Location:** Lea County, New Mexico

## Certificate of Analysis Summary 471804

#### PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Plains Monument** 

Date Received in Lab: Wed Oct-09-13 02:08 pm

**Report Date:** 23-OCT-13

Project Manager: Kelsev Brooks

|                                    |            |           |         |             |         |             |       | I Toject Mai    | iagei.  | Keisey Brooks | ,       |             |       |
|------------------------------------|------------|-----------|---------|-------------|---------|-------------|-------|-----------------|---------|---------------|---------|-------------|-------|
|                                    | Lab Id:    | 471804-0  | 001     | 471804-0    | 02      | 471804-0    | 03    | 471804-0        | 08      | 471804-0      | 09      | 471804-0    | 10    |
| Analysis Requested                 | Field Id:  | ESW-2 @   | @ 2'    | ESW-2 @     | 10'     | ESW-2A @    | 18'   | ESW-2 @         | 2'      | ESW-3 @       | 10'     | ESW-3A @    | 9 18' |
| Anaiysis Kequesiea                 | Depth:     | 2 ft      |         | 10 ft       |         | 18 ft       |       | 2 ft            |         | 10 ft         |         | 18 ft       |       |
|                                    | Matrix:    | SOIL      | ,       | SOIL        |         | SOIL        |       | SOIL            |         | SOIL          |         | SOIL        |       |
|                                    | Sampled:   | Oct-08-13 | 09:30   | Oct-08-13 0 | 9:35    | Oct-08-13 0 | 9:40  | Oct-08-13 1     | 1:40    | Oct-08-13 1   | 1:45    | Oct-08-13 1 | 11:50 |
| BTEX by EPA 8021                   | Extracted: | Oct-10-13 | 15:00   | Oct-10-13 1 | 5:00    |             |       | Oct-10-13 1     | 5:00    | Oct-10-13 1   | 5:00    |             |       |
|                                    | Analyzed:  | Oct-11-13 | 18:11   | Oct-14-13 1 | 2:01    |             |       | Oct-14-13 1     | 2:18    | Oct-14-13 1   | 2:34    |             |       |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      |             |       | mg/kg           | RL      | mg/kg         | RL      |             |       |
| Benzene                            |            | ND        | 0.00106 | ND          | 0.00126 |             |       | ND              | 0.00102 | ND            | 0.00101 |             |       |
| Toluene                            |            | ND        | 0.00211 | ND          | 0.00252 |             |       | ND              | 0.00204 | ND            | 0.00203 |             |       |
| Ethylbenzene                       |            | ND        | 0.00106 | ND          | 0.00126 |             |       | ND              | 0.00102 | ND            | 0.00101 |             |       |
| m_p-Xylenes                        |            | ND        | 0.00211 | ND          | 0.00252 |             |       | ND              | 0.00204 | ND            | 0.00203 |             |       |
| o-Xylene                           |            | ND        | 0.00106 | ND          | 0.00126 |             |       | ND              | 0.00102 | ND            | 0.00101 |             |       |
| Xylenes, Total                     |            | ND        | 0.00106 | ND          | 0.00126 |             |       | ND              | 0.00102 | ND            | 0.00101 |             |       |
| Total BTEX                         |            | ND        | 0.00106 | ND          | 0.00126 |             |       | ND              | 0.00102 | ND            | 0.00101 |             |       |
| Percent Moisture                   | Extracted: |           |         |             |         |             |       |                 |         |               |         |             |       |
|                                    | Analyzed:  | Oct-10-13 | 11:30   | Oct-10-13 1 | 1:30    | Oct-09-13 1 | 6:00  | Oct-10-13 1     | 1:30    | Oct-10-13 1   | 1:30    | Oct-09-13 1 | 16:00 |
|                                    | Units/RL:  | %         | RL      | %           | RL      | %           | RL    | %               | RL      | %             | RL      | %           | RL    |
| Percent Moisture                   |            | 5.43      | 1.00    | 21.2        | 1.00    | 19.6        | 1.00  | 2.17            | 1.00    | 1.91          | 1.00    | 9.98        | 1.00  |
| TPH by SW8015 Mod                  | Extracted: | Oct-09-13 | 17:00   | Oct-09-13 1 | 7:00    | Oct-09-13 1 | 7:00  | Oct-09-13 17:00 |         | Oct-09-13 1   | 7:00    | Oct-09-13 1 | 17:00 |
|                                    | Analyzed:  | Oct-10-13 | 00:13   | Oct-10-13 0 | 1:25    | Oct-09-13 2 | 22:15 | Oct-10-13 (     | 1:48    | Oct-10-13 (   | 02:11   | Oct-09-13 2 | 22:38 |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg       | RL    | mg/kg           | RL      | mg/kg         | RL      | mg/kg       | RL    |
| C6-C12 Gasoline Range Hydrocarbons |            | ND        | 15.8    | ND          | 19.0    | ND          | 18.6  | ND              | 15.3    | ND            | 15.2    | ND          | 16.7  |
| C12-C28 Diesel Range Hydrocarbons  |            | ND        | 15.8    | ND          | 19.0    | ND          | 18.6  | ND              | 15.3    | ND            | 15.2    | ND          | 16.7  |
| C28-C35 Oil Range Hydrocarbons     |            | ND        | 15.8    | ND          | 19.0    | ND          | 18.6  | ND              | 15.3    | ND            | 15.2    | ND          | 16.7  |
| Total TPH                          |            | ND        | 15.8    | ND          | 19.0    | ND          | 18.6  | ND              | 15.3    | ND            | 15.2    | ND          | 16.7  |
|                                    |            |           |         |             |         |             |       |                 |         |               |         |             |       |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks



**Project Id:** TNM Monument 18

**Contact:** Camille Bryant

**Project Location:** Lea County, New Mexico

## **Certificate of Analysis Summary 471804**

#### PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Plains Monument** 

Date Received in Lab: Wed Oct-09-13 02:08 pm

**Report Date:** 23-OCT-13

Project Manager: Kelsev Brooks

|                                    |            |           |         |             |         |                                 |      | Project Mai | nager:      | Kelsey Brooks |             |             |      |
|------------------------------------|------------|-----------|---------|-------------|---------|---------------------------------|------|-------------|-------------|---------------|-------------|-------------|------|
|                                    | Lab Id:    | 471804-0  | )15     | 471804-0    | 16      | 471804-0                        | 17   | 471804-0    | 22          | 471804-0      | 23          | 471804-02   | 24   |
| Analysis Requested                 | Field Id:  | NSW-1 @   | @ 2'    | NSW-1 @     | 10'     | NSW-1A @                        | 18'  | ESW-4 @ 2'  |             | ESW-4 @ 10'   |             | ESW-4A @    | 18'  |
| Anaiysis Kequesiea                 | Depth:     | 2 ft      |         | 10 ft       |         | 18 ft                           |      | 2 ft        |             | 10 ft         |             | 18 ft       |      |
|                                    | Matrix:    | SOIL      |         | SOIL        |         | SOIL                            |      | SOIL        |             | SOIL          |             | SOIL        |      |
|                                    | Sampled:   | Oct-08-13 | 12:45   | Oct-08-13 1 | 2:50    | Oct-08-13 1                     | 2:55 | Oct-08-13   | 3:50        | Oct-08-13 1   | 3:55        | Oct-08-13 1 | 4:00 |
| BTEX by EPA 8021                   | Extracted: | Oct-10-13 | 15:00   | Oct-10-13 1 | 5:00    |                                 |      | Oct-10-13   | 5:00        | Oct-10-13 1   | 5:00        |             |      |
|                                    | Analyzed:  | Oct-14-13 | 12:50   | Oct-14-13 1 | 3:06    |                                 |      | Oct-14-13   | 3:22        | Oct-14-13 1   | 3:39        |             |      |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      |                                 |      | mg/kg       | RL          | mg/kg         | RL          |             |      |
| Benzene                            |            | ND        | 0.00101 | ND          | 0.00101 |                                 |      | ND          | 0.00106     | ND            | 0.00102     |             |      |
| Toluene                            |            | ND        | 0.00202 | ND          | 0.00202 |                                 |      | ND          | 0.00212     | ND            | 0.00205     |             |      |
| Ethylbenzene                       |            | ND        | 0.00101 | ND          | 0.00101 |                                 |      | ND          | 0.00106     | ND            | 0.00102     |             |      |
| m_p-Xylenes                        |            | ND        | 0.00202 | ND          | 0.00202 |                                 |      | ND          | 0.00212     | ND            | 0.00205     |             |      |
| o-Xylene                           |            | ND        | 0.00101 | ND          | 0.00101 |                                 |      | ND          | 0.00106     | ND            | 0.00102     |             |      |
| Xylenes, Total                     |            | ND        | 0.00101 | ND          | 0.00101 |                                 |      | ND          | 0.00106     | ND            | 0.00102     |             |      |
| Total BTEX                         |            | ND        | 0.00101 | ND          | 0.00101 |                                 |      | ND          | 0.00106     | ND            | 0.00102     |             |      |
| Percent Moisture                   | Extracted: |           |         |             |         |                                 |      |             |             |               |             |             |      |
|                                    | Analyzed:  | Oct-10-13 | 11:30   | Oct-10-13 1 | 1:30    | Oct-09-13 16:00 Oct-10-13 11:30 |      | 1:30        | Oct-10-13 1 | 1:30          | Oct-09-13 1 | 6:00        |      |
|                                    | Units/RL:  | %         | RL      | %           | RL      | %                               | RL   | %           | RL          | %             | RL          | %           | RL   |
| Percent Moisture                   |            | 1.10      | 1.00    | 1.58        | 1.00    | 20.5                            | 1.00 | 6.00        | 1.00        | 2.43          | 1.00        | 8.34        | 1.00 |
| TPH by SW8015 Mod                  | Extracted: | Oct-09-13 | 17:00   | Oct-09-13 1 | 7:00    | Oct-09-13 1                     | 7:00 | Oct-09-13   | 7:00        | Oct-09-13 1   | 7:00        | Oct-09-13 1 | 7:00 |
|                                    | Analyzed:  | Oct-10-13 | 02:34   | Oct-10-13 0 | 3:47    | Oct-09-13 2                     | 3:01 | Oct-10-13 ( | 04:12       | Oct-10-13 0   | 4:36        | Oct-09-13 2 | 3:25 |
|                                    | Units/RL:  | mg/kg     | RL      | mg/kg       | RL      | mg/kg                           | RL   | mg/kg       | RL          | mg/kg         | RL          | mg/kg       | RL   |
| C6-C12 Gasoline Range Hydrocarbons |            | ND        | 15.1    | ND          | 15.2    | ND                              | 18.8 | ND          | 15.9        | ND            | 15.3        | 31.3        | 16.4 |
| C12-C28 Diesel Range Hydrocarbons  |            | ND        | 15.1    | ND          | 15.2    | ND                              | 18.8 | ND          | 15.9        | ND            | 15.3        | 1440        | 16.4 |
| C28-C35 Oil Range Hydrocarbons     |            | ND        | 15.1    | ND          | 15.2    | ND                              | 18.8 | ND          | 15.9        | ND            | 15.3        | ND          | 16.4 |
| Total TPH                          |            | ND        | 15.1    | ND          | 15.2    | ND                              | 18.8 | ND          | 15.9        | ND            | 15.3        | 1470        | 16.4 |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks Project Manager **Contact:** Camille Bryant

**Project Location:** Lea County, New Mexico

## Certificate of Analysis Summary 471804

#### PLAINS ALL AMERICAN EH&S, Midland, TX



Project Id: TNM Monument 18 Project Name: Plains Monument

**Date Received in Lab:** Wed Oct-09-13 02:08 pm

**Report Date:** 23-OCT-13

Project Manager: Kelsey Brooks

|                                    |            |                 |   | Froject Manager: | Reisey Diooks |   |
|------------------------------------|------------|-----------------|---|------------------|---------------|---|
|                                    | Lab Id:    | 471804-025      |   |                  |               |   |
| Analysis Requested                 | Field Id:  | ESW-4B @ 18'    |   |                  |               |   |
| Anaiysis Nequesiea                 | Depth:     | 18 ft           |   |                  |               |   |
|                                    | Matrix:    | SOIL            |   |                  |               |   |
|                                    | Sampled:   | Oct-08-13 14:10 |   |                  |               |   |
| Percent Moisture                   | Extracted: |                 |   |                  |               |   |
|                                    | Analyzed:  | Oct-10-13 11:30 |   |                  |               |   |
|                                    | Units/RL:  | % RL            |   |                  |               |   |
| Percent Moisture                   |            | 13.8 1.00       |   |                  |               |   |
| TPH by SW8015 Mod                  | Extracted: | Oct-09-13 17:00 |   |                  |               |   |
|                                    | Analyzed:  | Oct-10-13 10:06 |   |                  |               |   |
|                                    | Units/RL:  | mg/kg RL        |   |                  |               |   |
| C6-C12 Gasoline Range Hydrocarbons |            | ND 17.4         |   |                  |               |   |
| C12-C28 Diesel Range Hydrocarbons  |            | ND 17.4         |   |                  |               |   |
| C28-C35 Oil Range Hydrocarbons     |            | ND 17.4         |   |                  |               |   |
| Total TPH                          |            | ND 17.4         | _ | <br>_            |               | _ |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks
Project Manager

### Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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**Project Name: Plains Monument** 

Work Orders: 471804, 471804

o-Terphenyl

**Project ID:** TNM Monument 18

104

70-135

**Lab Batch #:** 925733 Matrix: Soil Sample: 471804-003 / SMP Batch: 1

| Units:       | mg/kg | <b>Date Analyzed:</b> 10/09/13 22:15 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |
|--------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|
|              | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |
| 1-Chloroocta | ane   |                                      | 101                      | 99.8                  | 101                   | 70-135                  |       |  |  |  |  |
| o-Terphenyl  |       |                                      | 50.9                     | 49.9                  | 102                   | 70-135                  |       |  |  |  |  |

Lab Batch #: 925733 Sample: 471804-010 / SMP Batch: 1 Matrix: Soil

**Units:** mg/kg Date Analyzed: 10/09/13 22:38 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Flags Found Limits Amount Recovery [A] [B] %R %R **Analytes** [D] 1-Chlorooctane 102 100 102 70-135

52.2

50.0

Lab Batch #: 925733 Sample: 471804-017 / SMP Batch: Matrix: Soil

**Units:** mg/kg Date Analyzed: 10/09/13 23:01 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 105                    | 99.6                  | 105                   | 70-135                  |       |
| o-Terphenyl                 | 53.2                   | 49.8                  | 107                   | 70-135                  |       |

**Lab Batch #:** 925733 **Sample:** 471804-024 / SMP Batch: Matrix: Soil

| Units:     | mg/kg | <b>Date Analyzed:</b> 10/09/13 23:25 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|
|            | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |
| 1-Chlorooc | ctane |                                      | 113                      | 100                   | 113                   | 70-135                  |       |  |  |  |  |
| o-Terpheny | yl    |                                      | 54.9                     | 50.0                  | 110                   | 70-135                  |       |  |  |  |  |

Lab Batch #: 925733 Sample: 471804-001 / SMP Batch: Matrix: Soil

| Units:      | mg/kg | <b>Date Analyzed:</b> 10/10/13 00:13 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|
|             | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |
| 1-Chlorooct | tane  |                                      | 107                      | 99.7                  | 107                   | 70-135                  |       |  |  |  |  |
| o-Terpheny  | 1     |                                      | 54.4                     | 49.9                  | 109                   | 70-135                  |       |  |  |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains Monument** 

Work Orders: 471804, 471804

**Lab Batch #:** 925733 **Sample:** 471804-002 / SMP **Project ID:** TNM Monument 18

Matrix: Soil Batch:

| Units:       | mg/kg | <b>Date Analyzed:</b> 10/10/13 01:25 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|--------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|              | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1-Chloroocta | ne    | Timing tels                          | 106                      | 99.6                  | 106                   | 70-135                  |       |  |  |
| o-Terphenyl  |       |                                      | 55.6                     | 49.8                  | 112                   | 70-135                  |       |  |  |

**Lab Batch #:** 925733 Sample: 471804-008 / SMP Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 10/10/13 01:48 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R **Analytes** [D] 1-Chlorooctane 98.2 99.5 99 70-135 o-Terphenyl 49.8 48.0 96 70-135

Lab Batch #: 925733 Sample: 471804-009 / SMP Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 10/10/13 02:11 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 97.6                   | 99.7                  | 98                    | 70-135                  |       |
| o-Terphenyl                 | 47.2                   | 49.9                  | 95                    | 70-135                  |       |

**Lab Batch #:** 925733 **Sample:** 471804-015 / SMP Batch: Matrix: Soil

| Units:     | mg/kg | <b>Date Analyzed:</b> 10/10/13 02:34 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|            | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1-Chlorooc | ctane | •                                    | 98.8                     | 99.5                  | 99                    | 70-135                  |       |  |  |
| o-Terpheny | yl    |                                      | 47.5                     | 49.8                  | 95                    | 70-135                  |       |  |  |

Lab Batch #: 925733 **Sample:** 471804-016 / SMP Batch: Matrix: Soil

| Units:      | mg/kg | <b>Date Analyzed:</b> 10/10/13 03:47 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|             | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooct | tane  |                                      | 101                      | 100                   | 101                   | 70-135                  |       |  |
| o-Terpheny  | 1     |                                      | 49.1                     | 50.0                  | 98                    | 70-135                  |       |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains Monument** 

Work Orders: 471804, 471804

**Lab Batch #:** 925733 Sample: 471804-022 / SMP **Project ID:** TNM Monument 18

Matrix: Soil Batch: 1

| Units:       | mg/kg | <b>Date Analyzed:</b> 10/10/13 04:12 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|--------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|              | ТРН   | by SW8015 Mod                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
|              |       | Analytes                             |                          |                       | [15]                  |                         |       |  |
| 1-Chloroocta | ane   |                                      | 104                      | 99.8                  | 104                   | 70-135                  |       |  |
| o-Terphenyl  |       |                                      | 52.1                     | 49.9                  | 104                   | 70-135                  |       |  |

Lab Batch #: 925733 Sample: 471804-023 / SMP Batch: 1 Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 10/10/13 04:36 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Amount Recovery Flags [A] [B] %R %R **Analytes** [D] 1-Chlorooctane 104 99.6 104 70-135 o-Terphenyl 53.5 49.8 107 70-135

Lab Batch #: 925733 Sample: 471804-025 / SMP Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 10/10/13 10:06 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 107                    | 99.9                  | 107                   | 70-135                  |       |
| o-Terphenyl                 | 51.8                   | 50.0                  | 104                   | 70-135                  |       |

**Lab Batch #:** 925052 Sample: 471804-001 / SMP Batch: Matrix: Soil

| Units:      | mg/kg       | <b>Date Analyzed:</b> 10/11/13 18:11 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|
|             | ВТЕ         | EX by EPA 8021                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
|             |             | Analytes                             |                          |                       | [D]            |                         |       |  |  |
| 1,4-Difluor | robenzene   |                                      | 0.0257                   | 0.0300                | 86             | 80-120                  |       |  |  |
| 4-Bromofli  | uorobenzene |                                      | 0.0267                   | 0.0300                | 89             | 80-120                  |       |  |  |

Lab Batch #: 925052 Sample: 471804-002 / SMP Batch: Matrix: Soil

| Units:      | mg/kg       | <b>Date Analyzed:</b> 10/14/13 12:01 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|             | BTI         | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1,4-Difluor | obenzene    | 11mily tes                           | 0.0255                   | 0.0300                | 85                    | 80-120                  |       |  |  |
| 4-Bromoflu  | iorobenzene |                                      | 0.0274                   | 0.0300                | 91                    | 80-120                  |       |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains Monument** 

Work Orders: 471804, 471804

4-Bromofluorobenzene

**Project ID:** TNM Monument 18

89

80-120

Matrix: Soil

0.0300

**Lab Batch #:** 925052 **Sample:** 471804-008 / SMP Batch:

| Units:      | mg/kg       | <b>Date Analyzed:</b> 10/14/13 12:18 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|             | BTI         | EX by EPA 8021                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
|             |             | Analytes                             |                          |                       | [2]                   |                         |       |  |  |
| 1,4-Difluor | obenzene    |                                      | 0.0259                   | 0.0300                | 86                    | 80-120                  |       |  |  |
| 4-Bromoflu  | ıorobenzene |                                      | 0.0265                   | 0.0300                | 88                    | 80-120                  |       |  |  |

Lab Batch #: 925052 Sample: 471804-009 / SMP Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 10/14/13 12:34 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021 Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0265 0.0300 88 80-120

0.0268

Lab Batch #: 925052 Sample: 471804-015 / SMP Batch: Matrix: Soil

**Units:** mg/kg Date Analyzed: 10/14/13 12:50 SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0269                 | 0.0300                | 90                    | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0276                 | 0.0300                | 92                    | 80-120                  |       |

**Lab Batch #:** 925052 Sample: 471804-016 / SMP Batch: Matrix: Soil

| Units:      | mg/kg       | <b>Date Analyzed:</b> 10/14/13 13:06 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|             | ВТІ         | EX by EPA 8021                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
|             |             | Analytes                             |                          |                       | [D]                   |                         |       |  |  |
| 1,4-Difluoi | robenzene   |                                      | 0.0275                   | 0.0300                | 92                    | 80-120                  |       |  |  |
| 4-Bromofli  | uorobenzene |                                      | 0.0272                   | 0.0300                | 91                    | 80-120                  |       |  |  |

Lab Batch #: 925052 Sample: 471804-022 / SMP Batch: Matrix: Soil

| Units:      | mg/kg       | <b>Date Analyzed:</b> 10/14/13 13:22 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|             | ВТЕ         | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1,4-Difluor | obenzene    |                                      | 0.0275                   | 0.0300                | 92                    | 80-120                  |       |  |  |
| 4-Bromoflu  | iorobenzene |                                      | 0.0273                   | 0.0300                | 91                    | 80-120                  |       |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains Monument** 

Work Orders: 471804, 471804

**Project ID:** TNM Monument 18

**Lab Batch #:** 925052 Matrix: Soil Sample: 471804-023 / SMP Batch: 1

| Units:      | mg/kg Date Analyzed: 10/14/13 13:39 SURROGATE RECOVERY STUDY |                          |                        |                       |                       |                         |       |  |  |  |  |
|-------------|--|--------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|
|             | BTI  | EX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |
| 1,4-Difluor | obenzene   |                          | 0.0272                 | 0.0300                | 91                    | 80-120                  |       |  |  |  |  |
| 4-Bromoflu  | iorobenzene  |                          | 0.0264                 | 0.0300                | 88                    | 80-120                  |       |  |  |  |  |

**Lab Batch #:** 925733 **Sample:** 645766-1-BLK / BLK Batch: 1 Matrix: Solid

| Units:     | mg/kg | <b>Date Analyzed:</b> 10/09/13 21:52 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|------------|-------|--------------------------------------|------------------------|-----------------------|----------------|-------------------------|-------|
|            | ТРН   | by SW8015 Mod                        | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
|            |       | Analytes                             |                        |                       | [D]            |                         |       |
| 1-Chlorooc | tane  |                                      | 102                    | 100                   | 102            | 70-135                  |       |
| o-Ternhens | ı1    |                                      | 53.5                   | 50.0                  | 107            | 70 135                  |       |

**Sample:** 645319-1-BLK / BLK **Lab Batch #:** 925052 Batch: 1 Matrix: Solid

**Units:** Date Analyzed: 10/11/13 16:50 mg/kg SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0273                 | 0.0300                | 91                    | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0264                 | 0.0300                | 88                    | 80-120                  |       |

**Lab Batch #:** 925733 **Sample:** 645766-1-BKS / BKS Batch: 1 Matrix: Solid

| Units:     | mg/kg | <b>Date Analyzed:</b> 10/09/13 21:06 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|--|
|            | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |  |
| 1-Chlorooc | ctane |                                      | 114                      | 100                   | 114                   | 70-135                  |       |  |  |  |  |  |
| o-Terpheny | yl    |                                      | 49.2                     | 50.0                  | 98                    | 70-135                  |       |  |  |  |  |  |

Batch: Lab Batch #: 925052 **Sample:** 645319-1-BKS / BKS Matrix: Solid

| Units:       | mg/kg                | <b>Date Analyzed:</b> 10/11/13 16:02 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |
|--------------|----------------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|
|              | ВТІ                  | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |
| 1,4-Difluoro | obenzene             | 11M1, VOS                            | 0.0296                   | 0.0300                | 99                    | 80-120                  |       |  |  |  |
| 4-Bromoflu   | 4-Bromofluorobenzene |                                      |                          | 0.0300                | 98                    | 80-120                  |       |  |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains Monument** 

Work Orders: 471804, 471804

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TT...\*4...

**Project ID:** TNM Monument 18

**Lab Batch #:** 925733 Matrix: Solid **Sample:** 645766-1-BSD / BSD Batch: 1

| Units:     | mg/kg | <b>Date Analyzed:</b> 10/09/13 21:30 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|
|            | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |
| 1-Chlorooc | tane  |                                      | 126                      | 100                   | 126                   | 70-135                  |       |  |  |  |  |
| o-Terpheny | 1     |                                      | 53.7                     | 50.0                  | 107                   | 70-135                  |       |  |  |  |  |

**Lab Batch #:** 925052 **Sample:** 645319-1-BSD / BSD Batch: 1 Matrix: Solid

A ... . I ... . 10/11/12 16:19

| Units:        | mg/kg     | <b>Date Analyzed:</b> 10/11/13 16:18 | SU                     | RROGATE RI            | ECOVERY S      | STUDY                   |       |
|---------------|-----------|--------------------------------------|------------------------|-----------------------|----------------|-------------------------|-------|
|               | BTI       | EX by EPA 8021                       | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
|               |           | Analytes                             |                        |                       | [D]            |                         |       |
| 1,4-Difluorol | benzene   |                                      | 0.0286                 | 0.0300                | 95             | 80-120                  |       |
| 4-Bromofluo   | robenzene |                                      | 0.0288                 | 0.0300                | 96             | 80-120                  |       |

**Lab Batch #:** 925733 Sample: 471804-001 S / MS Batch: Matrix: Soil

**Units:** mg/kg Date Analyzed: 10/10/13 00:37 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 121                    | 99.8                  | 121                   | 70-135                  |       |
| o-Terphenyl                 | 56.2                   | 49.9                  | 113                   | 70-135                  |       |

**Lab Batch #:** 925052 **Sample:** 471804-001 S / MS Batch: 1 Matrix: Soil

| Units:      | mg/kg       | <b>Date Analyzed:</b> 10/11/13 18:27 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|
|             | ВТІ         | EX by EPA 8021                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |
|             |             | Analytes                             |                          |                       | [D]                   |                         |       |  |  |  |  |
| 1,4-Difluor | robenzene   |                                      | 0.0285                   | 0.0300                | 95                    | 80-120                  |       |  |  |  |  |
| 4-Bromofli  | uorobenzene |                                      | 0.0280                   | 0.0300                | 93                    | 80-120                  |       |  |  |  |  |

Lab Batch #: 925733 Sample: 471804-001 SD / MSD Batch: Matrix: Soil

| Units:      | Units: mg/kg Date Analyzed: 10/10/13 01:01 SURROGATE RECOVERY STUDY |                         |                        |                       |                       |                         |       |  |  |  |
|-------------|---|-------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|
|             | ТРН   | by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |
| 1-Chlorooct | tane  |                         | 122                    | 99.8                  | 122                   | 70-135                  |       |  |  |  |
| o-Terpheny  | 1   |                         | 52.4                   | 49.9                  | 105                   | 70-135                  |       |  |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Plains Monument** 

Work Orders: 471804, 471804 Project ID: TNM Monument 18

**Lab Batch #:** 925052 **Sample:** 471804-001 SD / MSD **Batch:** 1 **Matrix:** Soil

**Units: Date Analyzed:** 10/11/13 18:43 mg/kg SURROGATE RECOVERY STUDY Amount True Control BTEX by EPA 8021 Found Amount Limits Flags Recovery [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0278 0.0300 93 80-120 4-Bromofluorobenzene 0.0286 0.0300 95 80-120

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



#### **BS / BSD Recoveries**



**Project Name: Plains Monument** 

**Work Order #:** 471804, 471804 **Project ID:** TNM Monument 18

Analyst: ARM Date Prepared: 10/10/2013 Date Analyzed: 10/11/2013

**Lab Batch ID:** 925052 **Sample:** 645319-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | < 0.00100                     | 0.100                 | 0.0878                          | 88                          | 0.100                 | 0.0871                                    | 87                            | 1        | 70-130                  | 35                        |      |
| Toluene                    | < 0.00200                     | 0.100                 | 0.0880                          | 88                          | 0.100                 | 0.0881                                    | 88                            | 0        | 70-130                  | 35                        |      |
| Ethylbenzene               | < 0.00100                     | 0.100                 | 0.0922                          | 92                          | 0.100                 | 0.0919                                    | 92                            | 0        | 71-129                  | 35                        |      |
| m_p-Xylenes                | < 0.00200                     | 0.200                 | 0.186                           | 93                          | 0.200                 | 0.186                                     | 93                            | 0        | 70-135                  | 35                        |      |
| o-Xylene                   | < 0.00100                     | 0.100                 | 0.0948                          | 95                          | 0.100                 | 0.0943                                    | 94                            | 1        | 71-133                  | 35                        |      |

**Analyst:** ARM **Date Prepared:** 10/09/2013 **Date Analyzed:** 10/09/2013

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod Analytes         | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000                  | 809                             | 81                          | 1000                  | 867                                       | 87                            | 7        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000                  | 844                             | 84                          | 1000                  | 885                                       | 89                            | 5        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



#### Form 3 - MS / MSD Recoveries



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**Project Name: Plains Monument** 

Work Order #: 471804 **Project ID:** TNM Monument 18

Lab Batch ID:

925052

**QC- Sample ID:** 471804-001 S

Batch #:

Matrix: Soil

**Date Analyzed:** 

10/11/2013

**Date Prepared:** 10/10/2013

Analyst: ARM

**Reporting Units:** 

mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | <0.00105                          | 0.105                 | 0.0688                         | 66                            | 0.105                 | 0.0669                                   | 64                          | 3        | 70-130                  | 35                        | X    |
| Toluene                    | < 0.00210                         | 0.105                 | 0.0603                         | 57                            | 0.105                 | 0.0582                                   | 55                          | 4        | 70-130                  | 35                        | X    |
| Ethylbenzene               | < 0.00105                         | 0.105                 | 0.0348                         | 33                            | 0.105                 | 0.0309                                   | 29                          | 12       | 71-129                  | 35                        | X    |
| m_p-Xylenes                | < 0.00210                         | 0.210                 | 0.0990                         | 47                            | 0.211                 | 0.101                                    | 48                          | 2        | 70-135                  | 35                        | X    |
| o-Xylene                   | < 0.00105                         | 0.105                 | 0.0658                         | 63                            | 0.105                 | 0.0652                                   | 62                          | 1        | 71-133                  | 35                        | X    |

Lab Batch ID:

925733

**QC- Sample ID:** 471804-001 S

Batch #:

Matrix: Soil

Date Analyzed:

10/10/2013

**Date Prepared:** 10/09/2013

Analyst: ARM

**Reporting Units:** mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod                  | Parent<br>Sample<br>Result | Spike        | Spiked Sample<br>Result | Sample    |              | Duplicate<br>Spiked Sample |           | RPD | Control<br>Limits | Control<br>Limits | Flag |
|------------------------------------|----------------------------|--------------|-------------------------|-----------|--------------|----------------------------|-----------|-----|-------------------|-------------------|------|
| Analytes                           | [A]                        | Added<br>[B] | [C]                     | %R<br>[D] | Added<br>[E] | Result [F]                 | %R<br>[G] | %   | %R                | %RPD              |      |
| C6-C12 Gasoline Range Hydrocarbons | <15.8                      | 1060         | 951                     | 90        | 1060         | 962                        | 91        | 1   | 70-135            | 35                |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.8                      | 1060         | 1000                    | 94        | 1060         | 993                        | 94        | 1   | 70-135            | 35                |      |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



## **Sample Duplicate Recovery**



**Project Name: Plains Monument** 

Work Order #: 471804

Lab Batch #: 924755 Project ID: TNM Monument 18

 Date Analyzed:
 10/09/2013 16:00
 Date Prepared:
 10/09/2013
 Analyst:
 WRU

 QC- Sample ID:
 471804-003 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: %        | SAMPLE / SAMPLE DUPLICATE RECOVE |                                      |     |                           | OVERY |
|---------------------------|----------------------------------|--------------------------------------|-----|---------------------------|-------|
| Percent Moisture  Analyte | Parent Sample<br>Result<br>[A]   | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag  |
| Analyte                   |                                  |                                      |     |                           |       |
| Percent Moisture          | 19.6                             | 19.1                                 | 3   | 20                        |       |

**Lab Batch #:** 924857

 Date Analyzed:
 10/10/2013 11:30
 Date Prepared:
 10/10/2013
 Analyst: WRU

 QC- Sample ID:
 471804-001 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: %        | SAMPLE/SAMPLE DUPLICATE RECOVER |                                      |     |                           | OVERY |
|---------------------------|---------------------------------|--------------------------------------|-----|---------------------------|-------|
| Percent Moisture  Analyte | Parent Sample<br>Result<br>[A]  | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag  |
| Allalyte                  |                                 |                                      |     |                           |       |
| Percent Moisture          | 5.43                            | 5.07                                 | 7   | 20                        |       |

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#### **XENCO Laboratories**

### XENCO Laboratories

### Prelogin/Nonconformance Report- Sample Log-In



D. ( . / T' . . . D . . . ' . . | . . 40/00/0040 00:00:00 |

Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 10/09/2013 02:08:00 PM

Work Order #: 471804

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

| Sample Re   | ceipt Checklist  | Comments |
|---|------------------|----------|
| #1 *Temperature of cooler(s)?                           | 1.5              |          |
| #2 *Shipping container in good condition?               | Yes              |          |
| #3 *Samples received on ice?                            | Yes              |          |
| #4 *Custody Seals intact on shipping container/ cooler? | N/A              |          |
| #5 Custody Seals intact on sample bottles?              | N/A              |          |
| #6 *Custody Seals Signed and dated?                     | N/A              |          |
| #7 *Chain of Custody present?                           | Yes              |          |
| #8 Sample instructions complete on Chain of Custody?    | Yes              |          |
| #9 Any missing/extra samples?                           | No               |          |
| #10 Chain of Custody signed when relinquished/ receive  | ed? Yes          |          |
| #11 Chain of Custody agrees with sample label(s)?       | Yes              |          |
| #12 Container label(s) legible and intact?              | Yes              |          |
| #13 Sample matrix/ properties agree with Chain of Custo | ody? Yes         |          |
| #14 Samples in proper container/ bottle?                | Yes              |          |
| #15 Samples properly preserved?                         | Yes              |          |
| #16 Sample container(s) intact?                         | Yes              |          |
| #17 Sufficient sample amount for indicated test(s)?     | Yes              |          |
| #18 All samples received within hold time?              | Yes              |          |
| #19 Subcontract of sample(s)?                           | No               |          |
| #20 VOC samples have zero headspace (less than 1/4 i    | nch bubble)? N/A |          |
| #21 <2 for all samples preserved with HNO3,HCL, H2SC    | 04? <b>N/A</b>   |          |
| #22 >10 for all samples preserved with NaAsO2+NaOH,     | ZnAc+NaOH? N/A   |          |

| Analyst:            | PH Device/Lot#:                |                  |
|---------------------|--------------------------------|------------------|
| Checklist completed | by: Candau James Candace James | Date: 10/09/2013 |
| Checklist reviewed  | by: Many Moah Kelsey Brooks    | Date: 10/09/2013 |

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Final 1.001



#### **XENCO Laboratories**

#### Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 10/09/2013 02:08:00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 471804

Temperature Measuring device used :

| Sample Receipt Checklist   |     | Comments |
|--|-----|----------|
| #1 *Temperature of cooler(s)?                                    | 1.5 |          |
| #2 *Shipping container in good condition?                        | Yes |          |
| #3 *Samples received on ice?                                     | Yes |          |
| #4 *Custody Seals intact on shipping container/ cooler?          | N/A |          |
| #5 Custody Seals intact on sample bottles?                       | N/A |          |
| #6 *Custody Seals Signed and dated?                              | N/A |          |
| #7 *Chain of Custody present?                                    | Yes |          |
| #8 Sample instructions complete on Chain of Custody?             | Yes |          |
| #9 Any missing/extra samples?                                    | No  |          |
| #10 Chain of Custody signed when relinquished/ received?         | Yes |          |
| #11 Chain of Custody agrees with sample label(s)?                | Yes |          |
| #12 Container label(s) legible and intact?                       | Yes |          |
| #13 Sample matrix/ properties agree with Chain of Custody?       | Yes |          |
| #14 Samples in proper container/ bottle?                         | Yes |          |
| #15 Samples properly preserved?                                  | Yes |          |
| #16 Sample container(s) intact?                                  | Yes |          |
| #17 Sufficient sample amount for indicated test(s)?              | Yes |          |
| #18 All samples received within hold time?                       | Yes |          |
| #19 Subcontract of sample(s)?                                    | No  |          |
| #20 VOC samples have zero headspace (less than 1/4 inch bubble)? | N/A |          |
| #21 <2 for all samples preserved with HNO3,HCL, H2SO4?           | N/A |          |
| #22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?   | N/A |          |
|  |     |          |
|  |     |          |

| Analyst:            | PH Device/Lot#:                |                  |
|---------------------|--------------------------------|------------------|
| Checklist completed | by: Candau James Candace James | Date: 10/09/2013 |
| Checklist reviewed  | by: Many Moah  Kelsey Brooks   | Date: 10/09/2013 |

## **Analytical Report 473458**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Curt Stanley
Monument #18
SRS#TNM-Monument 18
11-NOV-13

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002) Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054) New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610) Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX) Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)





11-NOV-13

Project Manager: **Curt Stanley PLAINS ALL AMERICAN EH&S**1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): 473458

**Monument #18** 

Project Address: Lea County, NM

#### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473458. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473458 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Kelsey Brooks** 

Knis Hoah

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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# **Sample Cross Reference 473458**



## PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18

| Sample Id          | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|--------------------|--------|-----------------------|--------------|---------------|
| W Trench @ 5' bgs  | S      | 11-05-13 09:00        | - 5 ft       | 473458-001    |
| W Trench @ 10' bgs | S      | 11-05-13 09:20        | - 10 ft      | 473458-002    |
| W Trench @ 15' bgs | S      | 11-05-13 09:50        | - 15 ft      | 473458-003    |
| W Trench @ 18' bgs | S      | 11-05-13 11:00        | - 18 ft      | 473458-004    |



#### CASE NARRATIVE



11-NOV-13

Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Monument #18

Project ID: SRS#TNM-Monument 18 Report Date:

Work Order Number(s): 473458 Date Received: 11/05/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-926991 TPH by SW8015 Mod

SW8015MOD\_NM

Batch 926991, C12-C28 Diesel Range Hydrocarbons, C6-C12 Gasoline Range Hydrocarbons RPD was

outside QC limits.

Samples affected are: 473458-004, -002, -003, -001



## Hits Summary 473458



## PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18



**Contact:** Curt Stanley

Project Location: Lea County, NM

**Project Id:** SRS#TNM-Monument 18

## **Certificate of Analysis Summary 473458**

#### PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Monument #18** 

Date Received in Lab: Tue Nov-05-13 04:22 pm

**Report Date:** 11-NOV-13

Project Manager: Kelsey Brooks

|                                    |            |            |          |              |          |            |          | I Toject Ma | mager.  | Keisey Blooks |  |
|------------------------------------|------------|------------|----------|--------------|----------|------------|----------|-------------|---------|---------------|--|
|                                    | Lab Id:    | 473458-0   | 001      | 473458-0     | 02       | 473458-    | 003      | 473458-     | 004     |               |  |
| Analysis Requested                 | Field Id:  | W Trench @ | 5' bgs   | W Trench @ 1 | 0' bgs   | W Trench @ | 15' bgs  | W Trench @  | 18' bgs |               |  |
| Analysis Requesieu                 | Depth:     | 5 ft       |          | 10 ft        |          | 15 ft      |          | 18 ft       |         |               |  |
|                                    | Matrix:    | SOIL       |          | SOIL         |          | SOII       | .        | SOIL        | ,       |               |  |
|                                    | Sampled:   | Nov-05-13  | 09:00    | Nov-05-13 (  | 09:20    | Nov-05-13  | 09:50    | Nov-05-13   | 11:00   |               |  |
| BTEX by EPA 8021                   | Extracted: | Nov-06-13  | 15:00    | Nov-06-13 1  | 15:00    | Nov-06-13  | 15:00    | Nov-06-13   | 15:00   |               |  |
|                                    | Analyzed:  | Nov-07-13  | 00:52    | Nov-07-13 (  | 01:08    | Nov-07-13  | 01:24    | Nov-07-13   | 01:40   |               |  |
|                                    | Units/RL:  | mg/kg      | RL       | mg/kg        | RL       | mg/kg      | RL       | mg/kg       | RL      |               |  |
| Benzene                            |            | ND         | 0.000996 | ND (         | 0.000994 | ND         | 0.000990 | ND          | 0.00100 |               |  |
| Toluene                            |            | ND         | 0.00199  | ND           | 0.00199  | ND         | 0.00198  | ND          | 0.00200 |               |  |
| Ethylbenzene                       |            | ND         | 0.000996 | ND (         | 0.000994 | ND         | 0.000990 | ND          | 0.00100 |               |  |
| m_p-Xylenes                        |            | ND         | 0.00199  |              | 0.00199  | ND         |          | ND          | 0.00200 |               |  |
| o-Xylene                           |            | ND         | 0.000996 | ND (         | 0.000994 | ND         | 0.000990 | ND          | 0.00100 |               |  |
| Xylenes, Total                     |            | ND         | 0.000996 | ND (         | 0.000994 | ND         | 0.000990 | ND          | 0.00100 |               |  |
| Total BTEX                         |            | ND         | 0.000996 | ND (         | 0.000994 | ND         | 0.000990 | ND          | 0.00100 |               |  |
| Percent Moisture                   | Extracted: |            |          |              |          |            |          |             |         |               |  |
|                                    | Analyzed:  | Nov-06-13  | 15:00    | Nov-06-13 1  | 15:00    | Nov-06-13  | 15:00    | Nov-06-13   | 15:00   |               |  |
|                                    | Units/RL:  | %          | RL       | %            | RL       | %          | RL       | %           | RL      |               |  |
| Percent Moisture                   |            | 10.2       | 1.00     | 10.1         | 1.00     | 9.89       | 1.00     | 13.4        | 1.00    |               |  |
| TPH by SW8015 Mod                  | Extracted: | Nov-05-13  | 18:00    | Nov-05-13 1  | 18:00    | Nov-05-13  | 18:00    | Nov-05-13   | 18:00   |               |  |
|                                    | Analyzed:  | Nov-06-13  | 13:02    | Nov-06-13 1  | 13:32    | Nov-06-13  | 14:01    | Nov-06-13   | 14:31   |               |  |
|                                    | Units/RL:  | mg/kg      | RL       | mg/kg        | RL       | mg/kg      | RL       | mg/kg       | RL      |               |  |
| C6-C12 Gasoline Range Hydrocarbons |            | ND         | 16.7     | ND           | 16.6     | ND         | 16.6     | ND          | 17.3    |               |  |
| C12-C28 Diesel Range Hydrocarbons  |            | ND         | 16.7     | ND           | 16.6     | ND         | 16.6     | ND          | 17.3    |               |  |
| C28-C35 Oil Range Hydrocarbons     |            | ND         | 16.7     | ND           | 16.6     | ND         | 16.6     | ND          | 17.3    |               |  |
| Total TPH                          |            | ND         | 16.7     | ND           | 16.6     | ND         | 16.6     | ND          | 17.3    |               |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks

## Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantiation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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**Project Name: Monument #18** 

Work Orders: 473458,

**Project ID:** SRS#TNM-Monument 18

**Lab Batch #:** 926991 **Sample:** 473458-001 / SMP Batch: 1 Matrix: Soil

| Units:      | mg/kg | <b>Date Analyzed:</b> 11/06/13 13:02 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|             | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1-Chlorooct | ane   |                                      | 98.1                     | 99.8                  | 98                    | 70-135                  |       |  |  |
| o-Terphenyl |       |                                      | 45.9                     | 49.9                  | 92                    | 70-135                  |       |  |  |

Lab Batch #: 926991 Sample: 473458-002 / SMP Batch: 1 Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 11/06/13 13:32 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 103                    | 99.6                  | 103                   | 70-135                  |       |
| o-Terphenyl                 | 47.8                   | 49.8                  | 96                    | 70-135                  |       |

Lab Batch #: 926991 Sample: 473458-003 / SMP Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 11/06/13 14:01 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 101                    | 100                   | 101                   | 70-135                  |       |
| o-Terphenyl                 | 46.4                   | 50.0                  | 93                    | 70-135                  |       |

**Lab Batch #:** 926991 Sample: 473458-004 / SMP Batch: Matrix: Soil

| Units:     | mg/kg | <b>Date Analyzed:</b> 11/06/13 14:31 | SURROGATE RECOVERY STUDY |                       |                |                         |       |  |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|----------------|-------------------------|-------|--|--|
|            | ТРН   | by SW8015 Mod                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
|            |       | Analytes                             |                          |                       | [D]            |                         |       |  |  |
| 1-Chlorooc | tane  |                                      | 103                      | 100                   | 103            | 70-135                  |       |  |  |
| o-Terpheny | ·1    |                                      | 48.1                     | 50.0                  | 96             | 70-135                  |       |  |  |

Lab Batch #: 926999 **Sample:** 473458-001 / SMP Batch: Matrix: Soil

| Units:       | mg/kg      | <b>Date Analyzed:</b> 11/07/13 00:52 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |
|--------------|------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|
|              | ВТІ        | CX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |
| 1,4-Difluoro | obenzene   |                                      | 0.0268                   | 0.0300                | 89                    | 80-120                  |       |  |  |  |
| 4-Bromoflu   | orobenzene |                                      | 0.0283                   | 0.0300                | 94                    | 80-120                  |       |  |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 473458,

4-Bromofluorobenzene

Project ID: SRS#TNM-Monument 18

99

80-120

Lab Batch #: 926999 Sample: 473458-002 / SMP

Matrix: Soil Batch: 1

0.0300

| <b>Units:</b> | mg/kg      | <b>Date Analyzed:</b> 11/07/13 01:08 | SURROGATE RECOVERY STUDY |                       |             |                         |       |  |  |
|---------------|------------|--------------------------------------|--------------------------|-----------------------|-------------|-------------------------|-------|--|--|
|               | ВТЕ        | X by EPA 8021                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |  |  |
|               |            | Analytes                             |                          |                       | [D]         |                         |       |  |  |
| 1,4-Difluor   | obenzene   |                                      | 0.0277                   | 0.0300                | 92          | 80-120                  |       |  |  |
| 4-Bromoflu    | orobenzene |                                      | 0.0302                   | 0.0300                | 101         | 80-120                  |       |  |  |

Lab Batch #: 926999 Sample: 473458-003 / SMP Batch: 1 Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 11/07/13 01:24 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021 Found Recovery Limits Amount Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0276 0.0300 92 80-120

0.0296

Lab Batch #: 926999 Sample: 473458-004 / SMP Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 11/07/13 01:40 SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0273                 | 0.0300                | 91                    | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0286                 | 0.0300                | 95                    | 80-120                  |       |

**Lab Batch #:** 926991 Sample: 646539-1-BLK / BLK Batch: Matrix: Solid

| Units:     | mg/kg      | <b>Date Analyzed:</b> 11/06/13 02:43 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |
|------------|------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|
|            | ТРН        | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |
| 1-Chlorooc | tane       |                                      | 108                      | 100                   | 108                   | 70-135                  |       |  |  |  |
| o-Terpheny | <i>i</i> 1 |                                      | 51.1                     | 50.0                  | 102                   | 70-135                  |       |  |  |  |

Lab Batch #: 926999 **Sample:** 646542-1-BLK / BLK Batch: Matrix: Solid

| Units:       | mg/kg      | <b>Date Analyzed:</b> 11/07/13 00:37    | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |  |
|--------------|------------|---|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|--|
|              | ВТІ        | CX by EPA 8021  Analytes                | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |  |
| 1,4-Difluoro | obenzene   | 111111111111111111111111111111111111111 | 0.0261                   | 0.0300                | 87                    | 80-120                  |       |  |  |  |  |  |
| 4-Bromoflu   | orobenzene |   | 0.0284                   | 0.0300                | 95                    | 80-120                  |       |  |  |  |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 473458,

TT...\*4...

**Project ID:** SRS#TNM-Monument 18

Lab Batch #: 926991 Matrix: Solid **Sample:** 646539-1-BKS / BKS Batch: 1

| Units:      | mg/kg | <b>Date Analyzed:</b> 11/06/13 01:53 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |  |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|--|
|             | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |  |
| 1-Chlorooct | ane   |                                      | 97.0                     | 100                   | 97                    | 70-135                  |       |  |  |  |  |  |
| o-Terphenyl |       |                                      | 54.1                     | 50.0                  | 108                   | 70-135                  |       |  |  |  |  |  |

Lab Batch #: 926999 **Sample:** 646542-1-BKS / BKS Batch: Matrix: Solid

| Units:      | mg/kg       | <b>Date Analyzed:</b> 11/06/13 23:1/ | SU                     | SURROGATE RECOVERY STUDY |                |                         |       |  |  |  |  |  |  |  |
|-------------|-------------|--------------------------------------|------------------------|--------------------------|----------------|-------------------------|-------|--|--|--|--|--|--|--|
|             | ВТЕ         | EX by EPA 8021                       | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |  |  |  |  |  |
|             |             | Analytes                             |                        |                          | [D]            |                         |       |  |  |  |  |  |  |  |
| 1,4-Difluor | robenzene   |                                      | 0.0292                 | 0.0300                   | 97             | 80-120                  |       |  |  |  |  |  |  |  |
| 4-Bromoflu  | uorobenzene |                                      | 0.0325                 | 0.0300                   | 108            | 80-120                  |       |  |  |  |  |  |  |  |

**Sample:** 646539-1-BSD / BSD Lab Batch #: 926991 Batch: Matrix: Solid

**Units:** mg/kg Date Analyzed: 11/06/13 02:18 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 111                    | 100                   | 111                   | 70-135                  |       |
| o-Terphenyl                 | 61.8                   | 50.0                  | 124                   | 70-135                  |       |

**Lab Batch #:** 926999 **Sample:** 646542-1-BSD / BSD Batch: Matrix: Solid

| Units:      | mg/kg       | <b>Date Analyzed:</b> 11/06/13 23:33 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|--|--|
|             | ВТІ         | EX by EPA 8021                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |  |  |
|             |             | Analytes                             |                          |                       | [D]                   |                         |       |  |  |  |  |  |  |
| 1,4-Difluor | robenzene   |                                      | 0.0293                   | 0.0300                | 98                    | 80-120                  |       |  |  |  |  |  |  |
| 4-Bromofli  | uorobenzene |                                      | 0.0329                   | 0.0300                | 110                   | 80-120                  |       |  |  |  |  |  |  |

Batch: **Lab Batch #:** 926991 **Sample:** 473374-007 S / MS Matrix: Soil

| Units:      | mg/kg | <b>Date Analyzed:</b> 11/06/13 05:56 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |  |  |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|--|--|
|             | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |  |  |
| 1-Chlorooct | tane  |                                      | 1100                     | 990                   | 111                   | 70-135                  |       |  |  |  |  |  |
| o-Terpheny  | 1     |                                      | 642                      | 495                   | 130                   | 70-135                  |       |  |  |  |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 473458,

**Project ID:** SRS#TNM-Monument 18

Lab Batch #: 926999 **Sample:** 473458-001 S / MS

Matrix: Soil Batch: 1

| Units:      | mg/kg            | <b>Date Analyzed:</b> 11/06/13 23:49 | SURROGATE RECOVERY STUDY |                       |             |                         |       |  |  |  |  |  |
|-------------|------------------|--------------------------------------|--------------------------|-----------------------|-------------|-------------------------|-------|--|--|--|--|--|
|             | BTEX by EPA 8021 |                                      | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |  |  |  |  |  |
|             |                  | Analytes                             |                          |                       | [D]         |                         |       |  |  |  |  |  |
| 1,4-Difluor | obenzene         |                                      | 0.0307                   | 0.0300                | 102         | 80-120                  |       |  |  |  |  |  |
| 4-Bromoflu  | iorobenzene      |                                      | 0.0330                   | 0.0300                | 110         | 80-120                  |       |  |  |  |  |  |

**Lab Batch #:** 926991 **Sample:** 473374-007 SD / MSD Batch: Matrix: Soil

**Units:** mg/kg Date Analyzed: 11/06/13 06:19 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Flags Amount Recovery [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 105 100 105 70-135 o-Terphenyl 50.0 56.5 113 70-135

Lab Batch #: 926999 Sample: 473458-001 SD / MSD Matrix: Soil Batch:

**Units:** mg/kg Date Analyzed: 11/07/13 00:05 SURROGATE RECOVERY STUDY Amount True Control BTEX by EPA 8021 Found Limits Flags Amount Recovery %R %R [A] [B] [D] **Analytes** 1,4-Difluorobenzene 0.0301 0.0300 100 80-120 4-Bromofluorobenzene 0.0315 0.0300 105 80-120

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **BS / BSD Recoveries**



**Project Name: Monument #18** 

Work Order #: 473458

Project ID: SRS#TNM-Monument 18

Analyst: ARM Date Prepared: 11/06/2013 Date Analyzed: 11/06/2013

 Lab Batch ID: 926999
 Sample: 646542-1-BKS
 Batch #: 1
 Matrix: Solid

| Units: | mg/kg            |       | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY |       |       |       |       |          |     |         | ΣY      |  |
|--------|------------------|-------|---|-------|-------|-------|-------|----------|-----|---------|---------|--|
|        | BTEX by EPA 8021 | Blank | Spike   | Blank | Blank | Spike | Blank | Blk. Spk | DDD | Control | Control |  |

| BTEX by EPA 8021  Analytes | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | < 0.00100                     | 0.100                 | 0.0948                          | 95                          | 0.100                 | 0.0986                                    | 99                            | 4        | 70-130                  | 35                        |      |
| Toluene                    | < 0.00200                     | 0.100                 | 0.0958                          | 96                          | 0.100                 | 0.0998                                    | 100                           | 4        | 70-130                  | 35                        |      |
| Ethylbenzene               | < 0.00100                     | 0.100                 | 0.0994                          | 99                          | 0.100                 | 0.104                                     | 104                           | 5        | 71-129                  | 35                        |      |
| m_p-Xylenes                | < 0.00200                     | 0.200                 | 0.201                           | 101                         | 0.200                 | 0.212                                     | 106                           | 5        | 70-135                  | 35                        |      |
| o-Xylene                   | < 0.00100                     | 0.100                 | 0.102                           | 102                         | 0.100                 | 0.107                                     | 107                           | 5        | 71-133                  | 35                        |      |

**Analyst:** ARM **Date Prepared:** 11/05/2013 **Date Analyzed:** 11/06/2013

**Lab Batch ID:** 926991 **Sample:** 646539-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod                  | Blank<br>Sample Result<br>[A] | Spike<br>Added | Blank<br>Spike<br>Result | Blank<br>Spike<br>%R | Spike<br>Added | Blank<br>Spike<br>Duplicate | Blk. Spk<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|-------------------------------|----------------|--------------------------|----------------------|----------------|-----------------------------|------------------------|----------|-------------------------|---------------------------|------|
| Analytes                           |                               | [B]            | [C]                      | [D]                  | [E]            | Result [F]                  | [G]                    |          |                         |                           |      |
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000           | 941                      | 94                   | 1000           | 1060                        | 106                    | 12       | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000           | 936                      | 94                   | 1000           | 1050                        | 105                    | 11       | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



### Form 3 - MS / MSD Recoveries



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**Project Name: Monument #18** 

Work Order #: 473458 **Project ID:** SRS#TNM-Monument 18

Lab Batch ID:

926999

**QC- Sample ID:** 473458-001 S

Batch #:

Matrix: Soil

Date Analyzed:

11/06/2013

**Date Prepared:** 11/06/2013

Analyst: ARM

**Reporting Units:** 

mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021 | Parent<br>Sample | Spike        | Spiked Sample<br>Result | Sample    | Spike        | Duplicate<br>Spiked Sample |           | RPD | Control<br>Limits | Control<br>Limits | Flag |
|------------------|------------------|--------------|-------------------------|-----------|--------------|----------------------------|-----------|-----|-------------------|-------------------|------|
| Analytes         | Result<br>[A]    | Added<br>[B] | [C]                     | %R<br>[D] | Added<br>[E] | Result [F]                 | %R<br>[G] | %   | %R                | %RPD              |      |
| Benzene          | < 0.000998       | 0.0998       | 0.0864                  | 87        | 0.0996       | 0.0707                     | 71        | 20  | 70-130            | 35                |      |
| Toluene          | < 0.00200        | 0.0998       | 0.0862                  | 86        | 0.0996       | 0.0704                     | 71        | 20  | 70-130            | 35                |      |
| Ethylbenzene     | < 0.000998       | 0.0998       | 0.0877                  | 88        | 0.0996       | 0.0715                     | 72        | 20  | 71-129            | 35                |      |
| m_p-Xylenes      | < 0.00200        | 0.200        | 0.177                   | 89        | 0.199        | 0.143                      | 72        | 21  | 70-135            | 35                |      |
| o-Xylene         | < 0.000998       | 0.0998       | 0.0900                  | 90        | 0.0996       | 0.0731                     | 73        | 21  | 71-133            | 35                |      |

Lab Batch ID:

926991

**QC- Sample ID:** 473374-007 S

Batch #:

Matrix: Soil

Date Analyzed:

11/06/2013

**Date Prepared:** 11/05/2013

Analyst: ARM

**Reporting Units:** 

mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod                  | Parent<br>Sample<br>Result | Spike        | Spiked Sample<br>Result | Sample    |              | Duplicate<br>Spiked Sample |           | RPD | Control<br>Limits | Control<br>Limits | Flag |
|------------------------------------|----------------------------|--------------|-------------------------|-----------|--------------|----------------------------|-----------|-----|-------------------|-------------------|------|
| Analytes                           | [A]                        | Added<br>[B] | [C]                     | %R<br>[D] | Added<br>[E] | Result [F]                 | %R<br>[G] | %   | %R                | %RPD              |      |
| C6-C12 Gasoline Range Hydrocarbons | <151                       | 10000        | 11600                   | 116       | 1010         | 1040                       | 103       | 167 | 70-135            | 35                | F    |
| C12-C28 Diesel Range Hydrocarbons  | <151                       | 10000        | 11900                   | 119       | 1010         | 1070                       | 106       | 167 | 70-135            | 35                | F    |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# **Sample Duplicate Recovery**



**Project Name: Monument #18** 

**Work Order #:** 473458

Lab Batch #: 926977 Project ID: SRS#TNM-Monument 18

 Date Analyzed:
 11/06/2013 15:00
 Date Prepared:
 11/06/2013
 Analyst:
 WRU

 QC- Sample ID:
 473446-001 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: %        | SAMPLE / SAMPLE DUPLICATE RECOVERY |                                      |     |                           |      |  |  |  |  |
|---------------------------|------------------------------------|--------------------------------------|-----|---------------------------|------|--|--|--|--|
| Percent Moisture  Analyte | Parent Sample<br>Result<br>[A]     | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |  |  |  |
| Percent Moisture          | 14.5                               | 15.4                                 | 6   | 20                        |      |  |  |  |  |

Spike Relative Difference RPD 200 \* | (B-A)/(B+A) | All Results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 11/05/2013 04:22:00 PM

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Work Order #: 473458

**Temperature Measuring device used:** 

| Work Order #: 473436                            | •  | J                |
|---|--|------------------|
|   | Sample Receipt Checklist                               | Comments         |
| #1 *Temperature of cooler(s)?                   |  | 3                |
| #2 *Shipping container in good condition        | on?  | Yes              |
| #3 *Samples received on ice?                    |  | Yes              |
| #4 *Custody Seals intact on shipping of         | ontainer/ cooler?                                      | N/A              |
| #5 Custody Seals intact on sample bot           | tles?  | N/A              |
| #6 *Custody Seals Signed and dated?             |  | N/A              |
| #7 *Chain of Custody present?                   |  | Yes              |
| #8 Sample instructions complete on C            | nain of Custody?                                       | Yes              |
| #9 Any missing/extra samples?                   |  | No               |
| #10 Chain of Custody signed when rel            | nquished/ received?                                    | Yes              |
| #11 Chain of Custody agrees with sam            | ple label(s)?  | Yes              |
| #12 Container label(s) legible and inta-        | ot?  | Yes              |
| #13 Sample matrix/ properties agree w           | ith Chain of Custody?                                  | Yes              |
| #14 Samples in proper container/ bottl          | e?   | Yes              |
| #15 Samples properly preserved?                 |  | Yes              |
| #16 Sample container(s) intact?                 |  | Yes              |
| #17 Sufficient sample amount for indic          | ated test(s)?  | Yes              |
| #18 All samples received within hold ti         | me?  | Yes              |
| #19 Subcontract of sample(s)?                   |  | Yes              |
| #20 VOC samples have zero headspar              | ce (less than 1/4 inch bubble)?                        | N/A              |
| #21 <2 for all samples preserved with           | HNO3,HCL, H2SO4?                                       | N/A              |
| #22 >10 for all samples preserved with          | NaAsO2+NaOH, ZnAc+NaOH?                                | N/A              |
| * Must be completed for after-hours of Analyst: | delivery of samples prior to placing in                | the refrigerator |
| , maryon  | 00/2011.   |                  |
| Checklist completed by                          | Candau James  Candace James  Muss Morah  Kelsey Brooks | Date: 11/05/2013 |
| Checklist reviewed by:                          | Kelsey Brooks  | Date: 11/05/2013 |

| Re | sceived by  | OC.                           | D: 6/8                                     | 8/202                          | 1 12:                             | 21:29<br>g                 | <i>9 РМ</i><br>Г        | şı                       | JU 71    | , <sup>0</sup> ρ               | PCUSH TAT (Pre-Schedule) 24,           | ×         | ×                  | ×                  | ×                  |       |    |               |                       | — Page   | 266 0   |
|----|---|-------------------------------|--|--------------------------------|-----------------------------------|----------------------------|-------------------------|--------------------------|----------|--------------------------------|--|-----------|--------------------|--------------------|--------------------|-------|----|---------------|-----------------------|--|---|
|    | 34  |                               | _  |                                |                                   | NPDE                       | H                       | T                        | -4 6Z    | 87                             | 10 folishedes ∞m TAT H2UR              | Н         | $\dashv$           |                    |                    | +     | +  |               | 2 2                   | 22222  | Lone  |
|    | 1   |                               | nt 18                                      |                                |                                   |                            |                         |                          |          |                                |  |           |                    |                    |                    |       |    |               | <b>→</b>              | ->->>  | Fed T   |
|    | 7   | - 1                           | SRS# TNM-Monument                          |                                |                                   |                            |                         | L                        |          |                                |  |           |                    |                    |                    |       | _  |               | 1                     |  | Te Te   |
|    | /ALYSIS REQUEST<br>Phone: 432-563-1800<br>Fax: 432-563-1713                                   | Monument #18                  | John                                       | Lea County, NM                 |                                   | TRRP                       | - 1                     | $\vdash$                 |          |                                | и.о.к.м.                               |           | -                  |                    |                    | <br>- | -  |               |                       |  | DHL   |
|    | OUE<br>363-   | Jume                          | ≥-<br> <br> -                              | Con                            | /ant                              |                            |                         | ŀ                        | Тх       | 1 00                           | BTE 80218/5030 or BTEX 820             | ×         | ×                  | ×                  | ×                  |       | +  |               | 2 -                   | er(s)<br>s)  | o to  |
|    | 32-4  | Š                             | Z  | Lea                            | e Br                              |                            |                         |                          | +        | 08                             | Semivolatiles                          | -         |                    |                    |                    | +     | +  | i and an area | nts:                  | spaces) s) ntain oler(   | JPS<br>JPS  |
|    | SIS   |                               | RS#  |                                | amill                             | ס                          | -                       | Analyze For              | t        |                                | Volatiles                              |           |                    |                    |                    |       | 1  |               | nme<br>lers           | iner(<br>iner(<br>in co<br>in co<br>elive  |   |
|    | ALYS<br>Phone<br>Fax:   |                               | S  |                                | PAA - Camille Bryant              | Standard                   | ŀ                       | {                        |          | əS                             | Metals: As Ag Ba Cd Cr Pb Hg           |           |                    |                    |                    |       |    |               |                       | or records als cals cals cals cals cals cals cals  | by Sampler/Cilent Nep. by Courier? UPS noerature Upon Recei |
|    | AN  |                               |  |                                | PA                                |                            |                         | TCLP                     | TOTAL:   |                                | SAR / ESP / CEC                        |           |                    |                    |                    |       | _  |               | ator)                 | on o   | Cour  |
|    | ND  |                               |  |                                |                                   |                            |                         |                          | 12       | _                              | Anions (Cl, SO4, Alkalinity)           |           |                    |                    | _                  |       |    |               | Laboratory Comments:  | VOCS Free of Headspace (<br>Labels on container(s)<br>Custody seals on container(s)<br>Custody seals on cooler(s)<br>Sample Hand Delivered | a a a   |
|    | DA  | Project Name:                 | Project #:                                 | Project Loc:                   | PO #:                             | at:                        |                         |                          |          | _                              | Cations (Ca, Mg, Na, K)                |           |                    |                    | $\dashv$           |       | -  |               | N W                   | > <u> </u>   | Ţ,  |
|    | NO.   | ct N                          | Proje                                      | ject                           |                                   | Report Format:             |                         |                          |          | 128                            | 08 M2108 1.814 :HqT<br>001 XT          | ×         | ×                  | ×                  | ×                  |       | +  |               | -                     | ime S  | Lime  |
|    | REC   | roje                          |  | Pro                            |                                   | or F                       | L                       |                          |          |                                | NP=Non-Potable Specify Other           |           |                    |                    |                    |       | +  |               | 1                     |  | Tin.  |
|    | DY  | ш                             |  |                                |                                   | Rep                        |                         |                          |          | Matrix                         | GW = Groundwater S=Soil/Solid          | Soil      | Soil               | Soil               | Soil               |       |    |               |                       | 2  |   |
|    | 07.0  |                               | 1  | 1                              |                                   |                            | OI                      | S)                       |          | _                              | DW=Drinking Water SL=Sludge            |           |                    |                    |                    | <br>  |    |               | 4                     | Date Date  | Date /  |
|    | 30  |                               |  |                                |                                   |                            | Jg.C                    | ng.c                     |          | 3rS                            | Other (Specify)                        |           |                    |                    |                    |       | -  |               | -                     | N  | 0/  |
|    | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST<br>t I-20 East<br>xas 79765<br>Fax: 432-563-1713 |                               |  |                                |                                   |                            | cbryant@novatraining.cc | cstaniey@novatraining.cc |          | Preservation & # of Containers | None                                   |           |                    |                    |                    |       |    |               | -                     |  | -   |
|    | <i>CHAIN OF</i><br>12600 West I-20 East<br>Odessa, Texas 79765                                |                               |  |                                |                                   |                            | /atra                   | varr                     |          | of Co                          | HOBN<br>£O <sub>S</sub> O <sub>S</sub> | -         |                    | $\vdash$           |                    |       | +- |               | 1                     |  |   |
|    | I-20<br>xas   |                               |  |                                |                                   | 1                          | Ono                     | nuo                      |          | # % L                          | <sup>†</sup> OS <sup>z</sup> H         |           |                    |                    |                    |       | +- |               | 1                     |  |   |
|    | Vest<br>, Te  |                               |  |                                |                                   | _                          | inta                    | ley(c                    |          | vation                         | нсі                                    |           |                    |                    |                    |       | 1  |               | 1                     |  |   |
|    | 00 V<br>9ssa  |                               |  |                                |                                   | .770                       | brya                    | stan                     |          | reser                          | <sup>E</sup> ONH                       |           |                    |                    |                    |       |    |               |                       |  |   |
|    | 126<br>Ode  |                               |  |                                |                                   | 432.520.7701               | O                       | ပျ                       |          |                                | lce                                    | ×         | ×                  | ×                  | ×                  |       |    |               |                       | 1 1  |   |
|    |   |                               |  |                                |                                   | 432                        |                         |                          |          |                                | Total #. of Containers                 | -         | _                  | _                  | _                  |       |    |               |                       | 2  |   |
|    |   |                               |  |                                |                                   |                            |                         |                          |          |                                | Filtered                               | 1         |                    |                    |                    |       | -  |               | -                     | 3  | '   |
|    |   |                               |  |                                | >                                 | Fax No:                    | e-mail:                 |                          |          |                                | bəlqms2 əmiT                           | 0060      | 0920               | 0920               | 1100               |       |    |               |                       | Ju. 29   |   |
|    |   |                               |  |                                |                                   | 1                          |                         |                          |          | 39.5                           | Date Sampled                           | 11/5/2013 | 11/5/2013          | 11/5/2013          | 11/5/2013          |       |    |               |                       | Received by: Received by:  | Received by ELO   |
|    |   |                               |  |                                |                                   |                            |                         |                          |          |                                | Ending Depth                           |           |                    |                    |                    |       |    |               |                       | the second   | Time Time   |
|    |   |                               | mental                                     |                                |                                   |                            | 3                       | 1                        |          |                                | Beginning Depth                        | 1         |                    |                    |                    |       |    |               |                       |  | 3   |
|    | Aenco Laboratories The Environmental Lab of Texas   | Project Manager: Curt Stanley | Company Name Nova Safety and Environmental | Company Address: 2057 Commerce | City/State/Zip: Midland, TX 79703 | Telephone No: 432.520.7720 | ture:                   | (vline early)            | (4110 00 | ORDER #:                       | FIELD CODE                             | LW        | W Trench @ 10' bgs | W Trench @ 15' bgs | W Trench @ 18' bgs |       |    |               | Special Instructions: | Refinquished by:   | Relinquished by: Date 11   11   13   13                     |
| >  | F F E   |                               |  | C 10 11                        | 2001                              | 2 45                       | 05 DI                   | (lah iis                 | (ומה מפ  | ORDE                           | (lab use only) # 8A_                   | 1         |                    |                    |                    |       |    |               | Specia                | Relinqu  | Relingu   |

# **Analytical Report 490081**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Curt Stanley
Monument #18
TNM-Monument 18
29-JUL-14

Collected By: Client





#### **12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054) New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





29-JUL-14

Project Manager: Curt Stanley
PLAINS ALL AMERICAN EH&S
1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): 490081

Monument #18

Project Address: Lea County, NM

#### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 490081. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 490081 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Kelsey Brooks** 

Knis Hoah

Project Manager

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# **Sample Cross Reference 490081**



## PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18

| Sample Id | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------------|--------------|---------------|
| SP-4      | S      | 07-23-14 15:05        |              | 490081-001    |
| SP-5      | S      | 07-23-14 15:30        |              | 490081-002    |
| SP-6      | S      | 07-23-14 16:00        |              | 490081-003    |
| SP-3      | S      | 07-23-14 14:05        |              | 490081-004    |



#### **CASE NARRATIVE**



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Monument #18

Project ID: TNM-Monument 18 Report Date: 29-JUL-14 Work Order Number(s): 490081 Date Received: 07/25/2014

| Sample receipt non o | onformances and comments:            |  |
|----------------------|--------------------------------------|--|
|                      |                                      |  |
| Sample receipt non c | onformances and comments per sample: |  |
| None                 |                                      |  |



**Contact:** Curt Stanley

Project Location: Lea County, NM

**Project Id:** TNM-Monument 18

## **Certificate of Analysis Summary 490081**

#### PLAINS ALL AMERICAN EH&S, Midland, TX

**Project Name: Monument #18** 

**Date Received in Lab:** Fri Jul-25-14 02:52 pm

**Report Date:** 29-JUL-14

Project Manager: Kelsey Brooks

|                                    |            |             |          |             |          |             |          | 1 Toject Mi | mager.   | Keisey Brooks |  |  |
|------------------------------------|------------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|---------------|--|--|
|                                    | Lab Id:    | 490081-0    | 001      | 490081-0    | 02       | 490081-0    | 03       | 490081-     | 004      |               |  |  |
| Analysis Requested                 | Field Id:  | SP-4        |          | SP-5        |          | SP-6        |          | SP-3        | ;        |               |  |  |
| Anaiysis Kequesieu                 | Depth:     |             |          |             |          |             |          |             |          |               |  |  |
|                                    | Matrix:    | SOIL        |          | SOIL        |          | SOIL        |          | SOII        | _        |               |  |  |
|                                    | Sampled:   | Jul-23-14 1 | 5:05     | Jul-23-14 1 | 5:30     | Jul-23-14 1 | 6:00     | Jul-23-14   | 14:05    |               |  |  |
| BTEX by EPA 8021                   | Extracted: | Jul-28-14 1 | 4:00     | Jul-28-14 1 | 4:00     | Jul-28-14 1 | 4:00     | Jul-28-14   | 14:00    |               |  |  |
|                                    | Analyzed:  | Jul-28-14 1 | 8:53     | Jul-28-14 1 | 9:26     | Jul-28-14 1 | 9:42     | Jul-28-14   | 19:58    |               |  |  |
|                                    | Units/RL:  | mg/kg       | RL       | mg/kg       | RL       | mg/kg       | RL       | mg/kg       | RL       |               |  |  |
| Benzene                            |            | ND          | 0.000996 | ND (        | 0.000998 | ND (        | 0.000994 | ND          | 0.000996 |               |  |  |
| Toluene                            |            | ND          | 0.00199  |             | 0.00200  |             | 0.00199  | ND          |          |               |  |  |
| Ethylbenzene                       |            | 0.00187     | 0.000996 | ND (        | 0.000998 | ND (        | 0.000994 | 0.0106      | 0.000996 |               |  |  |
| m_p-Xylenes                        |            | 0.00961     | 0.00199  | 0.00351     | 0.00200  | 0.00490     | 0.00199  | 0.0428      | 0.00199  |               |  |  |
| o-Xylene                           |            | 0.00237     | 0.000996 | ND (        | 0.000998 | 0.00135     | 0.000994 | 0.00597     | 0.000996 |               |  |  |
| Xylenes, Total                     |            | 0.0120      | 0.000996 | 0.00351     | 0.000998 | 0.00625     | 0.000994 | 0.0488      | 0.000996 |               |  |  |
| Total BTEX                         |            | 0.0139      | 0.000996 | 0.00351     | 0.000998 | 0.00625     | 0.000994 | 0.0594      | 0.000996 |               |  |  |
| Percent Moisture                   | Extracted: |             |          |             |          |             |          |             |          |               |  |  |
|                                    | Analyzed:  | Jul-28-14 ( | 9:45     | Jul-28-14 0 | 9:45     | Jul-28-14 0 | 9:45     | Jul-28-14   | 09:45    |               |  |  |
|                                    | Units/RL:  | %           | RL       | %           | RL       | %           | RL       | %           | RL       |               |  |  |
| Percent Moisture                   |            | 1.78        | 1.00     | 2.85        | 1.00     | 3.83        | 1.00     | 11.9        | 1.00     |               |  |  |
| TPH by SW8015 Mod                  | Extracted: | Jul-25-14 1 | 7:00     | Jul-25-14 1 | 7:00     | Jul-25-14 1 | 7:00     | Jul-25-14   | 17:00    |               |  |  |
|                                    | Analyzed:  | Jul-26-14 ( | )2:57    | Jul-26-14 0 | 3:23     | Jul-26-14 0 | 4:35     | Jul-26-14   | 05:54    |               |  |  |
|                                    | Units/RL:  | mg/kg       | RL       | mg/kg       | RL       | mg/kg       | RL       | mg/kg       | RL       |               |  |  |
| C6-C12 Gasoline Range Hydrocarbons |            | ND          | 15.3     | ND          | 15.4     | 20.2        | 15.6     | 332         | 17.0     |               |  |  |
| C12-C28 Diesel Range Hydrocarbons  |            | 105         | 15.3     | 89.4        | 15.4     | 716         | 15.6     | 3150        | 17.0     | ·             |  |  |
| C28-C35 Oil Range Hydrocarbons     |            | ND          | 15.3     | ND          | 15.4     | 72.4        | 15.6     | 168         | 17.0     | ·             |  |  |
| Total TPH                          |            | 105         | 15.3     | 89.4        | 15.4     | 809         | 15.6     | 3650        | 17.0     |               |  |  |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Mus Hoah

## Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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**Project Name: Monument #18** 

Work Orders: 490081,

**Project ID:** TNM-Monument 18

**Lab Batch #:** 946603

**Sample:** 490081-001 / SMP

Matrix: Soil Batch:

| Units: mg/kg Date Analyzed: 07/26/14 02:57 SURROGATE RECOVERY STUDY |     |               |                        |                       |                |                         |       |  |  |
|---|-----|---------------|------------------------|-----------------------|----------------|-------------------------|-------|--|--|
|   | ТРН | by SW8015 Mod | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |  |
|   |     | Analytes      |                        |                       | [D]            |                         |       |  |  |
| 1-Chloroocta  | ine |               | 91.0                   | 99.9                  | 91             | 70-135                  |       |  |  |
| o-Terphenyl   |     |               | 46.5                   | 50.0                  | 93             | 70-135                  |       |  |  |

**Lab Batch #:** 946603

Sample: 490081-002 / SMP

Batch: 1

Matrix: Soil

**Units:** 

mg/kg

**Date Analyzed:** 07/26/14 03:23

SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 95.6                   | 99.8                  | 96                    | 70-135                  |       |
| o-Terphenyl                 | 48.9                   | 49.9                  | 98                    | 70-135                  |       |

**Lab Batch #:** 946603

Sample: 490081-003 / SMP

Batch:

Matrix: Soil

**Units:** 

mg/kg

Date Analyzed: 07/26/14 04:35

SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 99.1                   | 99.9                  | 99                    | 70-135                  |       |
| o-Terphenyl                 | 51.6                   | 50.0                  | 103                   | 70-135                  |       |

**Lab Batch #: 946603** 

Sample: 490081-004 / SMP

Batch: 1

Matrix: Soil

| Units:     | mg/kg | <b>Date Analyzed:</b> 07/26/14 05:54 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|--|
|            | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |  |
| 1-Chlorooc | etane |                                      | 109                      | 99.8                  | 109                   | 70-135                  |       |  |  |  |
| o-Terpheny | /1    |                                      | 54.8                     | 49.9                  | 110                   | 70-135                  |       |  |  |  |

**Lab Batch #:** 946719

**Units:** 

Sample: 490081-001 / SMP

**Date Analyzed:** 07/28/14 18:53

Batch:

Matrix: Soil

SURROGATE RECOVERY STUDY

| BTEX by EPA | 802 |
|-------------|-----|

mg/kg

|                      | SCRROGATE RECOVERT STODI |                       |                |                         |       |  |
|----------------------|--------------------------|-----------------------|----------------|-------------------------|-------|--|
| BTEX by EPA 8021     | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
| Analytes             |                          |                       | [D]            |                         |       |  |
| 1,4-Difluorobenzene  | 0.0273                   | 0.0300                | 91             | 80-120                  |       |  |
| 4-Bromofluorobenzene | 0.0290                   | 0.0300                | 97             | 80-120                  |       |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 490081,

Sample: 490081-002 / SMP

**Project ID:** TNM-Monument 18

**Lab Batch #:** 946719

**Date Analyzed:** 07/28/14 19:26

Matrix: Soil Batch: 1

| Units:               | mg/kg    | <b>Date Analyzed:</b> 07/28/14 19:26 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|----------------------|----------|--------------------------------------|--------------------------|-----------------------|-------------|-------------------------|-------|
|                      | ВТЕ      | X by EPA 8021                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
|                      |          | Analytes                             |                          |                       | [D]         |                         |       |
| 1,4-Difluor          | obenzene |                                      | 0.0283                   | 0.0300                | 94          | 80-120                  |       |
| 4-Bromofluorobenzene |          |                                      | 0.0314                   | 0.0300                | 105         | 80-120                  |       |

**Lab Batch #:** 946719

Sample: 490081-003 / SMP

Batch: 1

Matrix: Soil

**Units:** 

mg/kg

**Date Analyzed:** 07/28/14 19:42

SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0271                 | 0.0300                | 90                    | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0284                 | 0.0300                | 95                    | 80-120                  |       |

**Lab Batch #:** 946719

Sample: 490081-004 / SMP

Batch:

Matrix: Soil

**Units:** 

mg/kg

Date Analyzed: 07/28/14 19:58

SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0241                 | 0.0300                | 80                    | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0315                 | 0.0300                | 105                   | 80-120                  |       |

**Lab Batch #: 946603** 

**Sample:** 658965-1-BLK / BLK

Batch:

Matrix: Solid

| Units: mg/kg   | <b>Date Analyzed:</b> 07/25/14 23:43 | RROGATE RE             | ECOVERY S             | STUDY                 |                         |       |
|----------------|--------------------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| T              | PH by SW8015 Mod  Analytes           | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooctane | Timily tes                           | 98.9                   | 100                   | 99                    | 70-135                  |       |
| o-Terphenyl    |                                      | 56.4                   | 50.0                  | 113                   | 70-135                  |       |

**Lab Batch #:** 946719

Sample: 659045-1-BLK / BLK

Batch:

Matrix: Solid

| Units:               | mg/kg | <b>Date Analyzed:</b> 0//28/14 16:03 | SU                     | RROGATE RE            | ECOVERY S      | STUDY                   |       |
|----------------------|-------|--------------------------------------|------------------------|-----------------------|----------------|-------------------------|-------|
|                      | ВТЕ   | X by EPA 8021                        | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
|                      |       | Analytes                             |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene  |       |                                      | 0.0278                 | 0.0300                | 93             | 80-120                  |       |
| 4-Bromofluorobenzene |       |                                      | 0.0272                 | 0.0300                | 91             | 80-120                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 490081,

**Project ID:** TNM-Monument 18

**Lab Batch #: 946603** Matrix: Solid **Sample:** 658965-1-BKS / BKS Batch: 1

| Units:      | mg/kg | <b>Date Analyzed:</b> 07/26/14 00:09 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|             | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooc  | tane  |                                      | 107                      | 100                   | 107                   | 70-135                  |       |  |
| o-Terphenyl |       |                                      | 60.2                     | 50.0                  | 120                   | 70-135                  |       |  |

**Sample:** 659045-1-BKS / BKS **Lab Batch #:** 946719 Batch: 1 Matrix: Solid

| Units:               | mg/kg    | <b>Date Analyzed:</b> 07/28/14 16:19 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|----------------------|----------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|                      | BTF      | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1,4-Difluor          | obenzene | Analytes                             | 0.0289                   | 0.0300                | 96                    | 80-120                  |       |  |
| 4-Bromofluorobenzene |          |                                      | 0.0309                   | 0.0300                | 103                   | 80-120                  |       |  |

**Sample:** 658965-1-BSD / BSD **Lab Batch #:** 946603 Batch: Matrix: Solid

Date Analyzed: 07/26/14 00:33 **Units:** mg/kg SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 102                    | 100                   | 102                   | 70-135                  |       |
| o-Terphenyl                 | 54.2                   | 50.0                  | 108                   | 70-135                  |       |

**Lab Batch #:** 946719 **Sample:** 659045-1-BSD / BSD Batch: Matrix: Solid

| Units:               | mg/kg     | <b>Date Analyzed:</b> 07/28/14 16:36 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|----------------------|-----------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|                      | BTF       | CX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1,4-Difluor          | robenzene | Timing tes                           | 0.0294                   | 0.0300                | 98                    | 80-120                  |       |  |
| 4-Bromofluorobenzene |           |                                      | 0.0317                   | 0.0300                | 106                   | 80-120                  |       |  |

**Lab Batch #:** 946603 Sample: 490081-002 S / MS Batch: Matrix: Soil

| Units:      | mg/kg | <b>Date Analyzed:</b> 07/26/14 03:46 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|             | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooct | tane  |                                      | 103                      | 99.7                  | 103                   | 70-135                  |       |  |
| o-Terpheny  | 1     |                                      | 51.7                     | 49.9                  | 104                   | 70-135                  |       |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 490081,

**Project ID:** TNM-Monument 18

**Lab Batch #:** 946719

**Sample:** 490081-001 S / MS

Matrix: Soil Batch: 1

| Units:      | mg/kg      | <b>Date Analyzed:</b> 07/28/14 16:53 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|-------------|------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|             | ВТІ        | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1,4-Difluor | obenzene   |                                      | 0.0297                   | 0.0300                | 99                    | 80-120                  |       |  |  |
| 4-Bromoflu  | orobenzene |                                      | 0.0327                   | 0.0300                | 109                   | 80-120                  |       |  |  |

**Lab Batch #:** 946603 **Sample:** 490081-002 SD / MSD Batch: Matrix: Soil

**Units:** mg/kg Date Analyzed: 07/26/14 04:10 SURROGATE RECOVERY STUDY **Amount** True Control TPH by SW8015 Mod Found Limits Flags Amount Recovery [A] [B] %R %R [D] **Analytes** 1-Chlorooctane 103 99.7 103 70-135 o-Terphenyl 49.7 49.9 100 70-135

Lab Batch #: 946719 Sample: 490081-001 SD / MSD Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 07/28/14 17:10 SURROGATE RECOVERY STUDY Amount True Control BTEX by EPA 8021 Found Limits Flags Amount Recovery %R %R [A] [B] [D] **Analytes** 1,4-Difluorobenzene 0.0288 0.0300 96 80-120 4-Bromofluorobenzene 0.0320 0.0300 107 80-120

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



### **BS / BSD Recoveries**



**Project Name: Monument #18** 

Work Order #: 490081 Project ID: TNM-Monument 18

Analyst: ARM Date Prepared: 07/28/2014 Date Analyzed: 07/28/2014

 Lab Batch ID: 946719
 Sample: 659045-1-BKS
 Batch #: 1
 Matrix: Solid

| BLAINK SPIKE / BLAINK SPIKE DUPLICATE RECOVERY STUD | Units: | mg/kg | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY |
|---|--------|-------|---|
|---|--------|-------|---|

| BTEX by EPA 8021 Analytes | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|---------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| Benzene                   | < 0.00100                     | 0.100                 | 0.0944                          | 94                          | 0.100                 | 0.0986                                    | 99                            | 4        | 70-130                  | 35                        |      |
| Toluene                   | < 0.00200                     | 0.100                 | 0.0982                          | 98                          | 0.100                 | 0.103                                     | 103                           | 5        | 70-130                  | 35                        |      |
| Ethylbenzene              | < 0.00100                     | 0.100                 | 0.101                           | 101                         | 0.100                 | 0.106                                     | 106                           | 5        | 71-129                  | 35                        |      |
| m_p-Xylenes               | < 0.00200                     | 0.200                 | 0.203                           | 102                         | 0.200                 | 0.213                                     | 107                           | 5        | 70-135                  | 35                        |      |
| o-Xylene                  | < 0.00100                     | 0.100                 | 0.0998                          | 100                         | 0.100                 | 0.104                                     | 104                           | 4        | 71-133                  | 35                        |      |

Analyst: ARM Date Prepared: 07/25/2014 Date Analyzed: 07/26/2014

Lab Batch ID: 946603 Sample: 658965-1-BKS Batch #: 1 Matrix: Solid

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod Analytes         | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000                  | 1020                            | 102                         | 1000                  | 1030                                      | 103                           | 1        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000                  | 1130                            | 113                         | 1000                  | 1130                                      | 113                           | 0        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



#### Form 3 - MS / MSD Recoveries



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**Project Name: Monument #18** 

Work Order #: 490081 **Project ID:** TNM-Monument 18

Lab Batch ID:

946719

**QC- Sample ID:** 490081-001 S

Batch #:

Matrix: Soil

Date Analyzed:

07/28/2014

**Date Prepared:** 07/28/2014

Analyst: ARM

**Reporting Units:** 

mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | < 0.000994                        | 0.0994                | 0.0884                         | 89                            | 0.0996                | 0.0844                                   | 85                          | 5        | 70-130                  | 35                        |      |
| Toluene                    | < 0.00199                         | 0.0994                | 0.0914                         | 92                            | 0.0996                | 0.0875                                   | 88                          | 4        | 70-130                  | 35                        |      |
| Ethylbenzene               | 0.00187                           | 0.0994                | 0.0925                         | 91                            | 0.0996                | 0.0884                                   | 87                          | 5        | 71-129                  | 35                        |      |
| m_p-Xylenes                | 0.00961                           | 0.199                 | 0.188                          | 90                            | 0.199                 | 0.179                                    | 85                          | 5        | 70-135                  | 35                        |      |
| o-Xylene                   | 0.00237                           | 0.0994                | 0.0916                         | 90                            | 0.0996                | 0.0875                                   | 85                          | 5        | 71-133                  | 35                        |      |

Lab Batch ID:

946603

**QC- Sample ID:** 490081-002 S

Batch #:

Matrix: Soil

Date Analyzed:

07/26/2014

**Date Prepared:** 07/25/2014

Analyst: ARM

**Reporting Units:** 

mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod                  | Parent<br>Sample<br>Result | Spike<br>Added | Spiked Sample<br>Result | Sample    |              | Duplicate<br>Spiked Sample | Spiked<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|----------------------------|----------------|-------------------------|-----------|--------------|----------------------------|----------------------|----------|-------------------------|---------------------------|------|
| Analytes                           | [A]                        | Added<br>[B]   | [C]                     | %R<br>[D] | Added<br>[E] | Result [F]                 | %K<br>[G]            | 70       | % <b>K</b>              | %KPD                      |      |
| C6-C12 Gasoline Range Hydrocarbons | <15.4                      | 1030           | 1110                    | 108       | 1030         | 1090                       | 106                  | 2        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | 89.4                       | 1030           | 1200                    | 108       | 1030         | 1160                       | 104                  | 3        | 70-135                  | 35                        |      |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# **Sample Duplicate Recovery**



**Project Name: Monument #18** 

Work Order #: 490081

Lab Batch #: 946647 Project ID: TNM-Monument 18

 Date Analyzed:
 07/28/2014 09:45
 Date Prepared:
 07/28/2014
 Analyst:
 WRU

 QC- Sample ID:
 490070-001 D
 Batch #:
 1
 Matrix:
 Solid

| Reporting Units: %        | SAMPLE / SAMPLE DUPLICATE RECOVERY |                                      |     |                           |      |  |  |  |  |
|---------------------------|------------------------------------|--------------------------------------|-----|---------------------------|------|--|--|--|--|
| Percent Moisture  Analyte | Parent Sample<br>Result<br>[A]     | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |  |  |  |
| 1 mary to                 |                                    |                                      |     |                           |      |  |  |  |  |
| Percent Moisture          | 7.78                               | 7.52                                 | 3   | 20                        |      |  |  |  |  |

**Lab Batch #:** 946647

 Date Analyzed:
 07/28/2014 09:45
 Date Prepared:
 07/28/2014
 Analyst:
 WRU

 QC- Sample ID:
 490081-003 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: % | SAMPLE / SAMPLE DUPLICATE RECOVERY |                                      |     |                           |      |  |  |  |
|--------------------|------------------------------------|--------------------------------------|-----|---------------------------|------|--|--|--|
|                    | Parent Sample<br>Result<br>[A]     | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |  |  |
| Analyte            |                                    | [2]                                  |     |                           |      |  |  |  |
| Percent Moisture   | 3.83                               | 3.88                                 | 1   | 20                        |      |  |  |  |



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 07/25/2014 02:52:00 PM

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Work Order #: 490081

**Temperature Measuring device used:** 

| Sample Receipt Checklist   |     | Comments |
|--|-----|----------|
| #1 *Temperature of cooler(s)?                                    | 3   |          |
| #2 *Shipping container in good condition?                        | Yes |          |
| #3 *Samples received on ice?                                     | Yes |          |
| #4 *Custody Seals intact on shipping container/ cooler?          | No  |          |
| #5 Custody Seals intact on sample bottles?                       | No  |          |
| #6 *Custody Seals Signed and dated?                              | No  |          |
| #7 *Chain of Custody present?                                    | Yes |          |
| #8 Sample instructions complete on Chain of Custody?             | Yes |          |
| #9 Any missing/extra samples?                                    | No  |          |
| #10 Chain of Custody signed when relinquished/ received?         | Yes |          |
| #11 Chain of Custody agrees with sample label(s)?                | Yes |          |
| #12 Container label(s) legible and intact?                       | Yes |          |
| #13 Sample matrix/ properties agree with Chain of Custody?       | Yes |          |
| #14 Samples in proper container/ bottle?                         | Yes |          |
| #15 Samples properly preserved?                                  | Yes |          |
| #16 Sample container(s) intact?                                  | Yes |          |
| #17 Sufficient sample amount for indicated test(s)?              | Yes |          |
| #18 All samples received within hold time?                       | Yes |          |
| #19 Subcontract of sample(s)?                                    | No  |          |
| #20 VOC samples have zero headspace (less than 1/4 inch bubble)? | N/A |          |
| #21 <2 for all samples preserved with HNO3,HCL, H2SO4?           | N/A |          |
| #22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?   | N/A |          |
|  |     |          |

| Must be  | completed for after-hours de | livery of samples prior to plac | ing in the refrigerator |  |
|----------|------------------------------|---------------------------------|-------------------------|--|
| Analyst: |                              | PH Device/Lot#:                 |                         |  |
|          | Checklist completed by:      | Muny Moah  Kelsey Brooks        | Date: <u>07/25/2014</u> |  |
|          | Checklist reviewed by:       | Mms Hoah  Kelsey Brooks         | Date: <u>07/25/2014</u> |  |



## **XENCO Laboratories** Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 07/25/2014 02:52:00 PM

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Work Order #: 490081

Temperature Measuring device used :

|  | Sample Receipt Checklist     | Comments         |  |  |  |  |  |
|--|------------------------------|------------------|--|--|--|--|--|
| #1 *Temperature of cooler(s)?  |                              | 3                |  |  |  |  |  |
| #2 *Shipping container in good condition   | ?                            | Yes              |  |  |  |  |  |
| #3 *Samples received on ice?   |                              | Yes              |  |  |  |  |  |
| #4 *Custody Seals intact on shipping cor   | ntainer/ cooler?             | No               |  |  |  |  |  |
| #5 Custody Seals intact on sample bottle   | es?                          | No               |  |  |  |  |  |
| #6 *Custody Seals Signed and dated?  |                              | No               |  |  |  |  |  |
| #7 *Chain of Custody present?  |                              | Yes              |  |  |  |  |  |
| #8 Sample instructions complete on Cha   | in of Custody?               | Yes              |  |  |  |  |  |
| #9 Any missing/extra samples?  |                              | No               |  |  |  |  |  |
| #10 Chain of Custody signed when reline  | quished/ received?           | Yes              |  |  |  |  |  |
| #11 Chain of Custody agrees with sample  | e label(s)?                  | Yes              |  |  |  |  |  |
| #12 Container label(s) legible and intact  | ?                            | Yes              |  |  |  |  |  |
| #13 Sample matrix/ properties agree with   | n Chain of Custody?          | Yes              |  |  |  |  |  |
| #14 Samples in proper container/ bottle?   | •                            | Yes              |  |  |  |  |  |
| #15 Samples properly preserved?  |                              | Yes              |  |  |  |  |  |
| #16 Sample container(s) intact?  |                              | Yes              |  |  |  |  |  |
| #17 Sufficient sample amount for indicat   | ed test(s)?                  | Yes              |  |  |  |  |  |
| #18 All samples received within hold time  | e?                           | Yes              |  |  |  |  |  |
| #19 Subcontract of sample(s)?  |                              | No               |  |  |  |  |  |
| #20 VOC samples have zero headspace  | (less than 1/4 inch bubble)? | N/A              |  |  |  |  |  |
| #21 <2 for all samples preserved with HI   | NO3,HCL, H2SO4?              | N/A              |  |  |  |  |  |
| #22 >10 for all samples preserved with N   | laAsO2+NaOH, ZnAc+NaOH?      | N/A              |  |  |  |  |  |
| * Must be completed for after-hours delivery of samples prior to placing in the refrigerator  Analyst: PH Device/Lot#: |                              |                  |  |  |  |  |  |
| Checklist completed by:  Checklist reviewed by:  | Muny Moah Kelsey Brooks      | Date: 07/25/2014 |  |  |  |  |  |
| Checklist reviewed by:   | Mmy froah Kelsey Brooks      | Date: 07/25/2014 |  |  |  |  |  |

# **Analytical Report 491265**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Curt Stanley
Monument #18
TNM-Monument 18
18-AUG-14

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054) New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

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Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





18-AUG-14

Project Manager: **Curt Stanley PLAINS ALL AMERICAN EH&S**1301 S. COUNTY ROAD 1150
Midland, TX 79706

Reference: XENCO Report No(s): 491265

**Monument #18** 

Project Address: Lea County, NM

#### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 491265. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 491265 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Kelsey Brooks** 

Knis Hoah

Project Manager

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# **Sample Cross Reference 491265**



## PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18

| Sample Id           | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|---------------------|--------|-----------------------|--------------|---------------|
| East Wall Stockpile | S      | 08-08-14 15:36        |              | 491265-001    |



#### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Monument #18

Project ID: TNM-Monument 18 Report Date: 18-AUG-14 Work Order Number(s): 491265 Date Received: 08/12/2014

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Page 4 of 16



## Hits Summary 491265



### PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18

Sample Id: East Wall Stockpile

Analytical Method: TPH by SW8015 Mod

Matrix: Soil

% Moisture: 4.1

Lab Sample Id: 491265-001

Date Collected: 08.08.14 15.36

\_ .

Basis: Dry Weight

Date Received: 08.12.14 09.52

Prep Method: TX1005P

Seq Number 948342

Date Prep: 08.14.14 14.00

| Parameter                         | Cas Number | Result | Units | <b>Analysis Date</b> | Flag | Dil |
|-----------------------------------|------------|--------|-------|----------------------|------|-----|
| C12-C28 Diesel Range Hydrocarbons | PHCG1028   | 60.3   | mg/kg | 08.14.14 16.57       |      | 1   |
| Total TPH                         | PHC635     | 60.3   | mg/kg | 08.14.14 16.57       |      | 1   |

# Certificate of Analysis Summary 491265

#### PLAINS ALL AMERICAN EH&S, Midland, TX



Page 288 of 613

**Project Name: Monument #18** 

**Contact:** Curt Stanley

Project Location: Lea County, NM

**Project Id:** TNM-Monument 18

**Report Date:** 18-AUG-14

Date Received in Lab: Tue Aug-12-14 09:52 am

**Project Manager:** Kelsey Brooks

|            |  |  |   | 1 Toject Manager.   | Reisey Brooks |  |
|------------|--|--|---|---|---------------|--|
| Lab Id:    | 491265-001   |  |   |   |               |  |
| Field Id:  | East Wall Stockpile  |  |   |   |               |  |
| Depth:     |  |  |   |   |               |  |
| Matrix:    | SOIL   |  |   |   |               |  |
| Sampled:   | Aug-08-14 15:36  |  |   |   |               |  |
| Extracted: | Aug-13-14 16:00  |  |   |   |               |  |
| Analyzed:  | Aug-14-14 18:48  |  |   |   |               |  |
| Units/RL:  | mg/kg RL   |  |   |   |               |  |
|            | ND 0.00104   |  |   |   |               |  |
|            | ND 0.00208   |  |   |   |               |  |
|            | ND 0.00104   |  |   |   |               |  |
|            |  |  |   |   |               |  |
|            |  |  |   |   |               |  |
|            | ND 0.00104   |  |   |   |               |  |
|            | ND 0.00104   |  |   |   |               |  |
| Extracted: |  |  |   |   |               |  |
| Analyzed:  | Aug-12-14 17:00  |  |   |   |               |  |
| Units/RL:  | % RL   |  |   |   |               |  |
|            | 4.10 1.00  |  |   |   |               |  |
| Extracted: | Aug-14-14 14:00  |  |   |   |               |  |
| Analyzed:  | Aug-14-14 16:57  |  |   |   |               |  |
| Units/RL:  | mg/kg RL   |  |   |   |               |  |
|            | ND 15.6  |  |   |   |               |  |
|            | 60.3 15.6  |  |   |   |               |  |
|            | ND 15.6  |  |   |   |               |  |
|            | 60.3 15.6  |  |   |   |               |  |
|            | Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Units/RL: | Field Id:       East Wall Stockpile         Depth:       Matrix:       SOIL         Sampled:       Aug-08-14 15:36         Extracted:       Aug-13-14 16:00         Analyzed:       Aug-14-14 18:48         Units/RL:       mg/kg       RL         ND       0.00104         ND       0.00104         ND       0.00104         ND       0.00104         Extracted:       Aug-12-14 17:00         Units/RL:       %       RL         4.10       1.00         Extracted:       Aug-14-14 16:57         Units/RL:       mg/kg       RL         ND       15.6         60.3       15.6         ND       15.6 | Field Id:       East Wall Stockpile         Depth:       Matrix:       SOIL         Sampled:       Aug-08-14 15:36         Extracted:       Aug-13-14 16:00         Analyzed:       Aug-14-14 18:48         Units/RL:       mg/kg       RL         ND       0.00104         ND       0.00208         ND       0.00104         ND       0.00104         ND       0.00104         Extracted:       Aug-12-14 17:00         Units/RL:       %       RL         4.10       1.00         Extracted:       Aug-14-14 14:00         Analyzed:       Aug-14-14 16:57         Units/RL:       mg/kg       RL         ND       15.6         60.3       15.6         ND       15.6 | Field Id:       East Wall Stockpile         Depth:       Matrix:       SOIL         Sampled:       Aug-08-14 15:36         Extracted:       Aug-13-14 16:00         Analyzed:       Aug-14-14 18:48         Units/RL:       mg/kg       RL         ND       0.00104         ND       0.00208         ND       0.00104         ND       0.00104         ND       0.00104         Extracted:       Aug-12-14 17:00         Units/RL:       %       RL         4.10       1.00         Extracted:       Aug-14-14 14:00         Analyzed:       Aug-14-14 16:57         Units/RL:       mg/kg       RL         ND       15.6         60.3       15.6         ND       15.6 | Lab Id:       | Field Id: Depth: Matrix: SOIL Sampled: Aug-08-14 15:36  Extracted: Aug-13-14 16:00 Analyzed: Aug-14-14 18:48 Units/RL: mg/kg RL  ND 0.00104  ND 0.00208  ND 0.00104  ND 0.00104  ND 0.00104  ND 0.00104  ND 0.00104  Extracted: Analyzed: Aug-12-14 17:00 Units/RL: % RL  4.10 1.00  Extracted: Analyzed: Aug-14-14 16:57 Units/RL: mg/kg RL  ND 0.03 15.6  ND 15.6  ND 15.6 |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks

### Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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| 3725 E. Atlanta Ave. Phoenix, AZ 85040      | (602) 437-0330 |                |



**Project Name: Monument #18** 

Work Orders: 491265,

**Project ID:** TNM-Monument 18

**Lab Batch #:** 948342

Sample: 491265-001 / SMP

Matrix: Soil Batch: 1

| Units:        | mg/kg | <b>Date Analyzed:</b> 08/14/14 16:57 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|---------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|
|               | ТРН   | by SW8015 Mod                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|               |       | Analytes                             |                          |                       | [-]                   |                         |       |
| 1-Chlorooctan | e     |                                      | 104                      | 99.8                  | 104                   | 70-135                  |       |
| o-Terphenyl   |       |                                      | 51.5                     | 49.9                  | 103                   | 70-135                  |       |

Lab Batch #: 948330 Sample: 491265-001 / SMP Batch: 1 Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 08/14/14 18:48 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021 Found Limits Amount Recovery Flags [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0274 0.0300 91 80-120 4-Bromofluorobenzene 0.0274 0.0300 91 80-120

Lab Batch #: 948330 Matrix: Solid Sample: 660099-1-BLK / BLK Batch:

**Units:** mg/kg Date Analyzed: 08/14/14 16:03 SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0254                 | 0.0300                | 85                    | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0245                 | 0.0300                | 82                    | 80-120                  |       |

**Lab Batch #:** 948342 **Sample:** 660105-1-BLK / BLK Batch: Matrix: Solid

| Units:     | mg/kg | <b>Date Analyzed:</b> 08/14/14 23:20 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|
|            | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorood | ctane |                                      | 112                      | 100                   | 112                   | 70-135                  |       |
| o-Terpheny | yl    |                                      | 57.6                     | 50.0                  | 115                   | 70-135                  |       |

Lab Batch #: 948342 **Sample:** 660105-1-BKS / BKS Batch: Matrix: Solid

| Units:      | mg/kg | <b>Date Analyzed:</b> 08/14/14 16:04 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|
|             | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1-Chlorooct | tane  |                                      | 116                      | 100                   | 116                   | 70-135                  |       |
| o-Terpheny  | 1     |                                      | 64.9                     | 50.0                  | 130                   | 70-135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 491265,

**Lab Batch #:** 948330

**Project ID:** TNM-Monument 18

Matrix: Solid **Sample:** 660099-1-BKS / BKS Batch: 1

| Units:      | mg/kg      | <b>Date Analyzed:</b> 08/14/14 16:19 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|-------------|------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|
|             | ВТЕ        | X by EPA 8021                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|             |            | Analytes                             |                          |                       | [D]                   |                         |       |
| 1,4-Difluor | obenzene   |                                      | 0.0286                   | 0.0300                | 95                    | 80-120                  |       |
| 4-Bromoflu  | orobenzene |                                      | 0.0297                   | 0.0300                | 99                    | 80-120                  |       |

Lab Batch #: 948342 **Sample:** 660105-1-BSD / BSD Batch: 1 Matrix: Solid

**Units:** mg/kg **Date Analyzed:** 08/14/14 16:31 SURROGATE RECOVERY STUDY TPH by SW8015 Mod **Amount** True Control Found Limits Amount Recovery Flags [A] [B] %R %R **Analytes** [D] 1-Chlorooctane 127 100 127 70-135 o-Terphenyl 50.0 64.6 129 70-135

Lab Batch #: 948330 Sample: 660099-1-BSD / BSD Batch: Matrix: Solid

**Units:** mg/kg **Date Analyzed:** 08/14/14 16:36 SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0288                 | 0.0300                | 96                    | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0307                 | 0.0300                | 102                   | 80-120                  |       |

**Lab Batch #:** 948330 **Sample:** 491118-003 S / MS Batch: Matrix: Soil

| Units:      | mg/kg                | <b>Date Analyzed:</b> 08/14/14 16:52 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|-------------|----------------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|             | ВТЕ                  | CX by EPA 8021                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1,4-Difluor | robenzene            | Analytes                             | 0.0287                   | 0.0300                | 96                    | 80-120                  |       |  |
| 4-Bromoflu  | 4-Bromofluorobenzene |                                      |                          | 0.0300                | 105                   | 80-120                  |       |  |

Lab Batch #: 948342 **Sample:** 491400-003 S / MS Batch: Matrix: Soil

| Units:     | mg/kg | <b>Date Analyzed:</b> 08/14/14 19:33 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|
|            | ТРН   | by SW8015 Mod  Analytes              | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooc | tane  |                                      | 109                      | 99.8                  | 109                   | 70-135                  |       |  |
| o-Terpheny | ·1    |                                      | 64.8                     | 49.9                  | 130                   | 70-135                  |       |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 491265,

**Project ID:** TNM-Monument 18

**Lab Batch #:** 948330 Matrix: Soil **Sample:** 491118-003 SD / MSD Batch: 1

| Units:      | mg/kg       | <b>Date Analyzed:</b> 08/14/14 17:09 | SURROGATE RECOVERY STUDY |                       |             |                         |       |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-------------|-------------------------|-------|
|             | BTI         | EX by EPA 8021                       | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
|             |             | Analytes                             |                          |                       | [D]         |                         |       |
| 1,4-Difluor | obenzene    |                                      | 0.0285                   | 0.0300                | 95          | 80-120                  |       |
| 4-Bromoflu  | ıorobenzene |                                      | 0.0294                   | 0.0300                | 98          | 80-120                  |       |

**Lab Batch #:** 948342 **Sample:** 491400-003 SD / MSD Batch: 1 Matrix: Soil

| Units:      | mg/kg <b>Date Analyzed:</b> 08/14/14 19:59 | SU                     | SURROGATE RECOVERY STUDY |                |                         |       |  |
|-------------|--|------------------------|--------------------------|----------------|-------------------------|-------|--|
|             | TPH by SW8015 Mod                          | Amount<br>Found<br>[A] | True<br>Amount<br>[B]    | Recovery<br>%R | Control<br>Limits<br>%R | Flags |  |
|             | Analytes                                   |                        |                          | [D]            |                         |       |  |
| 1-Chlorooct | ane  | 111                    | 99.8                     | 111            | 70-135                  |       |  |
| o-Terphenyl |  | 64.3                   | 49.9                     | 129            | 70-135                  |       |  |

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



#### **BS / BSD Recoveries**



**Project Name: Monument #18** 

Work Order #: 491265 Project ID: TNM-Monument 18

Analyst: ARM Date Prepared: 08/13/2014 Date Analyzed: 08/14/2014

**Lab Batch ID:** 948330 **Sample:** 660099-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | < 0.00100                     | 0.100                 | 0.0933                          | 93                          | 0.100                 | 0.0966                                    | 97                            | 3        | 70-130                  | 35                        |      |
| Toluene                    | < 0.00200                     | 0.100                 | 0.0964                          | 96                          | 0.100                 | 0.101                                     | 101                           | 5        | 70-130                  | 35                        |      |
| Ethylbenzene               | < 0.00100                     | 0.100                 | 0.0980                          | 98                          | 0.100                 | 0.104                                     | 104                           | 6        | 71-129                  | 35                        |      |
| m_p-Xylenes                | < 0.00200                     | 0.200                 | 0.197                           | 99                          | 0.200                 | 0.210                                     | 105                           | 6        | 70-135                  | 35                        |      |
| o-Xylene                   | < 0.00100                     | 0.100                 | 0.0948                          | 95                          | 0.100                 | 0.101                                     | 101                           | 6        | 71-133                  | 35                        |      |

Analyst: ARM Date Prepared: 08/14/2014 Date Analyzed: 08/14/2014

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod Analytes         | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000                  | 948                             | 95                          | 1000                  | 1040                                      | 104                           | 9        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000                  | 1180                            | 118                         | 1000                  | 1130                                      | 113                           | 4        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



#### Form 3 - MS / MSD Recoveries



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**Project Name: Monument #18** 

Work Order #: 491265 **Project ID:** TNM-Monument 18

Lab Batch ID:

948330

**QC- Sample ID:** 491118-003 S

Batch #:

Matrix: Soil

Date Analyzed:

08/14/2014

**Date Prepared:** 08/13/2014

Analyst: ARM

**Reporting Units:** 

mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Parent<br>Sample<br>Result<br>[A] | Spike<br>Added<br>[B] | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R<br>[D] | Spike<br>Added<br>[E] | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|----------------------------|-----------------------------------|-----------------------|--------------------------------|-------------------------------|-----------------------|--|-----------------------------|----------|-------------------------|---------------------------|------|
| Benzene                    | 0.00136                           | 0.105                 | 0.0629                         | 59                            | 0.105                 | 0.0646                                   | 60                          | 3        | 70-130                  | 35                        | X    |
| Toluene                    | < 0.00210                         | 0.105                 | 0.0626                         | 60                            | 0.105                 | 0.0620                                   | 59                          | 1        | 70-130                  | 35                        | X    |
| Ethylbenzene               | < 0.00105                         | 0.105                 | 0.0472                         | 45                            | 0.105                 | 0.0465                                   | 44                          | 1        | 71-129                  | 35                        | X    |
| m_p-Xylenes                | < 0.00210                         | 0.210                 | 0.118                          | 56                            | 0.210                 | 0.117                                    | 56                          | 1        | 70-135                  | 35                        | X    |
| o-Xylene                   | < 0.00105                         | 0.105                 | 0.0641                         | 61                            | 0.105                 | 0.0649                                   | 62                          | 1        | 71-133                  | 35                        | X    |

Lab Batch ID:

948342

**QC- Sample ID:** 491400-003 S

Batch #:

Matrix: Soil

Date Analyzed:

08/14/2014

**Date Prepared:** 08/14/2014

Analyst: ARM

**Reporting Units:** 

mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod                  | Parent<br>Sample<br>Result | Spike<br>Added | Spiked Sample<br>Result | Spiked<br>Sample<br>%R | Spike<br>Added | Duplicate<br>Spiked Sample | Spiked<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|----------------------------|----------------|-------------------------|------------------------|----------------|----------------------------|----------------------|----------|-------------------------|---------------------------|------|
| Analytes                           | [A]                        | [B]            | [C]                     | 76K<br>[D]             | [E]            | Result [F]                 | 76K<br>[G]           | 70       | 70K                     | 70KPD                     |      |
| C6-C12 Gasoline Range Hydrocarbons | <16.5                      | 1100           | 1040                    | 95                     | 1100           | 1040                       | 95                   | 0        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <16.5                      | 1100           | 1190                    | 108                    | 1100           | 1180                       | 107                  | 1        | 70-135                  | 35                        |      |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# **Sample Duplicate Recovery**



**Project Name: Monument #18** 

Work Order #: 491265

Lab Batch #: 948003 Project ID: TNM-Monument 18

 Date Analyzed:
 08/12/2014 17:00
 Date Prepared:
 08/12/2014
 Analyst:
 WRU

 QC- Sample ID:
 491109-005 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: %                      | SAMPLE / SAMPLE DUPLICATE RECOVERY |                                      |     |                           |      |  |  |
|---|------------------------------------|--------------------------------------|-----|---------------------------|------|--|--|
| 2 42 42 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Parent Sample<br>Result<br>[A]     | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |  |
| Analyte                                 |                                    | [D]                                  |     |                           |      |  |  |
| Percent Moisture                        | 6.58                               | 6.26                                 | 5   | 20                        |      |  |  |

**Lab Batch #:** 948003

 Date Analyzed:
 08/12/2014 17:00
 Date Prepared:
 08/12/2014
 Analyst:
 WRU

 QC- Sample ID:
 491265-001 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: %                      | orting Units: % SAMPLE / SAMPLE DUPLICATE RECOV |                                      |     |                           |      |  |  |
|---|---|--------------------------------------|-----|---------------------------|------|--|--|
| Percent Moisture  Analyte               | Parent Sample<br>Result<br>[A]                  | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |  |
| 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |   |                                      |     |                           |      |  |  |
| Percent Moisture                        | 4.10  | 3.61                                 | 13  | 20                        |      |  |  |



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 08/12/2014 09:52:00 AM

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Work Order #: 491265

**Temperature Measuring device used:** 

| Work Order #: 491265                      | Temperature                        | measuring action asca. |
|---|------------------------------------|------------------------|
|   | Sample Receipt Checklist           | Comments               |
| #1 *Temperature of cooler(s)?             |                                    | 4                      |
| #2 *Shipping container in good condition  | ?                                  | Yes                    |
| #3 *Samples received on ice?              |                                    | Yes                    |
| #4 *Custody Seals intact on shipping con  | ntainer/ cooler?                   | No                     |
| #5 Custody Seals intact on sample bottle  | es?                                | No                     |
| #6 *Custody Seals Signed and dated?       |                                    | No                     |
| #7 *Chain of Custody present?             |                                    | Yes                    |
| #8 Sample instructions complete on Cha    | in of Custody?                     | Yes                    |
| #9 Any missing/extra samples?             |                                    | No                     |
| #10 Chain of Custody signed when reline   | quished/ received?                 | Yes                    |
| #11 Chain of Custody agrees with sample   | e label(s)?                        | Yes                    |
| #12 Container label(s) legible and intact | ?                                  | Yes                    |
| #13 Sample matrix/ properties agree with  | n Chain of Custody?                | Yes                    |
| #14 Samples in proper container/ bottle?  | •                                  | Yes                    |
| #15 Samples properly preserved?           |                                    | Yes                    |
| #16 Sample container(s) intact?           |                                    | Yes                    |
| #17 Sufficient sample amount for indicat  | ed test(s)?                        | Yes                    |
| #18 All samples received within hold time | e?                                 | Yes                    |
| #19 Subcontract of sample(s)?             |                                    | No                     |
| #20 VOC samples have zero headspace       | (less than 1/4 inch bubble)?       | N/A                    |
| #21 <2 for all samples preserved with HI  | NO3,HCL, H2SO4?                    | N/A                    |
| #22 >10 for all samples preserved with N  | laAsO2+NaOH, ZnAc+NaOH?            | N/A                    |
| * Must be completed for after-hours de    | livery of samples prior to placing | in the refrigerator    |
| Analyst:                                  | PH Device/Lot#:                    |                        |
| Checklist completed by:                   | Mms Hoah  Kelsey Brooks            | Date: 08/12/2014       |
|   | Kelsey Brooks                      |                        |

Date: 08/12/2014

Checklist reviewed by:



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 08/12/2014 09:52:00 AM

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Work Order #: 491265

**Temperature Measuring device used:** 

|  | Sample Receipt Checklist                                  | Comments                |
|--|---|-------------------------|
| #1 *Temperature of cooler(s)?                      |   | 4                       |
| #2 *Shipping container in good condition           | ?   | Yes                     |
| #3 *Samples received on ice?                       |   | Yes                     |
| #4 *Custody Seals intact on shipping col           | ntainer/ cooler?  | No                      |
| #5 Custody Seals intact on sample bottle           | es?   | No                      |
| #6 *Custody Seals Signed and dated?                |   | No                      |
| #7 *Chain of Custody present?                      |   | Yes                     |
| #8 Sample instructions complete on Cha             | nin of Custody?   | Yes                     |
| #9 Any missing/extra samples?                      |   | No                      |
| #10 Chain of Custody signed when reline            | quished/ received?  | Yes                     |
| #11 Chain of Custody agrees with samp              | le label(s)?  | Yes                     |
| #12 Container label(s) legible and intact          | ?   | Yes                     |
| #13 Sample matrix/ properties agree with           | h Chain of Custody?                                       | Yes                     |
| #14 Samples in proper container/ bottle?           | >   | Yes                     |
| #15 Samples properly preserved?                    |   | Yes                     |
| #16 Sample container(s) intact?                    |   | Yes                     |
| #17 Sufficient sample amount for indicat           | ed test(s)?   | Yes                     |
| #18 All samples received within hold tim           | e?  | Yes                     |
| #19 Subcontract of sample(s)?                      |   | No                      |
| #20 VOC samples have zero headspace                | e (less than 1/4 inch bubble)?                            | N/A                     |
| #21 <2 for all samples preserved with HI           | NO3,HCL, H2SO4?   | N/A                     |
| #22 >10 for all samples preserved with N           | NaAsO2+NaOH, ZnAc+NaOH?                                   | N/A                     |
| * Must be completed for after-hours de<br>Analyst: | elivery of samples prior to placing in<br>PH Device/Lot#: | the refrigerator        |
| Checklist completed by:  Checklist reviewed by:    | Mms Moah Kelsey Brooks                                    | Date: <u>08/12/2014</u> |
| Checklist reviewed by:                             | Mms Moah Kelsey Brooks                                    | Date: 08/12/2014        |

# **Analytical Report 491904**

# for PLAINS ALL AMERICAN EH&S

Project Manager: Curt Stanley
Monument #18
TNM-Monument 18
26-AUG-14

Collected By: Client





#### 12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-14-16-TX), Arizona (AZ0765), Florida (E871002), Louisiana (03054) New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046): Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD ( L10-135) Texas (T104704477), Louisiana (04176), USDA (P330-07-00105)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)





26-AUG-14

Project Manager: Curt Stanley PLAINS ALL AMERICAN EH&S 1301 S. COUNTY ROAD 1150 Midland, TX 79706

Reference: XENCO Report No(s): 491904

**Monument #18** 

Project Address: Lea County, NM

#### **Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 491904. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 491904 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

**Kelsey Brooks** 

Knis Hoah

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies.

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



# **Sample Cross Reference 491904**



## PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18

| Sample Id | Matrix | <b>Date Collected</b> | Sample Depth | Lab Sample Id |
|-----------|--------|-----------------------|--------------|---------------|
| SP-9      | S      | 08-19-14 16:00        |              | 491904-001    |
| SP-10     | S      | 08-19-14 16:10        |              | 491904-002    |



#### CASE NARRATIVE



Client Name: PLAINS ALL AMERICAN EH&S

Project Name: Monument #18

Project ID: TNM-Monument 18 Report Date: 26-AUG-14 Work Order Number(s): 491904 Date Received: 08/21/2014

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



## Hits Summary 491904



### PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18

Sample Id: SP-9 Matrix:

Soil

% Moisture: 2.28

Lab Sample Id: 491904-001

Date Collected: 08.19.14 16.00

Basis:

Date Received: 08.21.14 13.19

Dry Weight

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Seq Number 949052 Date Prep:

08.22.14 15.00

| Parameter                         | Cas Number | Result | Units | <b>Analysis Date</b> | Flag | Dil |
|-----------------------------------|------------|--------|-------|----------------------|------|-----|
| C12-C28 Diesel Range Hydrocarbons | PHCG1028   | 49.9   | mg/kg | 08.23.14 02.33       |      | 1   |
| Total TPH                         | PHC635     | 49.9   | mg/kg | 08.23.14 02.33       |      | 1   |



## Hits Summary 491904



### PLAINS ALL AMERICAN EH&S, Midland, TX

Monument #18

Sample Id: SP-10

Seq Number

Matrix:

Soil

Date Received: 08.21.14 13.19

% Moisture: 2.59

Lab Sample Id: 491904-002

Date Collected: 08.19.14 16.10

Basis:

Dry Weight

Analytical Method : TPH by SW8015 Mod

949052

Prep Method: TX1005P

Date Prep: 08.22.14 15.00

| Parameter                         | Cas Number | Result | Units | <b>Analysis Date</b> | Flag | Dil |
|-----------------------------------|------------|--------|-------|----------------------|------|-----|
| C12-C28 Diesel Range Hydrocarbons | PHCG1028   | 66.4   | mg/kg | 08.23.14 03.57       |      | 1   |
| Total TPH                         | PHC635     | 66.4   | mg/kg | 08.23.14 03.57       |      | 1   |

Project Location: Lea County, NM

# **Certificate of Analysis Summary 491904**

#### PLAINS ALL AMERICAN EH&S, Midland, TX



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Project Name: Monument #18

Project Id: TNM-Monument 18

Contact: Curt Stanley

**Date Received in Lab:** Thu Aug-21-14 01:19 pm **Report Date:** 26-AUG-14

**Project Manager:** Kelsey Brooks

|            |  |   |   |   |  | 1 Toject Manager.   | Reisey Brooks |   |
|------------|--|---|---|---|--|---|---------------|---|
| Lab Id:    | 491904-0   | 001   | 491904-0  | 02  |  |   |               |   |
| Field Id:  | SP-9   |   | SP-10   |   |  |   |               |   |
| Depth:     |  |   |   |   |  |   |               |   |
| Matrix:    | SOIL   |   | SOIL  |   |  |   |               |   |
| Sampled:   | Aug-19-14  | 16:00   | Aug-19-14   | 16:10   |  |   |               |   |
| Extracted: | Aug-25-14  | 14:00   | Aug-25-14   | 14:00   |  |   |               |   |
| Analyzed:  | Aug-25-14  | 23:49   | Aug-26-14 (   | 00:05   |  |   |               |   |
| Units/RL:  | mg/kg  | RL  | mg/kg   | RL  |  |   |               |   |
|            | ND   | 0.00102   | ND  | 0.00102   |  |   |               |   |
|            | ND   | 0.00203   | ND  | 0.00204   |  |   |               |   |
|            | ND   | 0.00102   | ND  | 0.00102   |  |   |               |   |
|            | ND   | 0.00203   | ND  | 0.00204   |  |   |               |   |
|            | ND   | 0.00102   | ND  | 0.00102   |  |   |               |   |
|            | ND   | 0.00102   | ND  | 0.00102   |  |   |               |   |
|            | ND   | 0.00102   | ND  | 0.00102   |  |   |               |   |
| Extracted: |  |   |   |   |  |   |               |   |
| Analyzed:  | Aug-21-14  | 17:10   | Aug-21-14   | 17:10   |  |   |               |   |
| Units/RL:  | %  | RL  | %   | RL  |  |   |               |   |
|            | 2.28   | 1.00  | 2.59  | 1.00  |  |   |               |   |
| Extracted: | Aug-22-14  | 15:00   | Aug-22-14   | 15:00   |  |   |               |   |
| Analyzed:  | Aug-23-14  | 02:33   | Aug-23-14   | 03:57   |  |   |               |   |
| Units/RL:  | mg/kg  | RL  | mg/kg   | RL  |  |   |               |   |
| `          | ND   | 15.3  | ND  | 15.4  |  |   |               |   |
|            | 49.9   | 15.3  | 66.4  | 15.4  |  |   |               |   |
|            | ND   | 15.3  | ND  | 15.4  |  |   |               |   |
|            | 49.9   | 15.3  | 66.4  | 15.4  |  |   |               |   |
|            | Field Id: Depth: Matrix: Sampled: Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Units/RL:  Extracted: Analyzed: Analyzed: | Field Id:     Depth:     Matrix:    SOIL     Sampled:    Aug-19-14  Extracted:    Aug-25-14     Analyzed:    Aug-25-14     Units/RL:    mg/kg | Field Id:         SP-9           Depth:         Matrix:         SOIL           Sampled:         Aug-19-14 16:00           Extracted:         Aug-25-14 14:00           Analyzed:         Aug-25-14 23:49           Units/RL:         mg/kg         RL           ND         0.00102           ND         0.00203           ND         0.00102           ND         0.00102           ND         0.00102           ND         0.00102           Extracted:         Aug-21-14 17:10           Units/RL:         %         RL           2.28         1.00           Extracted:         Aug-23-14 02:33           Units/RL:         mg/kg         RL           ND         15.3           49.9         15.3           ND         15.3 | Field Id:         SP-9         SP-10           Depth:         Matrix:         SOIL         SOIL           Sampled:         Aug-19-14 16:00         Aug-19-14 1           Extracted:         Aug-25-14 14:00         Aug-25-14 2           Analyzed:         Aug-25-14 23:49         Aug-26-14 0           Units/RL:         mg/kg         RL         mg/kg           ND         0.00102         ND           ND         0.00203         ND           ND         0.00102         ND           ND         0.00102         ND           ND         0.00102         ND           Extracted:         Aug-21-14 17:10         Aug-21-14 17:10         Aug-21-14 17:10           Units/RL:         %         RL         %           Extracted:         Aug-22-14 15:00         Aug-22-14 15:00         Aug-23-14 02:33         Aug-23-14 02:33           Units/RL:         mg/kg         RL         mg/kg           ND         15.3         ND           49.9         15.3         66.4           ND         15.3         ND | Field Id:         SP-9         SP-10           Depth:         Matrix:         SOIL         SOIL           Sampled:         Aug-19-14 16:00         Aug-19-14 16:10           Extracted:         Aug-25-14 14:00         Aug-25-14 14:00         Aug-25-14 14:00           Analyzed:         Aug-25-14 23:49         Aug-26-14 00:05         MD         0.00102           Units/RL:         mg/kg         RL         mg/kg         RL           ND         0.00102         ND         0.00102           ND         0.00203         ND         0.00204           ND         0.00102         ND         0.00102           Extracted:         Aug-21-14 17:10         Aug-21-14 17:10         Aug-21-14 17:10           Extracted:         Aug-22-14 15:00         Aug-22-14 15:00         Aug-22-14 15:00           Analyzed:         Aug-23-14 02:33         Aug-23-14 03:57           Units/RL:         mg/kg         RL         mg/kg         RL     < | Field Id:         SP-9         SP-10           Depth:         Matrix:         SOIL         SOIL           Sampled:         Aug-19-14 16:00         Aug-19-14 16:10           Extracted:         Aug-25-14 14:00         Aug-25-14 14:00           Analyzed:         Aug-25-14 23:49         Aug-26-14 00:05           Units/RL:         mg/kg         RL         mg/kg         RL           ND         0.00102         ND         0.00102           ND         0.00203         ND         0.00204           ND         0.00102         ND         0.00102           ND         0.00102         ND         0.00102           ND         0.00102         ND         0.00102           ND         0.00102         ND         0.00102           Extracted:         Aug-21-14 17:10         Aug-21-14 17:10         Aug-21-14 17:10           Units/RL:         %         RL         %         RL           Extracted:         Aug-22-14 15:00         Aug-22-14 03:57         Aug-23-14 03:57           Units/RL:         mg/kg         RL         ND         15.4           ND         15.3         ND         15.4           49.9         15.3         66.4 | Lab Id:       | Field Id: SP-9 SP-10  Depth: Matrix: SOIL SOIL SOIL  Sampled: Aug-19-14 16:00 Aug-19-14 16:10  Extracted: Aug-25-14 14:00 Aug-25-14 14:00  Analyzed: Aug-25-14 23:49 Aug-26-14 00:05  Units/RL: mg/kg RL mg/kg RL  ND 0.00102 ND 0.00102  Extracted: Aug-21-14 17:10 Aug-21-14 17:10  Units/RL: 96 RL 96 RL  Extracted: Aug-22-14 15:00 Aug-22-14 15:00  Analyzed: Aug-23-14 02:33 Aug-23-14 03:57  Units/RL: mg/kg RL mg/kg RL  ND 15.3 ND 15.4  49.9 15.3 66.4 15.4  ND 15.3 ND 15.4 |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Mww Hoah

Kelsey Brooks

### Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- \*\* Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

| MDL Method Detection Limit | SDL Sample Detection Limit | LOD Limit of Detection |
|----------------------------|----------------------------|------------------------|
|                            |                            |                        |

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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**Project Name: Monument #18** 

Work Orders: 491904,

**Project ID:** TNM-Monument 18

**Lab Batch #:** 949052

Sample: 491904-001 / SMP

Matrix: Soil Batch: 1

| Units:      | mg/kg | <b>Date Analyzed:</b> 08/23/14 02:33 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |
|-------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|
|             | ТРН   | by SW8015 Mod                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|             |       | Analytes                             |                          |                       | [2]                   |                         |       |
| 1-Chlorooct | tane  |                                      | 87.3                     | 99.9                  | 87                    | 70-135                  |       |
| o-Terphenyl | 1     |                                      | 45.2                     | 50.0                  | 90                    | 70-135                  |       |

**Lab Batch #:** 949052

Sample: 491904-002 / SMP

Batch: 1

Matrix: Soil

**Units:** 

mg/kg

Date Analyzed: 08/23/14 03:57

SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 90.7                   | 99.7                  | 91                    | 70-135                  |       |
| o-Terphenyl                 | 46.7                   | 49.9                  | 94                    | 70-135                  |       |

Lab Batch #: 949166

Sample: 491904-001 / SMP

Batch:

Matrix: Soil

**Units:** 

mg/kg

Date Analyzed: 08/25/14 23:49

| SUN | RUGATE | RECOV | EKI | ,1001 |
|-----|--------|-------|-----|-------|

CUDDOCATE DECOVEDY CTUDY

| BTEX by EPA 8021     | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
|----------------------|------------------------|-----------------------|----------------|-------------------------|-------|
| Analytes             |                        |                       | [D]            |                         |       |
| 1,4-Difluorobenzene  | 0.0302                 | 0.0300                | 101            | 80-120                  |       |
| 4-Bromofluorobenzene | 0.0271                 | 0.0300                | 90             | 80-120                  |       |

**Lab Batch #:** 949166

Sample: 491904-002 / SMP

Batch:

Matrix: Soil

| Units:      | its: mg/kg Date Analyzed: 08/26/14 00:05 SURROGATE RECOVERY STUDY |                |                        |                       |             |                         |       |
|-------------|---|----------------|------------------------|-----------------------|-------------|-------------------------|-------|
|             | ВТІ   | EX by EPA 8021 | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery %R | Control<br>Limits<br>%R | Flags |
|             |   | Analytes       |                        |                       | [D]         |                         |       |
| 1,4-Difluor | robenzene   |                | 0.0312                 | 0.0300                | 104         | 80-120                  |       |
| 4-Bromofl   | uorobenzene   |                | 0.0280                 | 0.0300                | 93          | 80-120                  |       |

Lab Batch #: 949052

**Sample:** 660517-1-BLK / BLK

Batch:

Matrix: Solid

| Units:     | mg/kg | <b>Date Analyzed:</b> 08/23/14 01:09 | SU                     | RROGATE RE            | ECOVERY S             | STUDY                   |       |
|------------|-------|--------------------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
|            | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|            |       | 1 mary tes                           |                        |                       |                       |                         |       |
| 1-Chlorooc | tane  |                                      | 101                    | 100                   | 101                   | 70-135                  |       |
| o-Ternheny | 1     |                                      | 53.0                   | 50.0                  | 108                   | 70 135                  |       |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 491904,

TT...\*4...

...../1....

**Project ID:** TNM-Monument 18

**Lab Batch #:** 949166 Matrix: Solid **Sample:** 660603-1-BLK / BLK Batch: 1

| Units:       | mg/kg      | <b>Date Analyzed:</b> 08/25/14 20:46 | SU                     | RROGATE RE            | ECOVERY S             | STUDY                   |       |
|--------------|------------|--------------------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
|              | BTI        | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
| 1,4-Difluore | obenzene   | Time y ees                           | 0.0305                 | 0.0300                | 102                   | 80-120                  |       |
| 4-Bromoflu   | orobenzene |                                      | 0.0251                 | 0.0300                | 84                    | 80-120                  |       |

**Lab Batch #:** 949052 **Sample:** 660517-1-BKS / BKS Batch: 1 Matrix: Solid

A ... I ... 1. 00/22/14 01.26

| Units:     | mg/kg | <b>Date Analyzed:</b> 08/23/14 01:36 | SURROGATE RECOVERY STUDY |                       |                |                         |       |
|------------|-------|--------------------------------------|--------------------------|-----------------------|----------------|-------------------------|-------|
|            | ТРН   | by SW8015 Mod                        | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
|            |       | Analytes                             |                          |                       | [D]            |                         |       |
| 1-Chlorooc | tane  |                                      | 105                      | 100                   | 105            | 70-135                  |       |
| o-Terpheny | ıl    |                                      | 63.9                     | 50.0                  | 128            | 70-135                  |       |

**Sample:** 660603-1-BKS / BKS Batch: 1 **Lab Batch #:** 949166 Matrix: Solid

**Units:** mg/kg Date Analyzed: 08/25/14 21:02 SURROGATE RECOVERY STUDY

| BTEX by EPA 8021  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1,4-Difluorobenzene        | 0.0305                 | 0.0300                | 102                   | 80-120                  |       |
| 4-Bromofluorobenzene       | 0.0286                 | 0.0300                | 95                    | 80-120                  |       |

**Lab Batch #:** 949052 **Sample:** 660517-1-BSD / BSD Batch: 1 Matrix: Solid

| Units:     | mg/kg | <b>Date Analyzed:</b> 08/23/14 02:06 | SURROGATE RECOVERY STUDY |                       |                 |                         |       |  |
|------------|-------|--------------------------------------|--------------------------|-----------------------|-----------------|-------------------------|-------|--|
|            | ТРН   | by SW8015 Mod Analytes               | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery %R [D] | Control<br>Limits<br>%R | Flags |  |
| 1-Chlorooc | ctane |                                      | 106                      | 100                   | 106             | 70-135                  |       |  |
| o-Terpheny | yl    |                                      | 61.9                     | 50.0                  | 124             | 70-135                  |       |  |

Batch: Lab Batch #: 949166 **Sample:** 660603-1-BSD / BSD Matrix: Solid

| Units:       | mg/kg      | <b>Date Analyzed:</b> 08/25/14 21:19 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|--------------|------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|              | ВТІ        | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1,4-Difluore | obenzene   | Time y tes                           | 0.0299                   | 0.0300                | 100                   | 80-120                  |       |  |  |
| 4-Bromoflu   | orobenzene |                                      | 0.0282                   | 0.0300                | 94                    | 80-120                  |       |  |  |

<sup>\*</sup> Surrogate outside of Laboratory QC limits

Surrogate Recovery [D] = 100 \* A / B

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



**Project Name: Monument #18** 

Work Orders: 491904,

**Project ID:** TNM-Monument 18

**Lab Batch #:** 949052

**Sample:** 491904-001 S / MS

Matrix: Soil Batch:

| Units: mg/kg Date Analyzed: 08/23/14 02:59 SURROGATE RECOVERY STUDY |       |               |                        |                       |                |                         |       |
|---|-------|---------------|------------------------|-----------------------|----------------|-------------------------|-------|
|   | ТРН   | by SW8015 Mod | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R | Control<br>Limits<br>%R | Flags |
|   |       | Analytes      |                        |                       | [D]            |                         |       |
| 1-Chlorooc  | ctane |               | 119                    | 99.8                  | 119            | 70-135                  |       |
| o-Terpheny  | yl    |               | 62.3                   | 49.9                  | 125            | 70-135                  |       |

Lab Batch #: 949166 **Sample:** 491565-008 S / MS Batch: Matrix: Soil

**Units:** mg/kg **Date Analyzed:** 08/25/14 21:36 SURROGATE RECOVERY STUDY **Amount** True Control BTEX by EPA 8021 Flags Found Recovery Limits Amount [A] [B] %R %R [D] **Analytes** 1,4-Difluorobenzene 0.0332 0.0300 111 80-120 4-Bromofluorobenzene 0.0312 0.0300 104 80-120

Lab Batch #: 949052 Sample: 491904-001 SD / MSD Batch: Matrix: Soil

**Units:** mg/kg Date Analyzed: 08/23/14 03:27 SURROGATE RECOVERY STUDY

| TPH by SW8015 Mod  Analytes | Amount<br>Found<br>[A] | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |
|-----------------------------|------------------------|-----------------------|-----------------------|-------------------------|-------|
| 1-Chlorooctane              | 104                    | 99.9                  | 104                   | 70-135                  |       |
| o-Terphenyl                 | 52.0                   | 50.0                  | 104                   | 70-135                  |       |

**Lab Batch #:** 949166 **Sample:** 491565-008 SD / MSD Batch: Matrix: Soil

| Units:      | mg/kg       | <b>Date Analyzed:</b> 08/25/14 21:52 | SURROGATE RECOVERY STUDY |                       |                       |                         |       |  |  |
|-------------|-------------|--------------------------------------|--------------------------|-----------------------|-----------------------|-------------------------|-------|--|--|
|             | ВТІ         | EX by EPA 8021  Analytes             | Amount<br>Found<br>[A]   | True<br>Amount<br>[B] | Recovery<br>%R<br>[D] | Control<br>Limits<br>%R | Flags |  |  |
| 1,4-Difluor | robenzene   |                                      | 0.0320                   | 0.0300                | 107                   | 80-120                  |       |  |  |
| 4-Bromoflu  | uorobenzene |                                      | 0.0353                   | 0.0300                | 118                   | 80-120                  |       |  |  |

Surrogate Recovery [D] = 100 \* A / B

<sup>\*</sup> Surrogate outside of Laboratory QC limits

<sup>\*\*</sup> Surrogates outside limits; data and surrogates confirmed by reanalysis

<sup>\*\*\*</sup> Poor recoveries due to dilution



#### **BS / BSD Recoveries**



**Project Name: Monument #18** 

Work Order #: 491904 Project ID: TNM-Monument 18

Analyst: ARM Date Prepared: 08/25/2014 Date Analyzed: 08/25/2014

**Lab Batch ID:** 949166 **Sample:** 660603-1-BKS **Batch #:** 1 **Matrix:** Solid

| Units: | mg/kg | BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY |
|--------|-------|---|
|--------|-------|---|

| BTEX by EPA 8021 Analytes | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|---------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| Benzene                   | < 0.00100                     | 0.100                 | 0.107                           | 107                         | 0.100                 | 0.105                                     | 105                           | 2        | 70-130                  | 35                        |      |
| Toluene                   | < 0.00200                     | 0.100                 | 0.104                           | 104                         | 0.100                 | 0.103                                     | 103                           | 1        | 70-130                  | 35                        |      |
| Ethylbenzene              | < 0.00100                     | 0.100                 | 0.109                           | 109                         | 0.100                 | 0.107                                     | 107                           | 2        | 71-129                  | 35                        |      |
| m_p-Xylenes               | < 0.00200                     | 0.200                 | 0.213                           | 107                         | 0.200                 | 0.210                                     | 105                           | 1        | 70-135                  | 35                        |      |
| o-Xylene                  | < 0.00100                     | 0.100                 | 0.104                           | 104                         | 0.100                 | 0.103                                     | 103                           | 1        | 71-133                  | 35                        |      |

Analyst: ARM Date Prepared: 08/22/2014 Date Analyzed: 08/23/2014

Units: mg/kg BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod Analytes         | Blank<br>Sample Result<br>[A] | Spike<br>Added<br>[B] | Blank<br>Spike<br>Result<br>[C] | Blank<br>Spike<br>%R<br>[D] | Spike<br>Added<br>[E] | Blank<br>Spike<br>Duplicate<br>Result [F] | Blk. Spk<br>Dup.<br>%R<br>[G] | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|-------------------------------|-----------------------|---------------------------------|-----------------------------|-----------------------|---|-------------------------------|----------|-------------------------|---------------------------|------|
| C6-C12 Gasoline Range Hydrocarbons | <15.0                         | 1000                  | 905                             | 91                          | 1000                  | 837                                       | 84                            | 8        | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | <15.0                         | 1000                  | 1110                            | 111                         | 1000                  | 1030                                      | 103                           | 7        | 70-135                  | 35                        |      |

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|Blank Spike Recovery [D] = 100\*(C)/[B]Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]All results are based on MDL and Validated for QC Purposes



#### Form 3 - MS / MSD Recoveries



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**Project Name: Monument #18** 

Work Order #: 491904 **Project ID:** TNM-Monument 18

Lab Batch ID:

949166

**QC- Sample ID:** 491565-008 S

Batch #:

Matrix: Soil

Date Analyzed:

08/25/2014

**Date Prepared:** 08/25/2014

Analyst: ARM

**Reporting Units:** 

mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| BTEX by EPA 8021 | Parent<br>Sample<br>Result | Spike<br>Added | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R | Spike<br>Added | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R | RPD | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------|----------------------------|----------------|--------------------------------|------------------------|----------------|--|----------------------|-----|-------------------------|---------------------------|------|
| Analytes         | [A]                        | [B]            | [0]                            | [D]                    | [E]            | Kesuit [F]                               | [G]                  | 70  | /0K                     | 70KI D                    |      |
| Benzene          | < 0.00116                  | 0.116          | 0.113                          | 97                     | 0.116          | 0.101                                    | 87                   | 11  | 70-130                  | 35                        |      |
| Toluene          | < 0.00233                  | 0.116          | 0.106                          | 91                     | 0.116          | 0.0912                                   | 79                   | 15  | 70-130                  | 35                        |      |
| Ethylbenzene     | < 0.00116                  | 0.116          | 0.106                          | 91                     | 0.116          | 0.0877                                   | 76                   | 19  | 71-129                  | 35                        |      |
| m_p-Xylenes      | < 0.00233                  | 0.233          | 0.205                          | 88                     | 0.233          | 0.179                                    | 77                   | 14  | 70-135                  | 35                        |      |
| o-Xylene         | < 0.00116                  | 0.116          | 0.0996                         | 86                     | 0.116          | 0.0905                                   | 78                   | 10  | 71-133                  | 35                        |      |

Lab Batch ID:

949052

**QC- Sample ID:** 491904-001 S

Batch #:

Matrix: Soil

Date Analyzed:

08/23/2014

**Date Prepared:** 08/22/2014

Analyst: ARM

**Reporting Units:** mg/kg

#### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

| TPH by SW8015 Mod                  | Parent<br>Sample<br>Result | Spike<br>Added | Spiked Sample<br>Result<br>[C] | Spiked<br>Sample<br>%R | Spike<br>Added | Duplicate<br>Spiked Sample<br>Result [F] | Spiked<br>Dup.<br>%R | RPD<br>% | Control<br>Limits<br>%R | Control<br>Limits<br>%RPD | Flag |
|------------------------------------|----------------------------|----------------|--------------------------------|------------------------|----------------|--|----------------------|----------|-------------------------|---------------------------|------|
| Analytes                           | [A]                        | [B]            | [C]                            | 76K<br>[D]             | [E]            | Result [F]                               | [G]                  | 70       | 70K                     | 70KFD                     |      |
| C6-C12 Gasoline Range Hydrocarbons | <15.3                      | 1020           | 856                            | 84                     | 1020           | 767                                      | 75                   | 11       | 70-135                  | 35                        |      |
| C12-C28 Diesel Range Hydrocarbons  | 49.9                       | 1020           | 1130                           | 106                    | 1020           | 953                                      | 89                   | 17       | 70-135                  | 35                        |      |

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B Relative Percent Difference RPD = 200\*|(C-F)/(C+F)| Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E



# **Sample Duplicate Recovery**



**Project Name: Monument #18** 

**Work Order #:** 491904

Lab Batch #: 948893 Project ID: TNM-Monument 18

 Date Analyzed:
 08/21/2014 17:10
 Date Prepared:
 08/21/2014
 Analyst:
 WRU

 QC- Sample ID:
 491557-029 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: % | SAMPLE / SAMPLE DUPLICATE RECOVERY |                                      |     |                           |      |  |  |  |  |
|--------------------|------------------------------------|--------------------------------------|-----|---------------------------|------|--|--|--|--|
| Percent Moisture   | Parent Sample<br>Result<br>[A]     | Sample<br>Duplicate<br>Result<br>[B] | RPD | Control<br>Limits<br>%RPD | Flag |  |  |  |  |
| Analyte            |                                    | [10]                                 |     |                           |      |  |  |  |  |
| Percent Moisture   | 8.98                               | 9.21                                 | 3   | 20                        |      |  |  |  |  |

**Lab Batch #:** 948893

 Date Analyzed:
 08/21/2014 17:10
 Date Prepared:
 08/21/2014
 Analyst:
 WRU

 QC- Sample ID:
 491860-001 D
 Batch #:
 1
 Matrix:
 Soil

| Reporting Units: % SAMPLE / SAMPLE DUPLICATE RECOVE |                                |                     |     |                           |      |
|---|--------------------------------|---------------------|-----|---------------------------|------|
|   | Parent Sample<br>Result<br>[A] | Duplicate<br>Result | RPD | Control<br>Limits<br>%RPD | Flag |
| Analyte   |                                | [B]                 |     |                           |      |
| Percent Moisture                                    | 8.99                           | 8.39                | 7   | 20                        |      |



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 08/21/2014 01:19:00 PM

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Work Order #: 491904

**Temperature Measuring device used:** 

| Sa   | ample Receipt Checklist |     | Comments |
|--|-------------------------|-----|----------|
| #1 *Temperature of cooler(s)?                  |                         | 4.5 |          |
| #2 *Shipping container in good condition?      |                         | Yes |          |
| #3 *Samples received on ice?                   |                         | Yes |          |
| #4 *Custody Seals intact on shipping container | / cooler?               | No  |          |
| #5 Custody Seals intact on sample bottles?     |                         | No  |          |
| #6 *Custody Seals Signed and dated?            |                         | No  |          |
| #7 *Chain of Custody present?                  |                         | Yes |          |
| #8 Sample instructions complete on Chain of C  | Custody?                | Yes |          |
| #9 Any missing/extra samples?                  |                         | No  |          |
| #10 Chain of Custody signed when relinquishe   | d/ received?            | Yes |          |
| #11 Chain of Custody agrees with sample labe   | l(s)?                   | Yes |          |
| #12 Container label(s) legible and intact?     |                         | Yes |          |
| #13 Sample matrix/ properties agree with Chair | n of Custody?           | Yes |          |
| #14 Samples in proper container/ bottle?       |                         | Yes |          |
| #15 Samples properly preserved?                |                         | Yes |          |
| #16 Sample container(s) intact?                |                         | Yes |          |
| #17 Sufficient sample amount for indicated tes | t(s)?                   | Yes |          |
| #18 All samples received within hold time?     |                         | Yes |          |
| #19 Subcontract of sample(s)?                  |                         | No  |          |
| #20 VOC samples have zero headspace (less      | than 1/4 inch bubble)?  | N/A |          |
| #21 <2 for all samples preserved with HNO3,H   | CL, H2SO4?              | N/A |          |
| #22 >10 for all samples preserved with NaAsO   | 2+NaOH, ZnAc+NaOH?      | N/A |          |

| Must be completed for after-hours delivery of samples prior to placing in the refrigerator |                         |                            |                         |  |  |  |  |  |  |  |
|--|-------------------------|----------------------------|-------------------------|--|--|--|--|--|--|--|
| Analyst:   |                         | PH Device/Lot#:            |                         |  |  |  |  |  |  |  |
|  | Checklist completed by: | Mury Moah  Kelsey Brooks   | Date: <u>08/21/2014</u> |  |  |  |  |  |  |  |
|  | Checklist reviewed by:  | Mmy froak<br>Kelsey Brooks | Date: 08/21/2014        |  |  |  |  |  |  |  |



# XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: PLAINS ALL AMERICAN EH&S

Date/ Time Received: 08/21/2014 01:19:00 PM

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Work Order #: 491904

**Temperature Measuring device used:** 

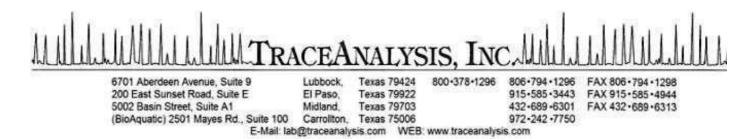
| Sample Receipt Checklist   |     | Comments |
|--|-----|----------|
| #1 *Temperature of cooler(s)?                                    | 4.5 |          |
| #2 *Shipping container in good condition?                        | Yes |          |
| #3 *Samples received on ice?                                     | Yes |          |
| #4 *Custody Seals intact on shipping container/ cooler?          | No  |          |
| #5 Custody Seals intact on sample bottles?                       | No  |          |
| #6 *Custody Seals Signed and dated?                              | No  |          |
| #7 *Chain of Custody present?                                    | Yes |          |
| #8 Sample instructions complete on Chain of Custody?             | Yes |          |
| #9 Any missing/extra samples?                                    | No  |          |
| #10 Chain of Custody signed when relinquished/ received?         | Yes |          |
| #11 Chain of Custody agrees with sample label(s)?                | Yes |          |
| #12 Container label(s) legible and intact?                       | Yes |          |
| #13 Sample matrix/ properties agree with Chain of Custody?       | Yes |          |
| #14 Samples in proper container/ bottle?                         | Yes |          |
| #15 Samples properly preserved?                                  | Yes |          |
| #16 Sample container(s) intact?                                  | Yes |          |
| #17 Sufficient sample amount for indicated test(s)?              | Yes |          |
| #18 All samples received within hold time?                       | Yes |          |
| #19 Subcontract of sample(s)?                                    | No  |          |
| #20 VOC samples have zero headspace (less than 1/4 inch bubble)? | N/A |          |
| #21 <2 for all samples preserved with HNO3,HCL, H2SO4?           | N/A |          |
| #22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?   | N/A |          |
|  |     |          |

| Must be completed for after-hours delivery of samples prior to placing in the refrigerator |                         |                          |                         |  |  |  |  |  |  |  |
|--|-------------------------|--------------------------|-------------------------|--|--|--|--|--|--|--|
| Analyst:   |                         |                          |                         |  |  |  |  |  |  |  |
|  | Checklist completed by: | Muny Moah  Kelsey Brooks | Date: <u>08/21/2014</u> |  |  |  |  |  |  |  |
|  | Checklist reviewed by:  | Mmy froah Kelsey Brooks  | Date: 08/21/2014        |  |  |  |  |  |  |  |

Report Date: October 28, 2014

14101730

Work Order:



#### Certifications

WBE **NCTRCA** DBENELAP DoD LELAP Oklahoma ISO 17025 Kansas

# Analytical and Quality Control Report

(Corrected Report)

Curt Stanley Nova Safety & Environmental 2057 Commerce St. Midland, TX, 79703

TNM Monument 18

Project Location: Monument, NM Project Name: Project Number: Monument 18

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

|        |             |        | Date       | Time  | Date       |
|--------|-------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken      | Taken | Received   |
| 377240 | SP-11       | soil   | 2014-10-13 | 15:00 | 2014-10-17 |
| 377241 | SP-12       | soil   | 2014-10-13 | 15:00 | 2014-10-17 |

#### Report Corrections (Work Order 14101730)

• 10/27/14: Reissued report with ORO results.

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director James Taylor, Assistant Director Brian Pellam, Operations Manager

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## Case Narrative

Samples for project TNM Monument 18 were received by TraceAnalysis, Inc. on 2014-10-17 and assigned to work order 14101730. Samples for work order 14101730 were received intact at a temperature of 0.2 C.

Samples were analyzed for the following tests using their respective methods.

|               |            | Prep  | $\operatorname{Prep}$ | QC     | Analysis              |
|---------------|------------|-------|-----------------------|--------|-----------------------|
| Test          | Method     | Batch | Date                  | Batch  | Date                  |
| BTEX          | S 8021B    | 98591 | 2014-10-22 at 14:25   | 116584 | 2014-10-22 at 14:25   |
| TPH DRO - NEW | S 8015 $D$ | 98548 | 2014-10-21 at 12:00   | 116536 | 2014-10-22 at $10:12$ |
| TPH GRO       | S 8015 $D$ | 98591 | 2014-10-22 at 14:25   | 116585 | 2014-10-22 at $14:25$ |
| TPH ORO       | S 8015 $D$ | 98548 | 2014-10-21 at 12:00   | 116649 | 2014-10-24 at $15:07$ |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 14101730 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 5 of 21 Monument 18 TNM Monument 18 Monument, NM

# **Analytical Report**

Sample: 377240 - SP-11

Laboratory: Lubbock

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035 QC Batch: 116584 Date Analyzed: 2014-10-22 Analyzed By: MT98591 Sample Preparation: 2014-10-22Prepared By: Prep Batch: MT

RLDilution Parameter Flag Cert Result Units RLBenzene < 0.0200mg/Kg 0.0200 1 U 1,2,3,4,5 Toluene 1 < 0.0200mg/Kg 0.0200U 1,2,3,4,5 Ethylbenzene 1 0.0200< 0.0200 mg/Kg U 1,2,3,4,5 Xylene < 0.0200 mg/Kg 1 0.0200Jb 1.2.3.4.5

|                              |      |                       |        |       |          | $\operatorname{Spike}$ | Percent  | Recovery   |
|------------------------------|------|-----------------------|--------|-------|----------|------------------------|----------|------------|
| Surrogate                    | Flag | $\operatorname{Cert}$ | Result | Units | Dilution | Amount                 | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 5                     | 1.93   | mg/Kg | 1        | 2.00                   | 96       | 66.2 - 120 |
| 4-Bromofluorobenzene (4-BFB) |      | 5                     | 2.07   | mg/Kg | 1        | 2.00                   | 104      | 59.5 - 120 |

Sample: 377240 - SP-11

Laboratory: Lubbock

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/A QC Batch: SM116536 Date Analyzed: 2014-10-22 Analyzed By: Prep Batch: 98548 Sample Preparation: 2014 - 10 - 21Prepared By: SM

|             |      |      |        |       |          | $_{ m Spike}$ | Percent  | Recovery |
|-------------|------|------|--------|-------|----------|---------------|----------|----------|
| Surrogate   | Flag | Cert | Result | Units | Dilution | Amount        | Recovery | Limits   |
| n-Tricosane |      | 3    | 124    | mg/Kg | 1        | 100           | 124      | 70 - 130 |

Sample: 377240 - SP-11

Laboratory: Lubbock

S 5035 Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: QC Batch: 116585 2014-10-22 Date Analyzed: Analyzed By: MTPrep Batch: 98591 Sample Preparation: 2014-10-22 Prepared By: MT

Report Date: October 28, 2014

Work Order: 14101730

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Monument 18

TNM Monument 18

Monument, NM

|                              |      |      |                       |        | RL     |                  |        |          |            |
|------------------------------|------|------|-----------------------|--------|--------|------------------|--------|----------|------------|
| Parameter                    | Flag |      | $\operatorname{Cert}$ |        | Result | Uni              | ts     | Dilution | RL         |
| GRO                          | U    |      | 1,2,3,4               |        | < 4.00 | $\mathrm{mg/Kg}$ |        | 1        | 4.00       |
| a                            |      |      | <b>a</b>              | -      | ·      | <b>D</b> .1      | Spike  | Percent  | Recovery   |
| Surrogate                    |      | Flag | Cert                  | Result | Units  | Dilution         | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      |      | 3                     | 2.04   | mg/Kg  | 1                | 2.00   | 102      | 73 - 122   |
| 4-Bromofluorobenzene (4-BFB) |      |      | 3                     | 1.90   | mg/Kg  | 1                | 2.00   | 95       | 74.6 - 120 |

Sample: 377240 - SP-11

Laboratory: Lubbock

TPH ORO Analysis: QC Batch: 116649 Prep Batch: 98548

Analytical Method: S 8015 D Date Analyzed: 2014 - 10 - 24Sample Preparation: 2014-10-21

Prep Method: N/A Analyzed By: SMPrepared By: SM

Prep Method: S 5035

MT

MT

Analyzed By:

Prepared By:

|           |                       |                       | MDL    | MQL    | $_{ m PQL}$ | RL     |       |          |      |      |      |      |
|-----------|-----------------------|-----------------------|--------|--------|-------------|--------|-------|----------|------|------|------|------|
| Parameter | Flag                  | $\operatorname{Cert}$ | Result | Result | Result      | Result | Units | Dilution | MDL  | MQL  | PQL  | RL   |
| ORO       | $_{\mathrm{Qc,Qs,U}}$ |                       | <17.1  | < 50.0 | < 50.0      | < 50.0 | mg/Kg | 1        | 17.1 | 50.0 | 50.0 | 50.0 |

|               |      |      |        |                           |          | $\operatorname{Spike}$ | Percent  | Recovery   |
|---------------|------|------|--------|---------------------------|----------|------------------------|----------|------------|
| Surrogate     | Flag | Cert | Result | Units                     | Dilution | Amount                 | Recovery | Limits     |
| n-Tricosane   |      |      | 124    | mg/Kg                     | 1        | 100                    | 124      | 61.5 - 159 |
| n-Triacontane |      |      | 137    | $\mathrm{mg}/\mathrm{Kg}$ | 1        | 100                    | 137      | 70 - 166   |

Sample: 377241 - SP-12

Laboratory: Lubbock

Analysis: BTEX Analytical Method:  $\le 8021B$ QC Batch: 116584Date Analyzed: 2014-10-22 Prep Batch: 98591 Sample Preparation: 2014 - 10 - 22

RL $\operatorname{Cert}$ Parameter Flag Result Units Dilution RLBenzene mg/Kg 0.0200 U 1,2,3,4,5 < 0.02001 Toluene < 0.0200 mg/Kg1 0.0200U 1,2,3,4,5 mg/KgEthylbenzene 1 0.0200U < 0.0200 1,2,3,4,5 Xylene < 0.0200 mg/Kg1 0.02001,2,3,4,5

|                              |      |                       |        |       |          | $_{ m Spike}$ | Percent  | Recovery   |
|------------------------------|------|-----------------------|--------|-------|----------|---------------|----------|------------|
| Surrogate                    | Flag | $\operatorname{Cert}$ | Result | Units | Dilution | Amount        | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 5                     | 2.12   | mg/Kg | 1        | 2.00          | 106      | 66.2 - 120 |
| 4-Bromofluorobenzene (4-BFB) |      | 5                     | 2.15   | mg/Kg | 1        | 2.00          | 108      | 59.5 - 120 |

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 7 of 21 Monument 18 TNM Monument 18 Monument, NM

Sample: 377241 - SP-12

Laboratory: Lubbock

Analysis: TPH DRO - NEW Analytical Method: S 8015 D Prep Method: N/AQC Batch: 116536 Date Analyzed: 2014-10-22 Analyzed By: SMPrep Batch: 98548 Sample Preparation: 2014-10-21 Prepared By: SM

|             |      |      |        |              |          | $_{ m Spike}$ | Percent  | Recovery |
|-------------|------|------|--------|--------------|----------|---------------|----------|----------|
| Surrogate   | Flag | Cert | Result | Units        | Dilution | Amount        | Recovery | Limits   |
| n-Tricosane |      | 3    | 128    | ${ m mg/Kg}$ | 1        | 100           | 128      | 70 - 130 |

Sample: 377241 - SP-12

Laboratory: Lubbock

Analysis: TPH GRO Analytical Method: S 8015 D Prep Method: S 5035 QC Batch: 116585 Date Analyzed: 2014-10-22 Analyzed By: MTPrep Batch: 98591 Sample Preparation: 2014-10-22 Prepared By: MT

|                              |                       |                       |        |       |          | Spike  | Percent  | Recovery   |
|------------------------------|-----------------------|-----------------------|--------|-------|----------|--------|----------|------------|
| Surrogate                    | $\operatorname{Flag}$ | $\operatorname{Cert}$ | Result | Units | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |                       | 3                     | 2.24   | mg/Kg | 1        | 2.00   | 112      | 73 - 122   |
| 4-Bromofluorobenzene (4-BFB) |                       | 3                     | 2.02   | mg/Kg | 1        | 2.00   | 101      | 74.6 - 120 |

Sample: 377241 - SP-12

Laboratory: Lubbock

Prep Method: Analysis: TPH ORO Analytical Method: S 8015 D N/AQC Batch: 116649 Date Analyzed: 2014-10-24 Analyzed By: SMPrep Batch: 98548 Sample Preparation: 2014-10-21 Prepared By: SM

MDLMQLPQL RLParameter Cert Result Result Result Units Dilution MDLMQL PQL RLFlag Result ORO <17.1 < 50.0 < 50.0 < 50.0 mg/Kg 17.1 50.0 50.0 50.0  $_{\mathrm{Qc,Qs,U}}$ 

Spike Percent Recovery Flag Recovery Surrogate Cert Result Units Dilution Amount Limits n-Tricosane 128 mg/Kg 100 128 61.5 - 159 1

 $continued \dots$ 

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 8 of 21 Monument 18 TNM Monument 18 Monument, NM

 $sample\ continued\ \dots$ 

|               |      |                       |        |                  |          | Spike  | Percent  | Recovery |
|---------------|------|-----------------------|--------|------------------|----------|--------|----------|----------|
| Surrogate     | Flag | $\operatorname{Cert}$ | Result | Units            | Dilution | Amount | Recovery | Limits   |
| n-Triacontane |      |                       | 140    | $\mathrm{mg/Kg}$ | 1        | 100    | 140      | 70 - 166 |

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 9 of 21 Monument 18 TNM Monument 18 Monument, NM

# Method Blanks

Method Blank (1) QC Batch: 116536

QC Batch: 116536 Date Analyzed: 2014-10-22 Analyzed By: SM Prep Batch: 98548 QC Preparation: 2014-10-21 Prepared By: SM

|             |      |      |        |       |          | Spike  | Percent  | Recovery |
|-------------|------|------|--------|-------|----------|--------|----------|----------|
| Surrogate   | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits   |
| n-Tricosane |      | 3    | 106    | mg/Kg | 1        | 100    | 106      | 70 - 130 |

Method Blank (1) QC Batch: 116584

QC Batch: 116584 Date Analyzed: 2014-10-22 Analyzed By: MT Prep Batch: 98591 QC Preparation: 2014-10-22 Prepared By: MT

MDLParameter Flag Cert Result Units RLBenzene < 0.00487mg/Kg 0.02 1,2,3,4,5 Toluene 0.00420mg/Kg 0.021.2.3.4.5 Ethylbenzene < 0.00283 mg/Kg0.02 1,2,3,4,5 Xylene 0.00540mg/Kg0.02

|                              |                       |                       |        |                        |          | Spike  | Percent  | Recovery   |
|------------------------------|-----------------------|-----------------------|--------|------------------------|----------|--------|----------|------------|
| Surrogate                    | $\operatorname{Flag}$ | $\operatorname{Cert}$ | Result | $\operatorname{Units}$ | Dilution | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |                       | 5                     | 1.80   | mg/Kg                  | 1        | 2.00   | 90       | 66.2 - 120 |
| 4-Bromofluorobenzene (4-BFB) |                       | 5                     | 1.67   | mg/Kg                  | 1        | 2.00   | 84       | 59.5 - 120 |

Method Blank (1) QC Batch: 116585

QC Batch: 116585 Date Analyzed: 2014-10-22 Analyzed By: MT Prep Batch: 98591 QC Preparation: 2014-10-22 Prepared By: MT

Report Date: October 28, 2014

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| Parameter                    | Flag |      | Cert    |       | MDL<br>Result |        | Units    | RL         |
|------------------------------|------|------|---------|-------|---------------|--------|----------|------------|
| GRO                          |      |      | 1,2,3,4 |       | < 0.217       |        | mg/Kg    | 4          |
|                              |      |      |         |       |               | Spike  | Percent  | Recovery   |
| Surrogate                    | Flag | Cert | Result  | Units | Dilution      | Amount | Recovery | Limits     |
| Trifluorotoluene (TFT)       |      | 3    | 1.83    | mg/Kg | 1             | 2.00   | 92       | 73 - 122   |
| 4-Bromofluorobenzene (4-BFB) |      | 3    | 1.58    | mg/Kg | 1             | 2.00   | 79       | 74.6 - 120 |

Method Blank (1) QC Batch: 116649

QC Batch: 116649 Prep Batch: 98548 Date Analyzed: 2014-10-24 QC Preparation: 2014-10-21 Analyzed By: SM Prepared By: SM

|           |      |      | $\mathrm{MDL}$ |         |    |
|-----------|------|------|----------------|---------|----|
| Parameter | Flag | Cert | Result         | Units   | RL |
| ORO       |      |      | <17.1          | m mg/Kg | 50 |

|               |                       |      |        |                           |          | Spike  | Percent  | Recovery   |
|---------------|-----------------------|------|--------|---------------------------|----------|--------|----------|------------|
| Surrogate     | $\operatorname{Flag}$ | Cert | Result | Units                     | Dilution | Amount | Recovery | Limits     |
| n-Tricosane   |                       |      | 106    | mg/Kg                     | 1        | 100    | 106      | 61.5 - 159 |
| n-Triacontane |                       |      | 117    | $\mathrm{mg}/\mathrm{Kg}$ | 1        | 100    | 117      | 70 - 166   |
|               |                       |      |        |                           |          |        |          |            |

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 11 of 21 Monument 18 TNM Monument 18 Monument, NM

# Laboratory Control Spikes

#### Laboratory Control Spike (LCS-1)

QC Batch: 116536 Date Analyzed: 2014-10-22 Analyzed By: SM Prep Batch: 98548 QC Preparation: 2014-10-21 Prepared By: SM

|       |   |              | LCS    |       |      | $\operatorname{Spike}$ | Matrix |      | Rec.     |
|-------|---|--------------|--------|-------|------|------------------------|--------|------|----------|
| Param | F | $\mathbf{C}$ | Result | Units | Dil. | Amount                 | Result | Rec. | Limit    |
| DRO   |   | 1,2,3,4      | 270    | mg/Kg | 1    | 250                    | 13.5   | 103  | 70 - 130 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       |   |              | LCSD   |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|-------|---|--------------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param | F | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| DRO   |   | 1,2,3,4      | 276    | mg/Kg | 1    | 250    | 13.5   | 105  | 70 - 130 | 2   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|             |   | LCS    | LCSD   |       |      | Spike  | LCS  | LCSD | Rec.     |
|-------------|---|--------|--------|-------|------|--------|------|------|----------|
| Surrogate   |   | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit    |
| n-Tricosane | 3 | 82.3   | 83.4   | mg/Kg | 1    | 100    | 82   | 83   | 70 - 130 |

#### Laboratory Control Spike (LCS-1)

QC Batch: 116584 Date Analyzed: 2014-10-22 Analyzed By: MT Prep Batch: 98591 QC Preparation: 2014-10-22 Prepared By: MT

|              |              |              | LCS    |       |      | Spike  | Matrix    |      | Rec.       |
|--------------|--------------|--------------|--------|-------|------|--------|-----------|------|------------|
| Param        | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result    | Rec. | Limit      |
| Benzene      |              | 1,2,3,4,5    | 1.78   | mg/Kg | 1    | 2.00   | < 0.00487 | 89   | 69.3 - 120 |
| Toluene      |              | 1,2,3,4,5    | 1.87   | mg/Kg | 1    | 2.00   | 0.0042    | 93   | 70.5 - 120 |
| Ethylbenzene |              | 1,2,3,4,5    | 1.95   | mg/Kg | 1    | 2.00   | < 0.00283 | 98   | 70.6 - 120 |
| Xylene       |              | 1,2,3,4,5    | 5.81   | mg/Kg | 1    | 6.00   | 0.0054    | 97   | 70.7 - 120 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              |              |              | LCSD   |       |      | Spike  | Matrix    |      | Rec.       |     | RPD   |
|--------------|--------------|--------------|--------|-------|------|--------|-----------|------|------------|-----|-------|
| Param        | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result    | Rec. | Limit      | RPD | Limit |
| Benzene      |              | 1,2,3,4,5    | 1.65   | mg/Kg | 1    | 2.00   | < 0.00487 | 83   | 69.3 - 120 | 7   | 20    |
| Toluene      |              | 1,2,3,4,5    | 1.77   | mg/Kg | 1    | 2.00   | 0.0042    | 88   | 70.5 - 120 | 6   | 20    |
| Ethylbenzene |              | 1,2,3,4,5    | 2.04   | mg/Kg | 1    | 2.00   | < 0.00283 | 102  | 70.6 - 120 | 5   | 20    |
| Xylene       |              | 1,2,3,4,5    | 5.53   | mg/Kg | 1    | 6.00   | 0.0054    | 92   | 70.7 - 120 | 5   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: October 28, 2014

Work Order: 14101730

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Monument 18

TNM Monument 18

Monument, NM

|                              |   | LCS    | LCSD   |                        |      | Spike  | LCS  | LCSD | Rec.                   |
|------------------------------|---|--------|--------|------------------------|------|--------|------|------|------------------------|
| Surrogate                    |   | Result | Result | $\operatorname{Units}$ | Dil. | Amount | Rec. | Rec. | $\operatorname{Limit}$ |
| Trifluorotoluene (TFT)       | 5 | 2.08   | 1.91   | mg/Kg                  | 1    | 2.00   | 104  | 95   | 66.2 - 120             |
| 4-Bromofluorobenzene (4-BFB) | 5 | 1.84   | 1.75   | mg/Kg                  | 1    | 2.00   | 92   | 88   | 59.5 - 120             |

#### Laboratory Control Spike (LCS-1)

116585 QC Batch: Prep Batch: 98591

Date Analyzed: 2014-10-22 QC Preparation: 2014-10-22 Analyzed By: MT Prepared By: MT

LCS Spike Matrix Rec. Param  $\mathbf{C}$ Result Units Dil. Amount Result Rec. Limit  $\overline{GRO}$ 1,2,3,4 14.8 mg/Kg 1 20.0 < 0.217 74 60.1 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       |   |              | LCSD   |       |      | Spike  | Matrix  |      | Rec.       |     | RPD   |
|-------|---|--------------|--------|-------|------|--------|---------|------|------------|-----|-------|
| Param | F | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result  | Rec. | Limit      | RPD | Limit |
| GRO   |   | 1,2,3,4      | 17.8   | mg/Kg | 1    | 20.0   | < 0.217 | 89   | 60.1 - 120 | 18  | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              |   | LCS    | LCSD   |                           |      | Spike  | LCS  | LCSD | Rec.       |
|------------------------------|---|--------|--------|---------------------------|------|--------|------|------|------------|
| Surrogate                    |   | Result | Result | Units                     | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 3 | 1.77   | 1.99   | mg/Kg                     | 1    | 2.00   | 88   | 100  | 73 - 122   |
| 4-Bromofluorobenzene (4-BFB) | 3 | 1.63   | 1.90   | $\mathrm{mg}/\mathrm{Kg}$ | 1    | 2.00   | 82   | 95   | 74.6 - 120 |

#### Laboratory Control Spike (LCS-1)

QC Batch: 116649 Prep Batch: 98548

Date Analyzed: 2014 - 10 - 24QC Preparation: 2014-10-21 Analyzed By: SM Prepared By: SM

|       |    |              |              | LCS    |       |      | Spike  | Matrix |      | Rec.       |
|-------|----|--------------|--------------|--------|-------|------|--------|--------|------|------------|
| Param |    | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result | Rec. | Limit      |
| ORO   | Qs | Qs           |              | <17.1  | mg/Kg | 1    | 250    | <17.1  | 0    | 75.6 - 120 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       |    |              |              | LCSD   |       |      | Spike  | Matrix |      | Rec.       |     | RPD   |
|-------|----|--------------|--------------|--------|-------|------|--------|--------|------|------------|-----|-------|
| Param |    | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result | Rec. | Limit      | RPD | Limit |
| ORO   | Qs | Qs           |              | <17.1  | mg/Kg | 1    | 250    | <17.1  | 0    | 75.6 - 120 | 0   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 13 of 21 Monument 18 TNM Monument 18 Monument, NM

|               | LCS    | LCSD   |       |      | $_{ m Spike}$ | LCS  | LCSD | Rec.       |
|---------------|--------|--------|-------|------|---------------|------|------|------------|
| Surrogate     | Result | Result | Units | Dil. | Amount        | Rec. | Rec. | Limit      |
| n-Tricosane   | 82.3   | 83.4   | mg/Kg | 1    | 100           | 82   | 83   | 61.5 - 159 |
| n-Triacontane | 89.3   | 90.2   | mg/Kg | 1    | 100           | 89   | 90   | 70 - 166   |

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# Matrix Spikes

Matrix Spike (MS-1) Spiked Sample: 376865

QC Batch: 116536 Date Analyzed: 2014-10-22 Analyzed By: SM Prep Batch: 98548 QC Preparation: 2014-10-21 Prepared By: SM

|       |              |              | MS     |       |      | $\operatorname{Spike}$ | Matrix |      | Rec.                   |
|-------|--------------|--------------|--------|-------|------|------------------------|--------|------|------------------------|
| Param | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount                 | Result | Rec. | $\operatorname{Limit}$ |
| DRO   |              | 1,2,3,4      | 290    | mg/Kg | 1    | 250                    | 13.4   | 111  | 70 - 130               |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       |   |              | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|-------|---|--------------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param | F | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| DRO   |   | 1.2.3.4      | 287    | mg/Kg | 1    | 250    | 13.4   | 109  | 70 - 130 | 1   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|             |   | MS     | MSD    |       |      | Spike  | MS   | MSD  | Rec.     |
|-------------|---|--------|--------|-------|------|--------|------|------|----------|
| Surrogate   |   | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit    |
| n-Tricosane | 3 | 91.0   | 90.1   | mg/Kg | 1    | 100    | 91   | 90   | 70 - 130 |

Matrix Spike (MS-1) Spiked Sample: 376871

QC Batch: 116584 Date Analyzed: 2014-10-22 Analyzed By: MT Prep Batch: 98591 QC Preparation: 2014-10-22 Prepared By: MT

|              |   |              | MS     |       |      | Spike  | Matrix    |      | Rec.       |
|--------------|---|--------------|--------|-------|------|--------|-----------|------|------------|
| Param        | F | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result    | Rec. | Limit      |
| Benzene      |   | 1,2,3,4,5    | 1.78   | mg/Kg | 1    | 2.00   | < 0.00487 | 89   | 63.6 - 120 |
| Toluene      |   | 1,2,3,4,5    | 1.89   | mg/Kg | 1    | 2.00   | 0.0056    | 94   | 67.8 - 128 |
| Ethylbenzene |   | 1,2,3,4,5    | 1.96   | mg/Kg | 1    | 2.00   | < 0.00283 | 98   | 69.5 - 136 |
| Xylene       |   | 1,2,3,4,5    | 5.86   | mg/Kg | 1    | 6.00   | 0.0051    | 98   | 69.3 - 139 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|              |              |              | MSD    |       |      | Spike  | Matrix    |      | Rec.                   |     | RPD   |
|--------------|--------------|--------------|--------|-------|------|--------|-----------|------|------------------------|-----|-------|
| Param        | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result    | Rec. | $\operatorname{Limit}$ | RPD | Limit |
| Benzene      |              | 1,2,3,4,5    | 1.83   | mg/Kg | 1    | 2.00   | < 0.00487 | 92   | 63.6 - 120             | 3   | 20    |
| Toluene      |              | 1,2,3,4,5    | 1.96   | mg/Kg | 1    | 2.00   | 0.0056    | 98   | 67.8 - 128             | 4   | 20    |
| Ethylbenzene |              | 1,2,3,4,5    | 2.04   | mg/Kg | 1    | 2.00   | < 0.00283 | 102  | 69.5 - 136             | 4   | 20    |
| Xylene       |              | 1,2,3,4,5    | 6.12   | mg/Kg | 1    | 6.00   | 0.0051    | 102  | 69.3 - 139             | 4   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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|                              |   | MS     | MSD    |                           |      | Spike  | MS   | MSD  | Rec.       |
|------------------------------|---|--------|--------|---------------------------|------|--------|------|------|------------|
| Surrogate                    |   | Result | Result | Units                     | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 5 | 1.95   | 2.00   | mg/Kg                     | 1    | 2      | 98   | 100  | 66.2 - 120 |
| 4-Bromofluorobenzene (4-BFB) | 5 | 1.93   | 1.96   | $\mathrm{mg}/\mathrm{Kg}$ | 1    | 2      | 96   | 98   | 59.5 - 120 |

Matrix Spike (MS-1) Spiked Sample: 376871

116585 QC Batch: Prep Batch: 98591

2014-10-22 Date Analyzed: QC Preparation: 2014-10-22

Analyzed By: MT Prepared By: MT

|       |              |              | MS     |       |      | Spike  | Matrix  |      | Rec.       |
|-------|--------------|--------------|--------|-------|------|--------|---------|------|------------|
| Param | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result  | Rec. | Limit      |
| GRO   |              | 1,2,3,4      | 16.0   | mg/Kg | 1    | 20.0   | < 0.217 | 80   | 40.3 - 120 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       |              |              | MSD    |       |      | Spike  | Matrix  |      | Rec.       |     | RPD   |
|-------|--------------|--------------|--------|-------|------|--------|---------|------|------------|-----|-------|
| Param | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result  | Rec. | Limit      | RPD | Limit |
| GRO   |              | 1,2,3,4      | 16.4   | mg/Kg | 1    | 20.0   | < 0.217 | 82   | 40.3 - 120 | 3   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                              |   | MS     | MSD    |       |      | Spike  | MS   | MSD  | Rec.       |
|------------------------------|---|--------|--------|-------|------|--------|------|------|------------|
| Surrogate                    |   | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| Trifluorotoluene (TFT)       | 3 | 1.86   | 1.80   | mg/Kg | 1    | 2      | 93   | 90   | 73 - 122   |
| 4-Bromofluorobenzene (4-BFB) | 3 | 1.81   | 1.87   | mg/Kg | 1    | 2      | 90   | 94   | 74.6 - 120 |

Matrix Spike (xMS-1) Spiked Sample: 376865

QC Batch: 116649 Date Analyzed: 2014 - 10 - 24Prep Batch: 98548 QC Preparation: 2014-10-21 Analyzed By: SM Prepared By: SM

|       |    |              |              | MS     |       |      | Spike  | Matrix |      | Rec.     |
|-------|----|--------------|--------------|--------|-------|------|--------|--------|------|----------|
| Param |    | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result | Rec. | Limit    |
| ORO   | Qs | Qs           |              | <17.1  | mg/Kg | 1    | 250    | <17.1  | 0    | 58 - 129 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|       |    |              |              | MSD    |       |      | Spike  | Matrix |      | Rec.     |     | RPD   |
|-------|----|--------------|--------------|--------|-------|------|--------|--------|------|----------|-----|-------|
| Param |    | $\mathbf{F}$ | $\mathbf{C}$ | Result | Units | Dil. | Amount | Result | Rec. | Limit    | RPD | Limit |
| ORO   | Qs | Qs           |              | <17.1  | mg/Kg | 1    | 250    | <17.1  | 0    | 58 - 129 | 0   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 16 of 21 Monument 18 TNM Monument 18 Monument, NM

|               | MS     | MSD    |       |      | Spike  | MS   | MSD  | Rec.       |
|---------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate     | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit      |
| n-Tricosane   | 91.0   | 90.1   | mg/Kg | 1    | 100    | 91   | 90   | 61.5 - 159 |
| n-Triacontane | 98.1   | 98.2   | mg/Kg | 1    | 100    | 98   | 98   | 70 - 166   |

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## Calibration Standards

Standard (CCV-2)

QC Batch: 116536 Date Analyzed: 2014-10-22 Analyzed By: SM

|       |      |                       |       | CCVs  | CCVs  | CCVs     | Percent  |            |
|-------|------|-----------------------|-------|-------|-------|----------|----------|------------|
|       |      |                       |       | True  | Found | Percent  | Recovery | Date       |
| Param | Flag | $\operatorname{Cert}$ | Units | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| DRO   |      | 1,2,3,4               | mg/Kg | 250   | 278   | 111      | 80 - 120 | 2014-10-22 |

Standard (CCV-3)

QC Batch: 116536 Date Analyzed: 2014-10-22 Analyzed By: SM

|       |      |                       |       | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | $\operatorname{CCVs}$ | Percent  |            |
|-------|------|-----------------------|-------|-----------------|-----------------|-----------------------|----------|------------|
|       |      |                       |       | True            | Found           | Percent               | Recovery | Date       |
| Param | Flag | $\operatorname{Cert}$ | Units | Conc.           | Conc.           | Recovery              | Limits   | Analyzed   |
| DRO   |      | 1 2 3 4               | mø/Kø | 250             | 277             | 111                   | 80 - 120 | 2014-10-22 |

Standard (CCV-2)

QC Batch: 116584 Date Analyzed: 2014-10-22 Analyzed By: MT

|              |      |           |                  | CCVs  | CCVs   | CCVs     | Percent  |            |
|--------------|------|-----------|------------------|-------|--------|----------|----------|------------|
|              |      |           |                  | True  | Found  | Percent  | Recovery | Date       |
| Param        | Flag | Cert      | Units            | Conc. | Conc.  | Recovery | Limits   | Analyzed   |
| Benzene      |      | 1,2,3,4,5 | mg/kg            | 0.100 | 0.0911 | 91       | 80 - 120 | 2014-10-22 |
| Toluene      |      | 1,2,3,4,5 | $\mathrm{mg/kg}$ | 0.100 | 0.0925 | 92       | 80 - 120 | 2014-10-22 |
| Ethylbenzene |      | 1,2,3,4,5 | mg/kg            | 0.100 | 0.0916 | 92       | 80 - 120 | 2014-10-22 |
| Xylene       |      | 1,2,3,4,5 | mg/kg            | 0.300 | 0.275  | 92       | 80 - 120 | 2014-10-22 |

Standard (CCV-3)

QC Batch: 116584 Date Analyzed: 2014-10-22 Analyzed By: MT

Report Date: October 28, 2014

Flag

Cert

1,2,3,4,5

1,2,3,4,5

1,2,3,4,5

1,2,3,4,5

Work Order: 14101730

CCVs

Found

 ${\rm Conc.}$ 

0.0876

0.0886

0.0886

0.266

 $\mathrm{CCVs}$ 

Percent

Recovery

88

89

89

89

Page Number: 18 of 21 Monument, NM

Monument 18

Param

Benzene

Toluene

Xylene

Ethylbenzene

TNM Monument 18

CCVs

True

Conc.

0.100

0.100

0.100

0.300

Units

mg/kg

mg/kg

mg/kg

mg/kg

| Percent  |            |
|----------|------------|
| Recovery | Date       |
| Limits   | Analyzed   |
| 80 - 120 | 2014-10-22 |
| 80 - 120 | 2014-10-22 |
| 80 - 120 | 2014-10-22 |

80 - 120

#### Standard (CCV-2)

QC Batch: 116585

Date Analyzed: 2014-10-22

Analyzed By: MT

2014 - 10 - 22

|       |      |         |       | $\mathrm{CCVs}$ | CCVs  | CCVs     | Percent  |            |
|-------|------|---------|-------|-----------------|-------|----------|----------|------------|
|       |      |         |       | True            | Found | Percent  | Recovery | Date       |
| Param | Flag | Cert    | Units | Conc.           | Conc. | Recovery | Limits   | Analyzed   |
| GRO   |      | 1,2,3,4 | mg/Kg | 1.00            | 0.862 | 86       | 80 - 120 | 2014-10-22 |

#### Standard (CCV-3)

QC Batch: 116585

Date Analyzed: 2014-10-22

Analyzed By: MT

|       |      |                       |       | CCVs  | CCVs  | CCVs     | Percent  |            |
|-------|------|-----------------------|-------|-------|-------|----------|----------|------------|
|       |      |                       |       | True  | Found | Percent  | Recovery | Date       |
| Param | Flag | $\operatorname{Cert}$ | Units | Conc. | Conc. | Recovery | Limits   | Analyzed   |
| GRO   |      | 1,2,3,4               | mg/Kg | 1.00  | 0.863 | 86       | 80 - 120 | 2014-10-22 |

#### Standard (CCV-2)

QC Batch: 116649

Date Analyzed: 2014-10-24

Analyzed By: SM

|       |    |      |      |       | CCVs  | CCVs   | $\mathrm{CCVs}$ | Percent  |            |
|-------|----|------|------|-------|-------|--------|-----------------|----------|------------|
|       |    |      |      |       | True  | Found  | Percent         | Recovery | Date       |
| Param |    | Flag | Cert | Units | Conc. | Conc.  | Recovery        | Limits   | Analyzed   |
| ORO   | Qc | Qc   |      | mg/Kg | 250   | 0.0180 | 0               | 80 - 120 | 2014-10-24 |

#### Standard (CCV-3)

QC Batch: 116649

Date Analyzed: 2014-10-24

Analyzed By: SM

| Report Date: October 28, 2014<br>Monument 18 |    |                       |                       |                        |              | er: 14101730<br>enument 18 | Page Number: 19 of 21<br>Monument, NM |                     |            |
|--|----|-----------------------|-----------------------|------------------------|--------------|----------------------------|---------------------------------------|---------------------|------------|
| D  |    | T21                   | Cont                  | TT:4                   | CCVs<br>True | CCVs<br>Found              | CCVs<br>Percent                       | Percent<br>Recovery | Date       |
| Param  |    | $\operatorname{Flag}$ | $\operatorname{Cert}$ | $\operatorname{Units}$ | Conc.        | Conc.                      | Recovery                              | Limits              | Analyzed   |
| ORO  | Qc | Qc                    |                       | mg/Kg                  | 250          | 0.0210                     | 0                                     | 80 - 120            | 2014-10-24 |

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 20 of 21 Monument 18 TNM Monument 18 Monument, NM

# Appendix

### Report Definitions

| Name | Definition                 |
|------|----------------------------|
| MDL  | Method Detection Limit     |
| MQL  | Minimum Quantitation Limit |
| SDL  | Sample Detection Limit     |

### **Laboratory Certifications**

|              | Certifying | Certification       | Laboratory    |
|--------------|------------|---------------------|---------------|
| $\mathbf{C}$ | Authority  | Number              | Location      |
| -            | NCTRCA     | WFWB384444Y0909     | TraceAnalysis |
| -            | DBE        | VN 20657            | TraceAnalysis |
| -            | HUB        | 1752439743100-86536 | TraceAnalysis |
| -            | WBE        | 237019              | TraceAnalysis |
| 1            | PJLA       | L14-93              | Lubbock       |
| 2            | Kansas     | Kansas E- $10317$   | Lubbock       |
| 3            | LELAP      | LELAP-02003         | Lubbock       |
| 4            | NELAP      | T104704219-14-10    | Lubbock       |
| 5            |            | 2014-018            | Lubbock       |

## Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- MI1 Split peak or shoulder peak
- MI2 Instrument software did not integrate
- MI3 Instrument software misidentified the peak
- MI4 Instrument software integrated improperly
- MI5 Baseline correction
  - Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.

Report Date: October 28, 2014 Work Order: 14101730 Page Number: 21 of 21 Monument 18 TNM Monument 18 Monument, NM

F Description

U The analyte is not detected above the SDL

### Attachments

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

CRIGINAL COPY

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

#### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea CO NM

Lab Order Number: 7A24014



NELAP/TCEQ # T104704156-16-6

Report Date: 02/03/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|-----------|---------------|--------|----------------|------------------|
| 2017 SP-1 | 7A24014-01    | Soil   | 01/20/17 11:30 | 01-24-2017 11:20 |
| 2017 SP-2 | 7A24014-02    | Soil   | 01/20/17 12:00 | 01-24-2017 11:20 |
| 2017 SP-3 | 7A24014-03    | Soil   | 01/20/17 13:30 | 01-24-2017 11:20 |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

#### 2017 SP-1 7A24014-01 (Soil)

| Analyte                               | Result               | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---------------------------------------|----------------------|--------------------|------------|-------------|--------------|----------|----------|---------------|-------|
|                                       | Pern                 | nian Basin E       | Environmer | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                        |                      |                    |            |             |              |          |          |               |       |
| Benzene                               | ND                   | 0.0111             | mg/kg dry  | 1           | P7A3018      | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Toluene                               | ND                   | 0.0222             | mg/kg dry  | 1           | P7A3018      | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Ethylbenzene                          | ND                   | 0.0111             | mg/kg dry  | 1           | P7A3018      | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Xylene (p/m)                          | ND                   | 0.0222             | mg/kg dry  | 1           | P7A3018      | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Xylene (o)                            | ND                   | 0.0111             | mg/kg dry  | 1           | P7A3018      | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene       |                      | 112 %              | 75-1       | 25          | P7A3018      | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene        |                      | 88.8 %             | 75-1       | 25          | P7A3018      | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| General Chemistry Parameters by EI    | PA / Standard Method | s                  |            |             |              |          |          |               |       |
| % Moisture                            | 10.0                 | 0.1                | %          | 1           | P7A2505      | 01/25/17 | 01/25/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C     | 35 by EPA Method 80  | 15M                |            |             |              |          |          |               |       |
| C6-C12                                | ND                   | 27.8               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                              | 28.9                 | 27.8               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                              | ND                   | 27.8               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane             |                      | 88.5 %             | 70-1       | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                |                      | 91.7 %             | 70-1       | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon<br>C6-C35 | 28.9                 | 27.8               | mg/kg dry  | 1           | [CALC]       | 01/26/17 | 01/26/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### 2017 SP-2 7A24014-02 (Soil)

| Analyte                                     | Result     | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method        | Notes |
|---|------------|--------------------|-----------|-------------|---------|----------|----------|---------------|-------|
|   | Per        | mian Basin F       | Environme | ıtal Lab, l | L.P.    |          |          |               |       |
| Organics by GC                              |            |                    |           |             |         |          |          |               |       |
| Benzene                                     | ND         | 0.0109             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Toluene                                     | ND         | 0.0217             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Ethylbenzene                                | ND         | 0.0109             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Xylene (p/m)                                | ND         | 0.0217             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Xylene (o)                                  | ND         | 0.0109             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene              |            | 88.1 %             | 75-1      | 25          | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene             |            | 112 %              | 75-1      | 25          | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stand | dard Metho | ds                 |           |             |         |          |          |               |       |
| % Moisture                                  | 8.0        | 0.1                | %         | 1           | P7A2505 | 01/25/17 | 01/25/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EP.  | A Method 8 | 015M               |           |             |         |          |          |               |       |
| C6-C12                                      | ND         | 27.2               | mg/kg dry | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                                    | ND         | 27.2               | mg/kg dry | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                                    | ND         | 27.2               | mg/kg dry | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                   |            | 98.9 %             | 70-1      | 30          | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                      |            | 102 %              | 70-1      | 30          | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35          | ND         | 27.2               | mg/kg dry | 1           | [CALC]  | 01/26/17 | 01/26/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### 2017 SP-3 7A24014-03 (Soil)

| Analyte                                  | Result        | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method        | Notes |
|--|---------------|--------------------|-----------|-------------|---------|----------|----------|---------------|-------|
|  | Per           | mian Basin E       | Environme | ıtal Lab, l | L.P.    |          |          |               |       |
| Organics by GC                           |               |                    |           |             |         |          |          |               |       |
| Benzene                                  | ND            | 0.0108             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Toluene                                  | ND            | 0.0215             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Ethylbenzene                             | ND            | 0.0108             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Xylene (p/m)                             | ND            | 0.0215             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Xylene (o)                               | ND            | 0.0108             | mg/kg dry | 1           | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene          |               | 115 %              | 75-1      | 25          | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene           |               | 91.2 %             | 75-1      | 25          | P7A3018 | 01/26/17 | 01/27/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / St | andard Metho  | ds                 |           |             |         |          |          |               |       |
| % Moisture                               | 7.0           | 0.1                | %         | 1           | P7A2505 | 01/25/17 | 01/25/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by   | EPA Method 80 | )15M               |           |             |         |          |          |               |       |
| C6-C12                                   | ND            | 26.9               | mg/kg dry | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                                 | ND            | 26.9               | mg/kg dry | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                                 | ND            | 26.9               | mg/kg dry | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                |               | 101 %              | 70-1      | 30          | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                   |               | 104 %              | 70-1      | 30          | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35       | ND            | 26.9               | mg/kg dry | 1           | [CALC]  | 01/26/17 | 01/26/17 | calc          |       |

Fax: (432) 520-7701

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Blank (P7A3018-BLK1)            |        |              |             | Prepared &  | Analyzed:   | 01/26/17   |        |      |    |      |
|---------------------------------|--------|--------------|-------------|-------------|-------------|------------|--------|------|----|------|
| Benzene                         | ND     | 0.00100      | mg/kg wet   | 1           |             |            |        |      |    |      |
| Toluene                         | ND     | 0.00200      | "           |             |             |            |        |      |    |      |
| Ethylbenzene                    | ND     | 0.00100      | "           |             |             |            |        |      |    |      |
| Xylene (p/m)                    | ND     | 0.00200      | "           |             |             |            |        |      |    |      |
| Xylene (o)                      | ND     | 0.00100      | "           |             |             |            |        |      |    |      |
| Surrogate: 4-Bromofluorobenzene | 0.0676 |              | "           | 0.0600      |             | 113        | 75-125 |      |    |      |
| Surrogate: 1,4-Difluorobenzene  | 0.0513 |              | "           | 0.0600      |             | 85.5       | 75-125 |      |    |      |
| LCS (P7A3018-BS1)               |        |              |             | Prepared &  | Analyzed:   | 01/26/17   |        |      |    |      |
| Benzene                         | 0.0821 | 0.00100      | mg/kg wet   | 0.100       | -           | 82.1       | 70-130 |      |    |      |
| Toluene                         | 0.0868 | 0.00200      | "           | 0.100       |             | 86.8       | 70-130 |      |    |      |
| Ethylbenzene                    | 0.0994 | 0.00100      | "           | 0.100       |             | 99.4       | 70-130 |      |    |      |
| Xylene (p/m)                    | 0.177  | 0.00200      | "           | 0.200       |             | 88.3       | 70-130 |      |    |      |
| Xylene (o)                      | 0.0863 | 0.00100      | "           | 0.100       |             | 86.3       | 70-130 |      |    |      |
| Surrogate: 1,4-Difluorobenzene  | 0.0558 |              | "           | 0.0600      |             | 93.0       | 75-125 |      |    |      |
| Surrogate: 4-Bromofluorobenzene | 0.0669 |              | "           | 0.0600      |             | 112        | 75-125 |      |    |      |
| LCS Dup (P7A3018-BSD1)          |        |              |             | Prepared &  | Analyzed:   | 01/26/17   |        |      |    |      |
| Benzene                         | 0.0879 | 0.00100      | mg/kg wet   | 0.100       |             | 87.9       | 70-130 | 6.83 | 20 |      |
| Toluene                         | 0.0924 | 0.00200      | "           | 0.100       |             | 92.4       | 70-130 | 6.23 | 20 |      |
| Ethylbenzene                    | 0.108  | 0.00100      | "           | 0.100       |             | 108        | 70-130 | 8.43 | 20 |      |
| Xylene (p/m)                    | 0.189  | 0.00200      | "           | 0.200       |             | 94.5       | 70-130 | 6.75 | 20 |      |
| Xylene (o)                      | 0.0923 | 0.00100      | "           | 0.100       |             | 92.3       | 70-130 | 6.70 | 20 |      |
| Surrogate: 4-Bromofluorobenzene | 0.0678 |              | "           | 0.0600      |             | 113        | 75-125 |      |    |      |
| Surrogate: 1,4-Difluorobenzene  | 0.0569 |              | "           | 0.0600      |             | 94.9       | 75-125 |      |    |      |
| Matrix Spike (P7A3018-MS1)      | Sour   | rce: 7A24014 | <b>I-01</b> | Prepared: ( | 01/26/17 An | alyzed: 01 | /27/17 |      |    |      |
| Benzene                         | 0.104  | 0.00111      | mg/kg dry   | 0.111       | 0.00141     | 92.5       | 80-120 |      |    |      |
| Toluene                         | 0.104  | 0.00222      | "           | 0.111       | 0.00146     | 92.1       | 80-120 |      |    |      |
| Ethylbenzene                    | 0.106  | 0.00111      | "           | 0.111       | 0.00106     | 94.4       | 80-120 |      |    |      |
| Xylene (p/m)                    | 0.184  | 0.00222      | "           | 0.222       | ND          | 82.8       | 80-120 |      |    |      |
| Xylene (o)                      | 0.0881 | 0.00111      | "           | 0.111       | ND          | 79.3       | 80-120 |      |    | QM-0 |
| Surrogate: 4-Bromofluorobenzene | 0.0838 |              | "           | 0.0667      |             | 126        | 75-125 |      |    | S-G0 |
| Surrogate: 1,4-Difluorobenzene  | 0.0684 |              | "           | 0.0667      |             | 103        | 75-125 |      |    |      |

Permian Basin Environmental Lab, L.P.

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Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                              | Result             | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result                           | %REC     | %REC<br>Limits | RPD   | RPD<br>Limit | Notes  |
|--------------------------------------|--------------------|--------------------|-------|----------------|--|----------|----------------|-------|--------------|--------|
|                                      | resuit             | Ziiiit             | Omo   | Level          | Robalt                                     | , with   | Dillito        | III D | Dillit       | 110005 |
| Batch P7A2505 - *** DEFAULT PREP *** |                    |                    |       |                |  |          |                |       |              |        |
| Blank (P7A2505-BLK1)                 |                    |                    |       | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | ND                 | 0.1                | %     |                |  |          |                |       |              |        |
| Blank (P7A2505-BLK2)                 |                    |                    |       | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | ND                 | 0.1                | %     |                |  |          |                |       |              |        |
| Duplicate (P7A2505-DUP1)             | Sour               | rce: 7A23011-      | 03    | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | 14.0               | 0.1                | %     |                | 13.0                                       |          |                | 7.41  | 20           |        |
| Duplicate (P7A2505-DUP2)             | Soui               | rce: 7A23012-      | 05    | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | 13.0               | 0.1                | %     |                | 12.0                                       |          |                | 8.00  | 20           |        |
| Duplicate (P7A2505-DUP3)             | Sour               | rce: 7A23015-      | 08    | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | 6.0                | 0.1                | %     |                | 7.0  |          |                | 15.4  | 20           |        |
| Duplicate (P7A2505-DUP4)             | Soui               | rce: 7A24001-      | 26    | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | 1.0                | 0.1                | %     |                | 2.0  |          |                | 66.7  | 20           |        |
| Duplicate (P7A2505-DUP5)             | Sour               | rce: 7A24004-      | 20    | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | 4.0                | 0.1                | %     |                | 4.0  |          |                | 0.00  | 20           |        |
| Duplicate (P7A2505-DUP6)             | Sour               | ce: 7A24007-       | 01    | Prepared &     | Analyzed:                                  | 01/25/17 |                |       |              |        |
| % Moisture                           | 5.0                | 0.1                | %     |                | 5.0  |          |                | 0.00  | 20           |        |
| Duplicate (P7A2505-DUP7)             | Source: 7A24012-06 |                    |       |                | 2- <b>96</b> Prepared & Analyzed: 01/25/17 |          |                |       |              |        |
| % Moisture                           | 14.0               | 0.1                | %     | •              | 14.0                                       |          |                | 0.00  | 20           |        |

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2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting   |           | Spike       | Source      |             | %REC   |      | RPD   |       |
|---------------------------------|--------|-------------|-----------|-------------|-------------|-------------|--------|------|-------|-------|
| Analyte                         | Result | Limit       | Units     | Level       | Result      | %REC        | Limits | RPD  | Limit | Notes |
| Batch P7A2706 - TX 1005         |        |             |           |             |             |             |        |      |       |       |
| Blank (P7A2706-BLK1)            |        |             |           | Prepared &  | k Analyzed: | 01/26/17    |        |      |       |       |
| C6-C12                          | ND     | 25.0        | mg/kg wet |             |             |             |        |      |       |       |
| >C12-C28                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| >C28-C35                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| Surrogate: 1-Chlorooctane       | 113    |             | "         | 100         |             | 113         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 64.0   |             | "         | 50.0        |             | 128         | 70-130 |      |       |       |
| LCS (P7A2706-BS1)               |        |             |           | Prepared &  | ն Analyzed: | 01/26/17    |        |      |       |       |
| C6-C12                          | 872    | 25.0        | mg/kg wet | 1000        |             | 87.2        | 75-125 |      |       |       |
| >C12-C28                        | 822    | 25.0        | "         | 1000        |             | 82.2        | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 127    |             | "         | 100         |             | 127         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 61.0   |             | "         | 50.0        |             | 122         | 70-130 |      |       |       |
| LCS Dup (P7A2706-BSD1)          |        |             |           | Prepared &  | ն Analyzed: | 01/26/17    |        |      |       |       |
| C6-C12                          | 861    | 25.0        | mg/kg wet | 1000        |             | 86.1        | 75-125 | 1.30 | 20    |       |
| >C12-C28                        | 888    | 25.0        | "         | 1000        |             | 88.8        | 75-125 | 7.70 | 20    |       |
| Surrogate: 1-Chlorooctane       | 110    |             | "         | 100         |             | 110         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 62.0   |             | "         | 50.0        |             | 124         | 70-130 |      |       |       |
| Matrix Spike (P7A2706-MS1)      | Sour   | ce: 7A23015 | 5-10      | Prepared: ( | 01/26/17 A  | nalyzed: 01 | /27/17 |      |       |       |
| C6-C12                          | 929    | 28.1        | mg/kg dry | 1120        | 32.0        | 79.8        | 75-125 |      |       |       |
| >C12-C28                        | 967    | 28.1        | "         | 1120        | 333         | 56.5        | 75-125 |      |       | QM-05 |
| Surrogate: 1-Chlorooctane       | 122    |             | "         | 112         |             | 109         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 62.3   |             | "         | 56.2        |             | 111         | 70-130 |      |       |       |
| Matrix Spike Dup (P7A2706-MSD1) | Sour   | ce: 7A23015 | 5-10      | Prepared: ( | 01/26/17 A  | nalyzed: 01 | /27/17 |      |       |       |
| C6-C12                          | 917    | 28.1        | mg/kg dry | 1120        | 32.0        | 78.7        | 75-125 | 1.37 | 20    |       |
| >C12-C28                        | 1020   | 28.1        | "         | 1120        | 333         | 61.0        | 75-125 | 7.76 | 20    | QM-05 |
| Surrogate: 1-Chlorooctane       | 126    |             | "         | 112         |             | 112         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 64.7   |             | "         | 56.2        |             | 115         | 70-130 |      |       |       |
|                                 |        |             |           |             |             |             |        |      |       |       |

Permian Basin Environmental Lab, L.P.

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TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701
2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were

within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Bren | Darron |       |          |  |
|---------------------|------|--------|-------|----------|--|
| Report Approved By: |      |        | Date: | 2/3/2017 |  |

Brent Barron, Laboratory Director/Technical Director

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Midland TX, 79703 Project Manager: Curt Stanley

Permian Basin Environmental Lab, L.P.

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| Receive Inquished by:                                      | by G  | CD:   | 8/202 <b>g</b><br>cia  | 12:      | 21:.      | 19 P            | M  | 194      |       |       |           |           |           | LAB # (lab use only)                                    | Ş            | 9 (          | (1)             |                    |                |                  |                   |                               | Page             | 348 of 6   |
|--|---|---|--|----------|-----------|-----------------|----|----------|-------|-------|-----------|-----------|-----------|---|--------------|--------------|-----------------|--------------------|----------------|------------------|-------------------|-------------------------------|------------------|--|
| quish  | by Gilliquistied by   | nduish  |  |          |           |                 |    |          |       |       | <u>رُ</u> | 16        |           | EAD # (lab use only)                                    |              | )            | (lah use only   |                    |                |                  |                   |                               |                  | T  |
| d by   | o by  |   | Instructions   | ١.       |           |                 |    |          |       |       |           |           |           |   | 7.           | <b>!</b>     | <u>5</u>  <br>5 | Sar                | Tel            | City             | Cor               | Co                            | Pro              | - O.   |
|  | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \                             |   |  |          |           |                 |    |          |       |       |           |           | 1         |   |              |              |                 | <u>p</u>           | eph            | /St              | ggr               | ggm                           | ject             |  |
|  | //  |   | X is   |          |           |                 |    |          |       |       |           |           |           |   | 7            | D            |                 | Si                 | one            | City/State/Zip:  | īy/               | īŋy l                         | Ma               | 33   |
|  | X   |   |  |          |           |                 |    |          |       |       |           | ŀ         |           |   | 10           | حر(          |                 | Sampler Signature: | Telephone No:  | Zip:             | Company Address:  | Company Name                  | Project Manager: |  |
| $  \ \ \rangle$  |   | 3   | 11   | 1        |           |                 |    |          |       |       | 20        | 20        | 20        |   | 1000         | JUNU<br>UNDE | 1,              | Ē.                 |                |                  | ress              | ថ                             | er:              | 40   |
|  |   |   | \ <del>`</del>   |          | ł         |                 |    |          | ٠.    |       | 2017 SP-3 | 2017 SP-2 | 2017 SP-1 | FIELD CODE  | ٥            | eq           | 1               | ):                 | *              | <u>اح</u>        |                   | I⊒                            | lο               | J  |
|  |   |   | 1 6  |          |           |                 |    |          |       |       | ξŸ.       | P.        | Ϋ́        | <del> </del>  |              | $\subseteq$  | . [ , }         | C                  | 432)520        | Midland/TX/79703 | 2057 Commerce Dr. | ကြို                          | Curt Stanley     | <b>.</b>   |
|  | $\sim$  | $\left\{ \right.$   | sar  |          | ľ         |                 |    |          | * · · |       | ~         | ``        | _         | m   |              |              | N               |                    | 703            | ĮŞ .             | m                 | nvir                          | tanle            |  |
| -  |   |   | nple   |          |           |                 |    |          |       |       |           |           |           |   |              |              | // //           | <b>X</b> <         |                | 797              | merc              | on<br>m                       | ×                | _  |
| Date   | Late  | 6   | )s fo  |          |           | ٠.              |    |          |       | · .   |           |           |           |   |              | (            | $\mathbb{A}$    | r' \               | 1/             | 23               | ğ<br>D            | ental                         |                  | HA   |
| l e  | ති  |   | \ <u>\</u>   | ١.       |           |                 |    | 4.       |       |       | ĺ         |           |           |   | _            |              |                 |                    | \$             |                  |                   | ပ္ခ                           |                  | N N  |
|  |   | 7   |  | _        |           |                 |    | - 1      |       |       |           |           |           |   | 7            |              | -               | et                 |                |                  |                   | TRC Environmental Corporation |                  | )F(  |
| Time   | Ime   | 11(20   | HOLD samples for BTEX analysis   |          |           |                 |    |          |       |       |           |           |           | Beginning Depth   | _            |              |                 | 7                  |                |                  |                   | tion                          |                  | SUST   |
|  |   | <u></u>   | 1 2 2 2  |          |           |                 |    |          |       |       |           |           |           | Ending Depth  |              |              |                 | £                  |                |                  |                   |                               |                  | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian Basi 10014 S. Cou |
| TAN RES  | Received by:  | Received by:  |  |          |           |                 |    |          |       |       | 1/2       | 15        | 1/2       |   |              |              |                 | BOCHOOL , e-mail:  |                |                  |                   |                               |                  | RE   |
| M 12   | ved -   | l é   |  |          |           |                 |    |          |       |       | 1/20/2017 | 1/20/2017 | 1/20/2017 | Date Sampled  |              |              |                 | 1                  |                |                  |                   |                               |                  | - Q  |
| A LOSE   | Į .ặ  | by  |  |          |           |                 |    |          |       |       | 017       | 017       | 017       |   |              |              |                 | B                  |                |                  |                   |                               |                  | 8  |
| 一方調  | •   | 1.11  |  |          |           | - "             |    |          |       |       |           | ٠.        |           |   | 1            |              | , I             | Ø .                | !              |                  |                   |                               |                  | 8  |
|  |   |   |  |          |           |                 |    |          |       |       | 13        | 12        | <u> </u>  | Time Complet  |              |              | •               | 4                  | т.             |                  | 1                 |                               |                  | AN   |
| \\ \   |   |   |  |          |           |                 |    |          |       |       | 1330      | 1200      | 1130      | Time Sampled  |              |              |                 | e<br>E             | Fax No:        |                  |                   |                               |                  | AL)  |
|  |   |   |  |          |           |                 |    |          |       |       |           |           |           |   |              |              |                 | <u>≅</u> .         | <u></u>        |                  |                   |                               |                  | /SIS   |
|  |   | ·   |  | -        |           |                 | ٠, |          | -     |       |           |           |           | Field Filtered  | 4            |              | ı               | C                  |                |                  |                   |                               | Mid              | Perr<br>100  |
|  |   |   |  |          |           |                 |    | $\dashv$ | <br>  |       | 1<br>X    | 1<br>×    | 1<br>×    | Total #. of Containers                                  | ╁            | 1            | cjbryant@       | dst                |                |                  |                   |                               | Midland, Texas   | REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213  |
|  |   |   |  |          |           |                 |    |          |       |       | ^         | Ĥ         | Ĥ         | HNO <sub>3</sub>  | Pre          |              | ğ               | ank                |                |                  |                   |                               | , Teg            | ES7<br>Bas   |
|  |   |   |  |          |           |                 |    |          |       |       | -         |           |           | нсі   | Preservation |              | yan             | ଚ                  |                | 1.               |                   |                               | as               | Aprilia<br>E   |
|  |   |   | . 12   |          |           |                 |    |          |       |       |           |           |           | H₂SO₄   | tion &       |              | <u>(8</u>       | er<br>To           |                |                  |                   |                               | 79706            | Ro   |
|  |   |   |  |          |           |                 |    |          |       |       |           |           |           | NaOH  | # of         |              | paa             | SO                 |                |                  |                   |                               | 8                | on me  |
| 8:   |   |   |  |          |           |                 |    |          |       |       |           |           |           | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>           | Containers   |              | paalp.com       | solutions.com      |                |                  |                   |                               |                  | ental<br>213   |
| 1/   |   |   |  |          |           |                 |    |          |       |       |           |           |           | None  | iners        |              |                 | ns                 |                |                  |                   |                               |                  | Lab  |
| Pate<br>24   | Date  | Date  |  | _        |           |                 |    |          |       |       |           |           |           | Other ( Specify)  | +            |              | -               | 8                  |                | 1                |                   | 1:                            | l                | 5  |
|  |   |   |  |          |           |                 |    |          |       |       | Soil      | Soil      | Soil      | DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid | Matrix       |              |                 | ゴ                  | Re             |                  |                   |                               | •                |  |
| 7  |   |   |  |          | 1         |                 |    |          |       |       | ï         | =         | =         | NP=Non-Potable Specify Other                            | ×            |              |                 |                    | port           |                  | o.                |                               | Рю               |  |
| Time<br>}(×  | Time  | Time  |  |          |           |                 |    |          |       |       | ×         | ×         | ×         |   | 015E         |              | $\prod$         |                    | Report Format: |                  | rojec             | Pro                           | ject             |  |
| and the second second second                               |   |   |  |          | $\square$ | $\square$       |    |          |       |       |           |           |           | TPH: TX 1005 TX 1006                                    | 3            |              |                 |                    | nat:           | P0 #             | Project Loc:      | Project #:                    | Project Name:    |  |
| Temperature Upon Receipt. Received: 40 °C Adjusted: 40 °CF | Sample Hand Delivered<br>by Sampler/Client Rep<br>by Courier? UPS | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? | <u> </u> | $\vdash$  |                 |    | -        |       |       |           |           |           | Cations (Ca, Mg, Na, K)                                 |              |              |                 |                    |                | #                | ñ<br>I            | #<br>                         | ē<br>I           |  |
| verat<br>ved:<br>ted:                                      | `Sar<br>E   | dy s<br>dy s  | rato<br>)le ©<br>; Fre   | <u> </u> |           |                 |    | $\dashv$ |       |       |           |           | $\vdash$  | Anions (CI, SO4, Alkalinity) SAR / ESP / CEC            |              | TOTAL:       |                 |                    | X Standard     |                  |                   |                               |                  |  |
| <b>1</b>   | and<br>Tipler<br>Tier?  | con<br>eals<br>eals   | ッ<br>onta<br>e of  | $\vdash$ | <u> </u>  |                 |    |          | 7     | 1 1 1 |           |           |           | Metals: As Ag Ba Cd Cr Pb Hg                            | g Se         | F   3        | 1 1             |                    | and            |                  |                   |                               |                  | Ph   |
| <i>©</i> 8   | Clie!   | taine<br>on c   | omn<br>Iners<br>Head   | $\vdash$ | $\Box$    |                 |    |          |       | . •   |           |           | <b></b>   | Volatiles   |              | H            | Analyze         |                    | pre            |                  |                   |                               |                  | one:   |
| Rec  | nple Hand Delivered by Sampler/Client Rep. ? by Courier? UPS      | onta<br>oole  | tents<br>Sinta<br>dspa   |          |           |                 |    |          |       |       |           |           |           | Semivolatiles   |              |              | ze F            |                    |                |                  | -                 | N<br>N                        | l≤               | 43   |
| ျှိုင်း<br>မြို့   | ″ き ¨<br>_ ・ゝ   | iner(   | Ge?<br>GE?   |          |           |                 |    |          |       |       |           |           |           | BTEX 8021B/5030 or BTEX 82                              | 260          |              | - F<br>9:       |                    |                |                  | a<br>C            | <u>-</u>                      | onu<br>Onu       | 2-66   |
| eipt.<br>°C<br>°C Factor W C GE /                          | 몯   | Ś   |  |          | - 1       |                 |    |          |       |       |           |           | Ĺ         | RCI   |              |              |                 |                    | ☐ TRRP         |                  | Lea County, NM    | TNM - Monument 18             | Monument 18      | Phone: 432-661-4184  |
| <b>E</b>   |   |   |  |          |           |                 |    | _        |       |       |           |           |           | N.O.R.M.  |              | -            | <b>↓</b>        |                    | Ū              |                  | ž.                | men                           | <del>*</del>     | 84   |
| 7,   | ∰ <i>6</i> ⊘  | RXX   | (১১  | _        |           | $\vdash \vdash$ |    | $\dashv$ | _     |       |           | _         | $\vdash$  | Chlorides E 300 Paint Filter                            |              |              | ┨╏              |                    | ·              |                  |                   | nt 18                         | ٦                | ם י  |
| 174  |   |   |  |          | $\vdash$  | $\vdash$        |    | $\dashv$ |       |       |           |           |           | TCLP BTEX   |              | -            | $\mid \mid$     |                    | ∐<br><u>Z</u>  |                  |                   | ~                             |                  | age  |
| 12   | Lone Star   | zzz   | zz   |          |           |                 |    |          |       |       |           |           |           | RUSH TAT (Pre-Schedule) 24,                             | , 48,        | 72 hrs       | 쒸               |                    | NPDES          |                  |                   |                               |                  | Page 1 of 1  |
|  | 턱   |   |  |          |           |                 |    |          |       | ٠.    | ×         | ×         | ×         | Standard TAT  | T            |              | _               |                    | σ,             |                  |                   |                               | <u> </u>         |  |
| - 1  | 1 4 - T   | - Section - Section -   | 6/8/21   | 021      | 2.44      | - 07            |    | <u> </u> | -     |       |           |           | _         |   | <b>-</b>     |              |                 |                    |                | ١.               | .1                | Pa                            | ige 11           | of 11  |

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

#### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea Co NM

Lab Order Number: 7A26005



NELAP/TCEQ # T104704156-16-6

Report Date: 01/31/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|-----------|---------------|--------|----------------|------------------|
| 2017 SP-4 | 7A26005-01    | Soil   | 01/24/17 16:00 | 01-26-2017 11:35 |
| 2017 SP-5 | 7A26005-02    | Soil   | 01/24/17 16:10 | 01-26-2017 11:35 |
| 2017 SP-6 | 7A26005-03    | Soil   | 01/24/17 16:15 | 01-26-2017 11:35 |
| 2017 SP-7 | 7A26005-04    | Soil   | 01/24/17 16:20 | 01-26-2017 11:35 |
| 2017 SP-8 | 7A26005-05    | Soil   | 01/24/17 16:30 | 01-26-2017 11:35 |

Fax: (432) 520-7701

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

2057 Commerce Street Midland TX, 79703

Project Manager: Curt Stanley

2017 SP-4 7A26005-01 (Soil)

| Analyte                                 | Result          | Reporting<br>Limit | Units     | Dilution    | Batch       | Prepared | Analyzed | Method        | Notes |
|---|-----------------|--------------------|-----------|-------------|-------------|----------|----------|---------------|-------|
|   | Peri            | mian Basin E       | nvironmei | ıtal Lab, l | <b>∟.P.</b> |          |          |               |       |
| Organics by GC                          |                 |                    |           |             |             |          |          |               |       |
| Benzene                                 | 0.00343         | 0.00106            | mg/kg dry | 1           | P7A3103     | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Toluene                                 | ND              | 0.00213            | mg/kg dry | 1           | P7A3103     | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Ethylbenzene                            | ND              | 0.00106            | mg/kg dry | 1           | P7A3103     | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (p/m)                            | ND              | 0.00213            | mg/kg dry | 1           | P7A3103     | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (o)                              | ND              | 0.00106            | mg/kg dry | 1           | P7A3103     | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene         |                 | 110 %              | 75-1      | 25          | P7A3103     | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene          |                 | 92.9 %             | 75-1      | 25          | P7A3103     | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / S | standard Method | ls                 |           |             |             |          |          |               |       |
| % Moisture                              | 6.0             | 0.1                | %         | 1           | P7A2701     | 01/27/17 | 01/27/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by  | EPA Method 80   | )15M               |           |             |             |          |          |               |       |
| C6-C12                                  | ND              | 26.6               | mg/kg dry | 1           | P7A2706     | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                                | ND              | 26.6               | mg/kg dry | 1           | P7A2706     | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                                | ND              | 26.6               | mg/kg dry | 1           | P7A2706     | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane               |                 | 99.1 %             | 70-1      | 30          | P7A2706     | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                  |                 | 104 %              | 70-1      | 30          | P7A2706     | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35      | ND              | 26.6               | mg/kg dry | 1           | [CALC]      | 01/26/17 | 01/26/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### 2017 SP-5 7A26005-02 (Soil)

| Analyte                               | Result          | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---------------------------------------|-----------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|                                       | Peri            | nian Basin E       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                        |                 |                    |           |             |              |          |          |               |       |
| Benzene                               | 0.00374         | 0.00110            | mg/kg dry | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Toluene                               | ND              | 0.00220            | mg/kg dry | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Ethylbenzene                          | ND              | 0.00110            | mg/kg dry | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (p/m)                          | ND              | 0.00220            | mg/kg dry | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (o)                            | ND              | 0.00110            | mg/kg dry | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene        |                 | 89.8 %             | 75-1      | 25          | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene       |                 | 107 %              | 75-1      | 25          | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA/  | Standard Method | ls                 |           |             |              |          |          |               |       |
| % Moisture                            | 9.0             | 0.1                | %         | 1           | P7A2701      | 01/27/17 | 01/27/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 b | y EPA Method 80 | )15M               |           |             |              |          |          |               |       |
| C6-C12                                | ND              | 27.5               | mg/kg dry | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                              | ND              | 27.5               | mg/kg dry | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                              | ND              | 27.5               | mg/kg dry | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane             |                 | 102 %              | 70-1      | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                |                 | 106 %              | 70-1      | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35    | ND              | 27.5               | mg/kg dry | 1           | [CALC]       | 01/26/17 | 01/26/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### 2017 SP-6 7A26005-03 (Soil)

| Analyte                                | Result          | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|-----------------|--------------------|------------|-------------|--------------|----------|----------|---------------|-------|
|  | Per             | mian Basin E       | Environmer | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                         |                 |                    |            |             |              |          |          |               |       |
| Benzene                                | 0.00310         | 0.00110            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Toluene                                | ND              | 0.00220            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Ethylbenzene                           | ND              | 0.00110            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (p/m)                           | ND              | 0.00220            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (o)                             | ND              | 0.00110            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene         |                 | 87.8 %             | 75-1       | 25          | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene        |                 | 99.7 %             | 75-1       | 25          | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA /  | Standard Metho  | ds                 |            |             |              |          |          |               |       |
| % Moisture                             | 9.0             | 0.1                | %          | 1           | P7A2701      | 01/27/17 | 01/27/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by | y EPA Method 80 | )15M               |            |             |              |          |          |               |       |
| C6-C12                                 | ND              | 27.5               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                               | ND              | 27.5               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                               | ND              | 27.5               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane              |                 | 95.4 %             | 70-1       | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                 |                 | 101 %              | 70-1       | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35     | ND              | 27.5               | mg/kg dry  | 1           | [CALC]       | 01/26/17 | 01/26/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### 2017 SP-7 7A26005-04 (Soil)

| Analyte                               | Result          | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---------------------------------------|-----------------|--------------------|------------|-------------|--------------|----------|----------|---------------|-------|
|                                       | Perr            | nian Basin F       | Environmer | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                        |                 |                    |            |             |              |          |          |               |       |
| Benzene                               | 0.00248         | 0.00106            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Toluene                               | 0.00273         | 0.00213            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Ethylbenzene                          | ND              | 0.00106            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (p/m)                          | 0.00235         | 0.00213            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (o)                            | ND              | 0.00106            | mg/kg dry  | 1           | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene        |                 | 88.2 %             | 75-1       | 25          | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene       |                 | 98.4 %             | 75-1       | 25          | P7A3103      | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / | Standard Method | ls                 |            |             |              |          |          |               |       |
| % Moisture                            | 6.0             | 0.1                | %          | 1           | P7A2701      | 01/27/17 | 01/27/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 b | y EPA Method 80 | )15M               |            |             |              |          |          |               |       |
| C6-C12                                | ND              | 26.6               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                              | ND              | 26.6               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                              | ND              | 26.6               | mg/kg dry  | 1           | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane             |                 | 98.1 %             | 70-1       | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                |                 | 103 %              | 70-1       | 30          | P7A2706      | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35    | ND              | 26.6               | mg/kg dry  | 1           | [CALC]       | 01/26/17 | 01/26/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### 2017 SP-8 7A26005-05 (Soil)

| Analyte                               | Result          | Reporting<br>Limit | Units      | Dilution    | Batch   | Prepared | Analyzed | Method        | Notes |
|---------------------------------------|-----------------|--------------------|------------|-------------|---------|----------|----------|---------------|-------|
|                                       | Peri            | mian Basin E       | Environmer | ıtal Lab, l | L.P.    |          |          |               |       |
| Organics by GC                        |                 |                    |            |             |         |          |          |               |       |
| Benzene                               | 0.00374         | 0.00111            | mg/kg dry  | 1           | P7A3103 | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Toluene                               | ND              | 0.00222            | mg/kg dry  | 1           | P7A3103 | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Ethylbenzene                          | ND              | 0.00111            | mg/kg dry  | 1           | P7A3103 | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (p/m)                          | ND              | 0.00222            | mg/kg dry  | 1           | P7A3103 | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Xylene (o)                            | ND              | 0.00111            | mg/kg dry  | 1           | P7A3103 | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene       |                 | 96.8 %             | 75-1       | 25          | P7A3103 | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene        |                 | 84.7 %             | 75-1       | 25          | P7A3103 | 01/30/17 | 01/30/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA/  | Standard Method | ds                 |            |             |         |          |          |               |       |
| % Moisture                            | 10.0            | 0.1                | %          | 1           | P7A2701 | 01/27/17 | 01/27/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 b | y EPA Method 80 | )15M               |            |             |         |          |          |               |       |
| C6-C12                                | ND              | 27.8               | mg/kg dry  | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C12-C28                              | ND              | 27.8               | mg/kg dry  | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| >C28-C35                              | ND              | 27.8               | mg/kg dry  | 1           | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane             |                 | 99.7 %             | 70-1       | 30          | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                |                 | 106 %              | 70-1       | 30          | P7A2706 | 01/26/17 | 01/26/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35    | ND              | 27.8               | mg/kg dry  | 1           | [CALC]  | 01/26/17 | 01/26/17 | calc          |       |

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TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Analyte                            | Result | Limit       | Units     | Level      | Result    | %REC     | Limits | KPD  | Limit | Notes |
|------------------------------------|--------|-------------|-----------|------------|-----------|----------|--------|------|-------|-------|
| Batch P7A3103 - General Preparatio | n (GC) |             |           |            |           |          |        |      |       |       |
| Blank (P7A3103-BLK1)               |        |             |           | Prepared & | Analyzed: | 01/30/17 |        |      |       |       |
| Benzene                            | ND     | 0.00100     | mg/kg wet |            |           |          |        |      |       |       |
| Toluene                            | ND     | 0.00200     | "         |            |           |          |        |      |       |       |
| Ethylbenzene                       | ND     | 0.00100     | "         |            |           |          |        |      |       |       |
| Xylene (p/m)                       | ND     | 0.00200     | "         |            |           |          |        |      |       |       |
| Xylene (o)                         | ND     | 0.00100     | "         |            |           |          |        |      |       |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0528 |             | "         | 0.0600     |           | 88.0     | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene    | 0.0705 |             | "         | 0.0600     |           | 117      | 75-125 |      |       |       |
| LCS (P7A3103-BS1)                  |        |             |           | Prepared & | Analyzed: | 01/30/17 |        |      |       |       |
| Benzene                            | 0.0883 | 0.00100     | mg/kg wet | 0.100      |           | 88.3     | 70-130 |      |       |       |
| Toluene                            | 0.0927 | 0.00200     | "         | 0.100      |           | 92.7     | 70-130 |      |       |       |
| Ethylbenzene                       | 0.107  | 0.00100     | "         | 0.100      |           | 107      | 70-130 |      |       |       |
| Xylene (p/m)                       | 0.194  | 0.00200     | "         | 0.200      |           | 96.9     | 70-130 |      |       |       |
| Xylene (o)                         | 0.0948 | 0.00100     | "         | 0.100      |           | 94.8     | 70-130 |      |       |       |
| Surrogate: 4-Bromofluorobenzene    | 0.0732 |             | "         | 0.0600     |           | 122      | 75-125 |      |       |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0545 |             | "         | 0.0600     |           | 90.8     | 75-125 |      |       |       |
| LCS Dup (P7A3103-BSD1)             |        |             |           | Prepared & | Analyzed: | 01/30/17 |        |      |       |       |
| Benzene                            | 0.0895 | 0.00100     | mg/kg wet | 0.100      |           | 89.5     | 70-130 | 1.36 | 20    |       |
| Toluene                            | 0.0954 | 0.00200     | "         | 0.100      |           | 95.4     | 70-130 | 2.91 | 20    |       |
| Ethylbenzene                       | 0.114  | 0.00100     | "         | 0.100      |           | 114      | 70-130 | 6.28 | 20    |       |
| Xylene (p/m)                       | 0.200  | 0.00200     | "         | 0.200      |           | 100      | 70-130 | 3.22 | 20    |       |
| Xylene (o)                         | 0.0996 | 0.00100     | "         | 0.100      |           | 99.6     | 70-130 | 4.91 | 20    |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0540 |             | "         | 0.0600     |           | 90.0     | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene    | 0.0708 |             | "         | 0.0600     |           | 118      | 75-125 |      |       |       |
| Matrix Spike (P7A3103-MS1)         | Sour   | ce: 7A26005 | 5-05      | Prepared & | Analyzed: | 01/30/17 |        |      |       |       |
| Benzene                            | 0.170  | 0.00111     | mg/kg dry | 0.111      | 0.00374   | 149      | 80-120 |      |       | QM-0  |
| Toluene                            | 0.178  | 0.00222     | "         | 0.111      | ND        | 160      | 80-120 |      |       | QM-0  |
| Ethylbenzene                       | 0.183  | 0.00111     | "         | 0.111      | ND        | 165      | 80-120 |      |       | QM-0  |
| Xylene (p/m)                       | 0.325  | 0.00222     | "         | 0.222      | 0.00158   | 145      | 80-120 |      |       | QM-0  |
| Xylene (o)                         | 0.152  | 0.00111     | "         | 0.111      | ND        | 136      | 80-120 |      |       | QM-0  |
| Surrogate: 4-Bromofluorobenzene    | 0.0722 |             | "         | 0.0667     |           | 108      | 75-125 |      |       |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0654 |             | "         | 0.0667     |           | 98.2     | 75-125 |      |       |       |
|                                    |        |             |           |            |           |          |        |      |       |       |

Permian Basin Environmental Lab, L.P.

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TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

#### **Batch P7A3103 - General Preparation (GC)**

| Matrix Spike Dup (P7A3103-MSD1) | Sour   | ce: 7A26005 | 5-05      | Prepared & | k Analyzed: ( | 01/30/17 |        |      |    |       |  |  |
|---------------------------------|--------|-------------|-----------|------------|---------------|----------|--------|------|----|-------|--|--|
| Benzene                         | 0.118  | 0.00111     | mg/kg dry | 0.111      | 0.00374       | 103      | 80-120 | 36.5 | 20 | QM-07 |  |  |
| Toluene                         | 0.122  | 0.00222     | "         | 0.111      | ND            | 110      | 80-120 | 37.1 | 20 | QM-07 |  |  |
| Ethylbenzene                    | 0.135  | 0.00111     | "         | 0.111      | ND            | 122      | 80-120 | 30.1 | 20 | QM-07 |  |  |
| Xylene (p/m)                    | 0.238  | 0.00222     | "         | 0.222      | 0.00158       | 107      | 80-120 | 30.8 | 20 | QM-07 |  |  |
| Xylene (o)                      | 0.118  | 0.00111     | "         | 0.111      | ND            | 106      | 80-120 | 25.0 | 20 | QM-07 |  |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0631 |             | "         | 0.0667     |               | 94.6     | 75-125 |      |    |       |  |  |
| Surrogate: 4-Bromofluorobenzene | 0.0789 |             | "         | 0.0667     |               | 118      | 75-125 |      |    |       |  |  |

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2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                              | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--------------------------------------|--------|--------------------|-------|----------------|------------------|----------|----------------|------|--------------|-------|
| Batch P7A2701 - *** DEFAULT PREP *** |        |                    |       |                |                  |          |                |      |              |       |
| Blank (P7A2701-BLK1)                 |        |                    |       | Prepared &     | Analyzed:        | 01/27/17 |                |      |              |       |
| % Moisture                           | ND     | 0.1                | %     |                |                  |          |                |      |              |       |
| Duplicate (P7A2701-DUP1)             | Sour   | ce: 7A25012-       | 02    | Prepared &     | : Analyzed:      | 01/27/17 |                |      |              |       |
| % Moisture                           | 14.0   | 0.1                | %     |                | 14.0             |          |                | 0.00 | 20           |       |
| Duplicate (P7A2701-DUP2)             | Sour   | ce: 7A25015-       | 04    | Prepared &     | Analyzed:        | 01/27/17 |                |      |              |       |
| % Moisture                           | 18.0   | 0.1                | %     |                | 17.0             |          |                | 5.71 | 20           |       |
| Duplicate (P7A2701-DUP3)             | Sour   | ce: 7A26005-       | 05    | Prepared &     | Analyzed:        | 01/27/17 |                |      |              |       |
| % Moisture                           | 10.0   | 0.1                | %     |                | 10.0             |          |                | 0.00 | 20           |       |
| Duplicate (P7A2701-DUP4)             | Sour   | ce: 7A26007-       | 02    | Prepared &     | : Analyzed:      | 01/27/17 |                |      |              |       |
| % Moisture                           | 9.0    | 0.1                | %     |                | 8.0              |          |                | 11.8 | 20           |       |

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2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting   |           | Spike       | Source      |             | %REC   |      | RPD   |       |
|---------------------------------|--------|-------------|-----------|-------------|-------------|-------------|--------|------|-------|-------|
| Analyte                         | Result | Limit       | Units     | Level       | Result      | %REC        | Limits | RPD  | Limit | Notes |
| Batch P7A2706 - TX 1005         |        |             |           |             |             |             |        |      |       |       |
| Blank (P7A2706-BLK1)            |        |             |           | Prepared &  | & Analyzed: | 01/26/17    |        |      |       |       |
| C6-C12                          | ND     | 25.0        | mg/kg wet |             |             |             |        |      |       |       |
| >C12-C28                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| >C28-C35                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| Surrogate: 1-Chlorooctane       | 113    |             | "         | 100         |             | 113         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 64.0   |             | "         | 50.0        |             | 128         | 70-130 |      |       |       |
| LCS (P7A2706-BS1)               |        |             |           | Prepared &  | & Analyzed: | 01/26/17    |        |      |       |       |
| C6-C12                          | 872    | 25.0        | mg/kg wet | 1000        |             | 87.2        | 75-125 |      |       |       |
| >C12-C28                        | 822    | 25.0        | "         | 1000        |             | 82.2        | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 127    |             | "         | 100         |             | 127         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 61.0   |             | "         | 50.0        |             | 122         | 70-130 |      |       |       |
| LCS Dup (P7A2706-BSD1)          |        |             |           | Prepared &  | & Analyzed: | 01/26/17    |        |      |       |       |
| C6-C12                          | 861    | 25.0        | mg/kg wet | 1000        |             | 86.1        | 75-125 | 1.30 | 20    |       |
| >C12-C28                        | 888    | 25.0        | "         | 1000        |             | 88.8        | 75-125 | 7.70 | 20    |       |
| Surrogate: 1-Chlorooctane       | 110    |             | "         | 100         |             | 110         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 62.0   |             | "         | 50.0        |             | 124         | 70-130 |      |       |       |
| Matrix Spike (P7A2706-MS1)      | Sour   | ce: 7A23015 | 5-10      | Prepared: ( | 01/26/17 A  | nalyzed: 01 | /27/17 |      |       |       |
| C6-C12                          | 929    | 28.1        | mg/kg dry | 1120        | 32.0        | 79.8        | 75-125 |      |       |       |
| >C12-C28                        | 967    | 28.1        | "         | 1120        | 333         | 56.5        | 75-125 |      |       | QM-05 |
| Surrogate: 1-Chlorooctane       | 122    |             | "         | 112         |             | 109         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 62.3   |             | "         | 56.2        |             | 111         | 70-130 |      |       |       |
| Matrix Spike Dup (P7A2706-MSD1) | Sour   | ce: 7A23015 | 5-10      | Prepared: ( | 01/26/17 A  | nalyzed: 01 | /27/17 |      |       |       |
| C6-C12                          | 917    | 28.1        | mg/kg dry | 1120        | 32.0        | 78.7        | 75-125 | 1.37 | 20    |       |
| >C12-C28                        | 1020   | 28.1        | "         | 1120        | 333         | 61.0        | 75-125 | 7.76 | 20    | QM-05 |
| Surrogate: 1-Chlorooctane       | 126    |             | "         | 112         |             | 112         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 64.7   |             | "         | 56.2        |             | 115         | 70-130 |      |       |       |
|                                 |        |             |           |             |             |             |        |      |       |       |

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2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### **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.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were

within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

Duplicate

MS Matrix Spike

Report Approved By:

Dup

O AR

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

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Permian Basin Environmental Lab, L.P.

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| quished by:                              |  | 7  | cial Instructions:   |          |     |      |          |               |             | \ <u></u> | 3            | 16,       |           | LAD # (iao use only)                             | CEX #:                         | 7<br>0<br>4                           | use only)       | (A)                      | _              | <u> </u>         | _                 |                               |                  |  |   |
|--|--|--|--|----------|-----|------|----------|---------------|-------------|-----------|--------------|-----------|-----------|--|--------------------------------|---------------------------------------|-----------------|--------------------------|----------------|------------------|-------------------|-------------------------------|------------------|--|---|
| by                                       | \$   |  | T truck  |          |     |      |          |               |             |           |              |           |           |  |                                | ラ                                     | 5               | Sampler Signature:       | Telephone No:  | City/State/Zip:  | Company Address:  | Company Name                  | Project Manager: |  | P(B B)IJA   |
| 4.                                       |  | X-   | ons  |          |     |      |          |               |             |           |              |           |           |  |                                | 7                                     |                 | er Si                    | one            | tate/2           | any /             | any i                         | ± Ma             |  |   |
|  |  | 6  |  |          |     |      |          |               |             |           |              |           | ١.        |  | 1                              | <b>γ</b> ~                            |                 | gnati                    | <u>S</u>       | Zip:             | \ddre             | Vame                          | nage             |  |   |
|  |  | 7  |  |          |     |      |          |               | 2017 SP-8   | 2017 SP-7 | 2017 SP-6    | 2017 SP-5 | 2017 SP-4 | FIELD CODE                                       | 6                              | 关                                     | , إ             | ure -                    | >              |                  | .SS:              |                               |                  |  |   |
|  |  | \  | 💆  |          |     |      |          |               | SP.         | SP.       | SP.          | SP        | SP.       | CO   | }                              | $\not\supseteq$                       | ?               | 4                        | (432)5207      | Midland/TX/79703 | 2057 Commerce Dr. | TRC                           | Curt Stanley     |  | J   |
|  |  |  | sa   |          | 1.  |      |          |               | ∞           | 7         | 6            | Ġ         | 4         | <del>M</del>                                     |                                | 介                                     |                 |                          | 5207           | nd/T)            | Com               | Envir                         | Stanl            |  | Jacob Barrier |
|  |  |  | 를  |          |     |      |          |               |             |           | ŀ            |           |           |  |                                | <b>,</b>                              |                 | K-                       | 720            | X/797            | merc              | onme.                         | lê.              |  | 0   |
| Date                                     | .Date  | Z Pare   | s fo   |          |     |      |          |               |             |           |              |           |           |  |                                | (                                     | _               |                          |                | 03               | ë Dr.             | ental                         |                  |  | HAI   |
| Ф  | 0  |  | r BT   |          |     |      |          | ٠.            | 1           |           |              |           |           |  |                                |                                       | $\widetilde{U}$ |                          |                |                  |                   | Corp                          |                  |  | 0   |
| =  | I  | 113 S  | HOLD samples for BTEX analysis   |          |     |      |          |               |             |           |              |           |           | Beginning Depth                                  |                                |                                       | - :             | <i>b</i>                 |                |                  |                   | TRC Environmental Corporation |                  |  | E CUS   |
| Time                                     | lime   | 25 Z   | alysis   |          |     |      |          |               |             |           |              |           |           | Ending Depth                                     | 1                              |                                       |                 | Ausser                   |                |                  |                   |                               |                  |  | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST  Permian Basi  |
| \®                                       | Rec  | Rec  |  |          |     |      |          |               | 1/          | 1/        | 1            | 1/        | 1         |  | 1                              |                                       | ¥.              | B                        |                |                  |                   |                               |                  |  | YRE   |
| W  | Received by:   | Received by:   |  |          |     |      |          |               | 1/24/2017   | 1/24/2017 | 1/24/2017    | 1/24/2017 | 1/24/2017 | Date Sampled                                     |                                |                                       |                 | 0                        |                |                  |                   |                               |                  |  | Ç   |
|  | / p×   | ş  |  |          |     |      |          |               | 017         | 017       | 017          | 017       | 017       |  |                                |                                       | 1.              | A                        |                |                  |                   |                               |                  |  | S,  |
|  |  |  |  |          |     |      |          |               |             |           |              |           |           |  | 1                              |                                       |                 | DARBER                   | 1              |                  |                   |                               |                  |  | 8   |
| 1  |  |  |  |          |     |      |          |               | 1630        | 1620      | 1615         | 1610      | 1600      | Time Sampled                                     |                                |                                       |                 |                          | ᇤ              |                  |                   |                               |                  |  | ANA   |
| M  |  |  |  |          |     |      |          |               | 0           | 0         | (J)          | 0         | ō         |  |                                |                                       |                 | e-mail:                  | Fax No:        |                  |                   |                               |                  |  | SXT   |
|  |  |  |  |          |     |      |          |               |             |           | _            |           |           | Field Filtered                                   | ┨.                             |                                       |                 |                          |                |                  |                   |                               | <u> </u>         | : ð ;                                  | , Š   |
|  |  | ÷  |  |          |     |      |          |               | 1           |           |              |           |           | Total #. of Containers                           | 1                              |                                       |                 | <u>cdstanley@trcsolu</u> |                |                  | •                 |                               | Midiand, Texas   | 10014 S. County Road 1213              | TEQ.  |
|  |  |  |  |          |     |      |          |               | ×           | ×         | ×            | ×         | ×         | Ice  | 7                              |                                       | Clb             | tan                      |                |                  |                   | ð                             | <u>۾</u> ا       | S C                                    | , <sub>R</sub>  |
|  |  |  |  |          |     |      |          |               |             | <u> </u>  |              |           |           | HNO <sub>3</sub>                                 | Preservation & # of Containers |                                       | iya             | le/                      |                |                  |                   |                               | exas             | County Road 1213                       | 7   |
|  |  |  |  |          | -   |      |          |               |             |           | _            |           | ļ · · ·   | HCI  | /ation                         |                                       | nt              | <u>@</u>                 |                |                  |                   |                               |                  | ֓֞֝֞֓֓֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓ | <u>г</u>  |
|  |  | *  |  | $\vdash$ |     |      |          | - 35<br>-11-5 |             | _         | <del> </del> | ┢         | ┝         | H <sub>2</sub> SO₄<br>NaOH                       | - 00 #                         |                                       | SQU             | င်နှ                     |                | -                |                   |                               | 90,67            | oad                                    | 3   |
|  |  | -  |  |          |     |      |          |               |             |           |              |           | -         | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>    | <b>-</b> [ਨੂੰ                  |                                       | aalg            |                          |                | 1                | 1                 |                               |                  | 121                                    | 300   |
| -  |  |  |  | -        |     |      |          |               | <del></del> |           |              | -         |           | None   | -Taine                         |                                       | p.com           | tions.com                |                |                  | ş                 |                               |                  | ယ ရှိ                                  | <u>š</u>  |
| Date $ \mathcal{E}_{b} $                 | D  | ٥  | ,  |          |     |      |          |               |             |           |              |           |           | Other ( Specify)                                 | 18                             |                                       | ΙĔ              | S.C                      |                |                  |                   |                               |                  | 9                                      | <del>}</del>  |
| ) ate                                    | Date   | Date   |  |          |     |      |          |               |             |           |              |           |           | DW=Drinking Water SL=Sludge                      | Ţ                              |                                       |                 | om                       |                |                  |                   |                               |                  | 4                                      | 0   |
| ->                                       |  |  |  |          |     |      |          |               | Soil        | Soil      | Soil         | Soil      | Soil      | GW = Groundwater S=Soil/Solid                    | Matrix                         |                                       |                 | •                        | Report Format: |                  |                   |                               | 70               |  |   |
| <b>-</b>                                 | - 11   | =  | •  | _        |     | 60.1 |          |               | ×           | ×         | ×            | ×         | ×         | NP=Non-Potable Specify Other TPH: 418.1 8015M 80 | 015B                           | Ь.                                    | П               |                          | ă              |                  | Рго               | _                             | Project Name:    |  |   |
| ime<br>3₹                                | lime   | me   |  |          |     |      |          |               |             |           |              |           |           | TPH: TX 1005 TX 1006                             |                                | 1                                     |                 |                          | M .            |                  | Project Loc:      | Project #:                    | Ω<br>N           |  |   |
| A Re                                     | Sa   | [<br>[<br>]  | <br>  ≤ %   La   |          | 1.0 |      |          | -             |             |           |              |           |           | Cations (Ca, Mg, Na, K)                          |                                |                                       |                 |                          | #              | PO #:            | L <sub>OC</sub>   | Ct<br>#                       | ame              |  |   |
| Temperat<br>Received:<br>Adjusted:       | 요요를  | bels<br>Istoc  | S B S  |          |     |      |          |               | -           |           |              |           |           | Anions (CI, SO4, Alkalinity)                     |                                | ᆌ                                     |                 |                          | $\boxtimes$    |                  | 1                 |                               | l <sup></sup>    |  |   |
| ed:<br>ed:                               | nple Hand  <br>by Sampler<br>by Courier?                       | ly se<br>ly se   | aton<br>e Co<br>Free   |          |     |      |          |               |             |           |              |           |           | SAR / ESP / CEC                                  |                                | TOTAL:                                | 2               |                          |                |                  | -                 |                               |                  |  |   |
| a<br>  ⊂                                 | pler/<br>lier/   | als als  | 유률 2   | -        |     | 1.   |          | 1:            |             |           |              |           |           | Metals: As Ag Ba Cd Cr Pb Hg                     | Se                             | П                                     | ٦. ا            |                          | Standard       |                  |                   |                               |                  |  | ב<br>ב  |
| PS                                       | Clier  | on co  | mm<br>Ters   |          |     |      |          |               |             |           |              |           |           | Volatiles  |                                |                                       | nalyz           |                          | ᇗ              |                  |                   | l⊒                            |                  |  | <u> </u>  |
| Temperature Upon Receipt: Received:  C F | Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS | Labels on container(s) Custody seals on container( Custody seals on cooler(s)  | Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? |          |     |      |          |               |             |           | <u> </u>     | <u> </u>  |           | Semivolatiles                                    |                                |                                       | Analyze For:    |                          |                |                  | 듄                 | ĺ                             | ַ≤               | į.                                     | 432   |
| က္လိုက္မ်ိဳး                             | ٠.   | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)  | 용당   |          |     |      |          | -             | 1.          |           |              |           | <u> </u>  | BTEX 8021B/5030 or BTEX 82                       | 260                            | Ш                                     | Ĭ               |                          |                |                  | ြို့              | ≥                             |                  |  | 200   |
| eipt:<br>°C<br>Factor                    | 星  | s)   |  | _        |     | 1    |          |               |             |           |              | <u> </u>  | <u> </u>  | RCI  |                                |                                       | - -             |                          | TRRP           |                  | vinty .           | )<br>Iur                      | Ter<br>Ter       |  | Phone: 432-661-4184   |
|  | n.   |  |  | $\vdash$ |     |      | <u> </u> |               |             |           | _            |           | -         | N.O.R.M.   |                                |                                       | -               |                          | ָּט            |                  | ea County, NM     | TNM - Monument 18             | Monument 18      | Ş                                      | 4   |
|  | FedEy ≺ ≺  | ~ ~ ~  | <<<  | <u> </u> |     |      |          |               | <u> </u>    |           | H            |           | <u> </u>  | Chlorides E 300 Paint Filter                     | -                              | · · · · · · · · · · · · · · · · · · · | 1               |                          | _              |                  |                   | t 18                          | ~                |  | U   |
|  |  |  |  | <u> </u> |     | -    |          |               |             | -         | ļ            | -         | 1-        | TCLP BTEX  |                                |                                       | 1               |                          | ⊒<br>Z         |                  |                   |                               |                  |  | age   |
| No.                                      | N<br>N<br>Lone Star  | <b>z</b> z'z   | 2 Z  | $\vdash$ |     |      |          |               |             |           |              | <u> </u>  |           | RUSH TAT (Pre-Schedule) 24                       | , 48,                          | 72 hrs                                |                 |                          | NPDES          |                  |                   |                               | 1                |  | Page 1 of 1   |
|  | 國  |  |  | _        |     |      |          |               | ×           | ×         | ×            | ×         | ×         | Standard TAT                                     | T                              |                                       |                 | !                        | 0)             | }                |                   | <u> </u>                      | m = 4            | 3 of                                   |   |
|  | 5, 5, 5, 9, 3,   | Committee of Grand Committee of the Comm | ENGINEENTARS   |          |     |      |          |               |             | -         |              |           | •         |  | _                              |                                       |                 |                          |                |                  |                   |                               | 1                | > ()T                                  |   |

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County NM

Lab Order Number: 7B01005



NELAP/TCEQ # T104704156-16-6

Report Date: 02/08/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2017 SP-9  | 7B01005-01    | Soil   | 01/31/17 16:00 | 02-01-2017 12:35 |
| 2017 SP-10 | 7B01005-02    | Soil   | 01/31/17 16:10 | 02-01-2017 12:35 |
| 2017 SP-11 | 7B01005-03    | Soil   | 01/31/17 16:15 | 02-01-2017 12:35 |
| 2017 SP-12 | 7B01005-04    | Soil   | 01/31/17 16:20 | 02-01-2017 12:35 |
| 2017 SP-13 | 7B01005-05    | Soil   | 01/31/17 16:25 | 02-01-2017 12:35 |
| 2017 SP-14 | 7B01005-06    | Soil   | 01/31/17 16:30 | 02-01-2017 12:35 |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street

Project Number: TNM-Monument 18

Midland TX, 79703

Project Manager: Curt Stanley

2017 SP-9 7B01005-01 (Soil)

| Analyte                                 | Result          | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---|-----------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|   | Pern            | nian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                          |                 |                    |           |             |              |          |          |               |       |
| Benzene                                 | ND              | 0.0215             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Toluene                                 | ND              | 0.0430             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Ethylbenzene                            | ND              | 0.0215             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (p/m)                            | ND              | 0.0430             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (o)                              | ND              | 0.0215             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene         |                 | 77.2 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene          |                 | 89.0 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / S | Standard Method | ls                 |           |             |              |          |          |               |       |
| % Moisture                              | 7.0             | 0.1                | %         | 1           | P7B0203      | 02/02/17 | 02/02/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by  | EPA Method 80   | 15M                |           |             |              |          |          |               |       |
| C6-C12                                  | ND              | 26.9               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C12-C28                                | ND              | 26.9               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C28-C35                                | ND              | 26.9               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane               |                 | 115 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                  |                 | 127 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35      | ND              | 26.9               | mg/kg dry | 1           | [CALC]       | 02/03/17 | 02/04/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-10 7B01005-02 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Per        | mian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                             |            |                    |           |             |              |          |          |               |       |
| Benzene                                    | ND         | 0.0215             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Toluene                                    | ND         | 0.0430             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Ethylbenzene                               | ND         | 0.0215             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (p/m)                               | ND         | 0.0430             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (o)                                 | ND         | 0.0215             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene             |            | 101 %              | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene            |            | 92.1 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ds                 |           |             |              |          |          |               |       |
| % Moisture                                 | 7.0        | 0.1                | %         | 1           | P7B0203      | 02/02/17 | 02/02/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 015M               |           |             |              |          |          |               |       |
| C6-C12                                     | ND         | 26.9               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C12-C28                                   | ND         | 26.9               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C28-C35                                   | ND         | 26.9               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                  |            | 121 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                     |            | 134 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     | S-GC  |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 26.9               | mg/kg dry | 1           | [CALC]       | 02/03/17 | 02/04/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-11 7B01005-03 (Soil)

| Analyte                                     | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---|------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|   | Per        | mian Basin E       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                              |            |                    |           |             |              |          |          |               |       |
| Benzene                                     | ND         | 0.0220             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Toluene                                     | ND         | 0.0440             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Ethylbenzene                                | ND         | 0.0220             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (p/m)                                | ND         | 0.0440             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (o)                                  | ND         | 0.0220             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene             |            | 88.4 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene              |            | 99.3 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stand | dard Metho | ds                 |           |             |              |          |          |               |       |
| % Moisture                                  | 9.0        | 0.1                | %         | 1           | P7B0203      | 02/02/17 | 02/02/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EP.  | A Method 8 | 015M               |           |             |              |          |          |               |       |
| C6-C12                                      | ND         | 27.5               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C12-C28                                    | ND         | 27.5               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C28-C35                                    | ND         | 27.5               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                   |            | 119 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                      |            | 134 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     | S-GC  |
| Total Petroleum Hydrocarbon C6-C35          | ND         | 27.5               | mg/kg dry | 1           | [CALC]       | 02/03/17 | 02/04/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-12 7B01005-04 (Soil)

| Analyte                                    | Result       | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method        | Notes |
|--|--------------|--------------------|-----------|-------------|---------|----------|----------|---------------|-------|
|  | Per          | mian Basin F       | Environme | ıtal Lab, 1 | L.P.    |          |          |               |       |
| Organics by GC                             |              |                    |           |             |         |          |          |               |       |
| Benzene                                    | ND           | 0.0217             | mg/kg dry | 20          | P7B0302 | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Toluene                                    | ND           | 0.0435             | mg/kg dry | 20          | P7B0302 | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Ethylbenzene                               | ND           | 0.0217             | mg/kg dry | 20          | P7B0302 | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (p/m)                               | ND           | 0.0435             | mg/kg dry | 20          | P7B0302 | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (o)                                 | ND           | 0.0217             | mg/kg dry | 20          | P7B0302 | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene            |              | 72.7 %             | 75-1      | 25          | P7B0302 | 02/02/17 | 02/02/17 | EPA 8021B     | S-GC  |
| Surrogate: 1,4-Difluorobenzene             |              | 88.4 %             | 75-1      | 25          | P7B0302 | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Star | ndard Metho  | ds                 |           |             |         |          |          |               |       |
| % Moisture                                 | 8.0          | 0.1                | %         | 1           | P7B0203 | 02/02/17 | 02/02/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by El  | PA Method 80 | 015M               |           |             |         |          |          |               |       |
| C6-C12                                     | ND           | 27.2               | mg/kg dry | 1           | P7B0801 | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C12-C28                                   | ND           | 27.2               | mg/kg dry | 1           | P7B0801 | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C28-C35                                   | ND           | 27.2               | mg/kg dry | 1           | P7B0801 | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                  |              | 126 %              | 70-1      | 30          | P7B0801 | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                     |              | 139 %              | 70-1      | 30          | P7B0801 | 02/03/17 | 02/04/17 | TPH 8015M     | S-GC  |
| Total Petroleum Hydrocarbon C6-C35         | ND           | 27.2               | mg/kg dry | 1           | [CALC]  | 02/03/17 | 02/04/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-13 7B01005-05 (Soil)

| Analyte                                   | Result        | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---|---------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|   | Per           | mian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                            |               |                    |           |             |              |          |          |               |       |
| Benzene                                   | ND            | 0.0225             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Toluene                                   | ND            | 0.0449             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Ethylbenzene                              | ND            | 0.0225             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (p/m)                              | ND            | 0.0449             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (o)                                | ND            | 0.0225             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene            |               | 102 %              | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene           |               | 88.5 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / St. | andard Metho  | ds                 |           |             |              |          |          |               |       |
| % Moisture                                | 11.0          | 0.1                | %         | 1           | P7B0203      | 02/02/17 | 02/02/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by l  | EPA Method 80 | 015M               |           |             |              |          |          |               |       |
| C6-C12                                    | ND            | 28.1               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C12-C28                                  | ND            | 28.1               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C28-C35                                  | ND            | 28.1               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                 |               | 115 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                    |               | 128 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35        | ND            | 28.1               | mg/kg dry | 1           | [CALC]       | 02/03/17 | 02/04/17 | calc          |       |

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-14 7B01005-06 (Soil)

| Analyte                                  | Result        | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|---------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Per           | mian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                           |               |                    |           |             |              |          |          |               |       |
| Benzene                                  | ND            | 0.0233             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Toluene                                  | ND            | 0.0465             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Ethylbenzene                             | ND            | 0.0233             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (p/m)                             | ND            | 0.0465             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Xylene (o)                               | ND            | 0.0233             | mg/kg dry | 20          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene          |               | 87.9 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene           |               | 97.3 %             | 75-1      | 25          | P7B0302      | 02/02/17 | 02/02/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / St | andard Metho  | ds                 |           |             |              |          |          |               |       |
| % Moisture                               | 14.0          | 0.1                | %         | 1           | P7B0203      | 02/02/17 | 02/02/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by   | EPA Method 80 | )15M               |           |             |              |          |          |               |       |
| C6-C12                                   | ND            | 29.1               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C12-C28                                 | ND            | 29.1               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| >C28-C35                                 | ND            | 29.1               | mg/kg dry | 1           | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                |               | 122 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                   |               | 134 %              | 70-1      | 30          | P7B0801      | 02/03/17 | 02/04/17 | TPH 8015M     | S-GC  |
| Total Petroleum Hydrocarbon C6-C35       | ND            | 29.1               | mg/kg dry | 1           | [CALC]       | 02/03/17 | 02/04/17 | calc          |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|  |        | Reporting |       | Spike | Source |          | %REC   |     | RPD   |       |
|--|--------|-----------|-------|-------|--------|----------|--------|-----|-------|-------|
| Analyte                                  | Result | Limit     | Units | Level | Result | %REC     | Limits | RPD | Limit | Notes |
| Batch P7B0302 - General Preparation (GC) |        |           |       |       |        |          |        |     |       |       |
| DI 1 (PSD0202 DI 1/1)                    |        |           |       | D 10  | A 1 1  | 02/02/17 |        |     |       |       |

| Blank (P7B0302-BLK1)            |        |              |             | Prepared & | Analyzed:   | 02/02/17 |        |      |    |       |
|---------------------------------|--------|--------------|-------------|------------|-------------|----------|--------|------|----|-------|
| Benzene                         | ND     | 0.00100      | mg/kg wet   | F          |             |          |        |      |    |       |
| Toluene                         | ND     | 0.00200      | "           |            |             |          |        |      |    |       |
| Ethylbenzene                    | ND     | 0.00100      | "           |            |             |          |        |      |    |       |
| Xylene (p/m)                    | ND     | 0.00200      | "           |            |             |          |        |      |    |       |
| Xylene (o)                      | ND     | 0.00100      | "           |            |             |          |        |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0632 |              | "           | 0.0600     |             | 105      | 75-125 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0689 |              | "           | 0.0600     |             | 115      | 75-125 |      |    |       |
| LCS (P7B0302-BS1)               |        |              |             | Prepared & | : Analyzed: | 02/02/17 |        |      |    |       |
| Benzene                         | 0.0925 | 0.00100      | mg/kg wet   | 0.100      |             | 92.5     | 70-130 |      |    |       |
| Toluene                         | 0.0992 | 0.00200      | "           | 0.100      |             | 99.2     | 70-130 |      |    |       |
| Ethylbenzene                    | 0.119  | 0.00100      | "           | 0.100      |             | 119      | 70-130 |      |    |       |
| Xylene (p/m)                    | 0.204  | 0.00200      | "           | 0.200      |             | 102      | 70-130 |      |    |       |
| Xylene (o)                      | 0.101  | 0.00100      | "           | 0.100      |             | 101      | 70-130 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0671 |              | "           | 0.0600     |             | 112      | 75-125 |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0654 |              | "           | 0.0600     |             | 109      | 75-125 |      |    |       |
| LCS Dup (P7B0302-BSD1)          |        |              |             | Prepared & | Analyzed:   | 02/02/17 |        |      |    |       |
| Benzene                         | 0.0867 | 0.00100      | mg/kg wet   | 0.100      |             | 86.7     | 70-130 | 6.45 | 20 |       |
| Toluene                         | 0.0922 | 0.00200      | "           | 0.100      |             | 92.2     | 70-130 | 7.30 | 20 |       |
| Ethylbenzene                    | 0.114  | 0.00100      | "           | 0.100      |             | 114      | 70-130 | 4.38 | 20 |       |
| Xylene (p/m)                    | 0.198  | 0.00200      | "           | 0.200      |             | 98.8     | 70-130 | 3.07 | 20 |       |
| Xylene (o)                      | 0.0958 | 0.00100      | "           | 0.100      |             | 95.8     | 70-130 | 5.28 | 20 |       |
| Surrogate: 4-Bromofluorobenzene | 0.0620 |              | "           | 0.0600     |             | 103      | 75-125 |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0634 |              | "           | 0.0600     |             | 106      | 75-125 |      |    |       |
| Matrix Spike (P7B0302-MS1)      | Sour   | rce: 7B01005 | <b>i-06</b> | Prepared & | Analyzed:   | 02/02/17 |        |      |    |       |
| Benzene                         | 0.221  | 0.0233       | mg/kg dry   | 0.116      | 0.00837     | 183      | 80-120 |      |    | QM-07 |
| Toluene                         | 0.213  | 0.0465       | "           | 0.116      | ND          | 183      | 80-120 |      |    | QM-07 |
| Ethylbenzene                    | 0.253  | 0.0233       | "           | 0.116      | ND          | 218      | 80-120 |      |    | QM-07 |
| Xylene (p/m)                    | 0.361  | 0.0465       | "           | 0.233      | 0.0216      | 146      | 80-120 |      |    | QM-07 |
| Xylene (o)                      | 0.199  | 0.0233       | "           | 0.116      | ND          | 171      | 80-120 |      |    | QM-07 |
| Surrogate: 4-Bromofluorobenzene | 0.0647 |              | "           | 0.0698     |             | 92.7     | 75-125 |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0684 |              | "           | 0.0698     |             | 98.1     | 75-125 |      |    |       |

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas

Project: Monument 18 Project Number: TNM-Monument 18

2057 Commerce Street Midland TX, 79703

Project Manager: Curt Stanley

### **Organics by GC - Quality Control** Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Matrix Spike Dup (P7B0302-MSD1) | Sour   | Source: 7B01005-06 |           |        |         | 02/02/17 |        |      |    |       |
|---------------------------------|--------|--------------------|-----------|--------|---------|----------|--------|------|----|-------|
| Benzene                         | 0.195  | 0.0233             | mg/kg dry | 0.116  | 0.00837 | 160      | 80-120 | 13.3 | 20 | QM-07 |
| Toluene                         | 0.180  | 0.0465             | "         | 0.116  | ND      | 155      | 80-120 | 16.8 | 20 | QM-07 |
| Ethylbenzene                    | 0.207  | 0.0233             | "         | 0.116  | ND      | 178      | 80-120 | 20.1 | 20 | QM-07 |
| Xylene (p/m)                    | 0.319  | 0.0465             | "         | 0.233  | 0.0216  | 128      | 80-120 | 13.3 | 20 | QM-07 |
| Xylene (o)                      | 0.153  | 0.0233             | "         | 0.116  | ND      | 131      | 80-120 | 26.4 | 20 | QM-07 |
| Surrogate: 4-Bromofluorobenzene | 0.0515 |                    | "         | 0.0698 |         | 73.8     | 75-125 |      |    | S-GC  |
| Surrogate: 1,4-Difluorobenzene  | 0.0613 |                    | "         | 0.0698 |         | 87.9     | 75-125 |      |    |       |

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                              | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--------------------------------------|--------|--------------------|-------|----------------|------------------|----------|----------------|------|--------------|-------|
| Batch P7B0203 - *** DEFAULT PREP *** |        |                    |       |                |                  |          |                |      |              |       |
| Blank (P7B0203-BLK1)                 |        |                    |       | Prepared &     | Analyzed:        | 02/02/17 |                |      |              |       |
| % Moisture                           | ND     | 0.1                | %     |                |                  |          |                |      |              |       |
| Duplicate (P7B0203-DUP1)             | Sou    | rce: 7A31004-      | -01   | Prepared &     | Analyzed:        | 02/02/17 |                |      |              |       |
| % Moisture                           | 15.0   | 0.1                | %     |                | 15.0             |          |                | 0.00 | 20           |       |
| Duplicate (P7B0203-DUP2)             | Sou    | rce: 7B01002-      | 04    | Prepared &     | z Analyzed:      | 02/02/17 |                |      |              |       |
| % Moisture                           | 14.0   | 0.1                | %     |                | 15.0             |          |                | 6.90 | 20           |       |
| Duplicate (P7B0203-DUP3)             | Sou    | rce: 7B01004-      | 04    | Prepared &     | Analyzed:        | 02/02/17 |                |      |              |       |
| % Moisture                           | 8.0    | 0.1                | %     |                | 8.0              |          |                | 0.00 | 20           |       |
| Duplicate (P7B0203-DUP4)             | Sou    | rce: 7A31009-      | -04   | Prepared &     | Analyzed:        | 02/02/17 |                |      |              |       |
| % Moisture                           | 14.0   | 0.1                | %     |                | 13.0             |          |                | 7.41 | 20           |       |

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                   | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|---------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Batch P7B0801 - TX 1005   |        |                    |           |                |                  |             |                |      |              |       |
| Blank (P7B0801-BLK1)      |        |                    |           | Prepared: 0    | 02/03/17 A       | nalyzed: 02 | /04/17         |      |              |       |
| C6-C12                    | ND     | 25.0               | mg/kg wet |                |                  |             |                |      |              |       |
| >C12-C28                  | ND     | 25.0               | "         |                |                  |             |                |      |              |       |
| >C28-C35                  | ND     | 25.0               | "         |                |                  |             |                |      |              |       |
| Surrogate: 1-Chlorooctane | 103    |                    | "         | 100            |                  | 103         | 70-130         |      |              |       |
| Surrogate: o-Terphenyl    | 59.9   |                    | "         | 50.0           |                  | 120         | 70-130         |      |              |       |
| LCS (P7B0801-BS1)         |        |                    |           | Prepared: 0    | 02/03/17 A       | nalyzed: 02 | /04/17         |      |              |       |
| C6-C12                    | 750    | 25.0               | mg/kg wet | 1000           |                  | 75.0        | 75-125         |      |              |       |
| >C12-C28                  | 792    | 25.0               | "         | 1000           |                  | 79.2        | 75-125         |      |              |       |
| Surrogate: 1-Chlorooctane | 85.4   |                    | "         | 100            |                  | 85.4        | 70-130         |      |              |       |
| Surrogate: o-Terphenyl    | 43.2   |                    | "         | 50.0           |                  | 86.4        | 70-130         |      |              |       |
| LCS Dup (P7B0801-BSD1)    |        |                    |           | Prepared: 0    | 02/03/17 A       | nalyzed: 02 | /04/17         |      |              |       |
| C6-C12                    | 783    | 25.0               | mg/kg wet | 1000           |                  | 78.3        | 75-125         | 4.27 | 20           |       |
| >C12-C28                  | 838    | 25.0               | "         | 1000           |                  | 83.8        | 75-125         | 5.54 | 20           |       |
| Surrogate: 1-Chlorooctane | 89.3   |                    | "         | 100            |                  | 89.3        | 70-130         |      |              |       |
| Surrogate: o-Terphenyl    | 45.6   |                    | "         | 50.0           |                  | 91.3        | 70-130         |      |              |       |
| Duplicate (P7B0801-DUP1)  | Sou    | rce: 7B02004       | l-03      | Prepared: 0    | 02/03/17 A       | nalyzed: 02 | /04/17         |      |              |       |
| C6-C12                    | ND     | 26.6               | mg/kg dry |                | ND               |             |                |      | 20           |       |
| >C12-C28                  | 20.8   | 26.6               | "         |                | 19.9             |             |                | 4.50 | 20           |       |
| Surrogate: 1-Chlorooctane | 124    |                    | "         | 106            |                  | 117         | 70-130         |      |              |       |
| Surrogate: o-Terphenyl    | 69.3   |                    | "         | 53.2           |                  | 130         | 70-130         |      |              |       |

TRC Solutions- Midland, Texas

Project: Monument 18

Project Number: TNM-Monument 18

Fax: (432) 520-7701

Midland TX, 79703 Project Manager: Curt Stanley

### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Drew | Darron |       |          |  |
|---------------------|------|--------|-------|----------|--|
| Report Approved By: |      |        | Date: | 2/8/2017 |  |

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Permian Basin Environmental Lab, LP 10014 S. County Road 1213 Midland, Texas 79706

Phone: 432-661-4184

Page 14 of 14

| $R_{i}$ | eceive  | l by Q   | <i>CD</i> : 6   | /8/2                    | 021  | 12: | 21:         | 29 I     | W  | 3287758  | 1247 S.I   | Gibasi     | ga eta     | ly state   | e e e e e e e e e e e e e e e e e e e | n en      | TO a                    |                   |                |                  |                  |                               | Pag              |
|---------|---|--|---|-------------------------|--|-----|-------------|----------|--|--|------------|------------|------------|------------|---------------------------------------|---|-------------------------|-------------------|----------------|------------------|------------------|-------------------------------|------------------|
|         | elinquished by:                                     | Chirriquished by   | Relinquist  | $\triangleright$        | Special Instructions                           |     |             |          |  | ـــــا   | ٠,         | C          | ١          | L٠         | سا                                    | LAB # (lab use only)                          | (lab use only) ORDER #: |                   | 1              |                  |                  |                               |                  |
|         | lsink   | hisin  | Z į   |                         | ia   |     |             |          | 7  | $\boldsymbol{\varrho}$                           | ĵ          | lpha       | 5          | <b>)</b>   |                                       |   | Se C                    |                   |                |                  |                  |                               |                  |
|         | ned   | ned  | 1   |                         | nst  |     |             |          |  |  |            |            |            |            |                                       |   | # j                     | Sa                | Te             | Cj:              | ဂ္ဂ              | င္ပ                           | Pro              |
|         | by:   | ×  |   | R                       | 딦  | 3.5 |             |          |  |  |            |            |            |            |                                       |   | ーブ                      | Sampler Signature | Telephone No:  | City/State/Zip:  | Company Address: | Company Name                  | Project Manager: |
| . '     |   |  |   | <b>[</b> ]              | g  |     |             | 1        | -  |  |            |            | ŀ          |            |                                       |   |                         | ब्                | non            | tate             | an)              | an)                           | ×                |
|         |   |  | Ø_  | $\supset$               | S.   |     |             |          |  | }  |            |            |            | ]          |                                       |   |                         | Sig               | ō<br>7         | Z.               | À                | ž                             | an               |
|         |   |  | 7   | /                       |  |     |             |          |  |  |            |            |            |            |                                       |   | 0                       | nat               | ō              | Ö                | dr.              | Mar.                          | age              |
|         |   |  | 0   |                         | . 4  |     | **.<br>     |          |  | 20   | 20         | 20         | 20         | 20         | 20                                    | <b>1</b>                                      |                         | The last          |                |                  | SSe              | W                             | Ä                |
|         |   |  | 7   |                         |  |     |             |          |  | 2017 SP-14                                       | 2017 SP-13 | 2017 SP-12 | 2017 SP-11 | 2017 SP-10 | 2017 SP-9                             | FIELD CODE                                    | 1005                    | -                 | <del>}</del>   |                  |                  | I≓                            | ĺΩ               |
|         |   |  |   |                         | 14.4   | e . |             |          |  | 뭐  | SP.        | ĮΫ         | Ϋ́         | Ϋ́         | န                                     | 8   | 0                       |                   | 432)520        | idla             | )57              | <u>c</u>                      | Curt Stanley     |
|         |   |  |   |                         |  |     |             |          |  | 4  | 13         | ね          | =          | 0          | ဖ်                                    | l H   | 1011                    |                   |                | 3                | ပြ               | N.                            | štan             |
|         |   | 1  |   | <b>\</b>                | 1  |     |             |          |  |  |            |            |            |            |                                       |   |                         |                   | 772            | Š                | ine<br>In        | log<br>o                      | ley              |
| -       |   |  | 2   |                         | . 1  |     |             |          |  | ĺ  |            | i          |            |            | ĺ                                     |   |                         | A                 |                | Midland/TX/79703 | 2057 Commerce Dr | nen                           |                  |
|         | Date  | Date   | 2   |                         |  |     |             |          |  | ł  |            |            | :          |            | 1                                     |   |                         |                   | *              | ω                | 무                | <u> </u>                      | ł                |
|         | ति  | 6  |   |                         |  |     |             |          |  |  |            |            |            | ļ          |                                       |   |                         | 1                 |                |                  | ļ                | TRC Environmental Corporation | 1                |
|         |   |  | 1   | :                       |  |     | -           |          |  | <del> </del>                                     |            | <u> </u>   | <u> </u>   | -          | -                                     |   | 1                       | (%)               | 2              |                  |                  | ora                           | 1 .              |
|         |   |  | 12  |                         |  |     |             |          |  |  |            |            | ĺ          |            | ١                                     | Beginning Depth                               | [ .                     | 1                 |                |                  | İ                | S.                            |                  |
| i       | Time  | Time   | Time  |                         | ŀ  |     |             |          | -  | H  | _          | -          | -          | -          | -                                     |   | <del> </del>            | E                 | ľ              |                  |                  | l                             |                  |
|         |   |  | 1~/_  | ļ                       | Į  | •   |             |          | ,  |  |            |            |            |            |                                       | Ending Depth                                  | <u>}</u>                | (A)               | } .            | Į.               | }                | ļ                             |                  |
| A       | N Z   | Re   | 곦   |                         | j  |     | :           |          |  | _  | 1          | _          |            | _          |                                       |   | 1                       | A.R.R.C.          |                |                  |                  |                               | j                |
| 1       | M   | Received by  | Received by:  |                         | .  |     |             | \        |  | 1/31/2017  | 1/31/2017  | 1/31/2017  | 1/31/2017  | 1/31/2017  | 1/31/2017                             |   |                         | 12                |                |                  |                  |                               |                  |
| )       | WVE   | edt  | edb   | 1                       | Ì  |     |             |          |  | /20  | /20        | /20        | /20        | /20        | /20                                   | Date Sampled                                  | 1                       | #                 | )              | 1                |                  | 1                             |                  |
|         | A. W  | ×  | ×   |                         | 1  | 14  |             |          | - "  | 17   | 17         | 17         | 17         | 17         | 17                                    |   | 1 1                     | 12                |                |                  |                  | 1                             |                  |
| ·       | Received by PBEL                                    |  |   | ļ                       | j  | _   | -           |          | -  |  |            |            |            |            | -                                     |   | 1                       | ACCOEAL Be-mail:  | •              |                  |                  | }                             | 1                |
|         | $\mathbb{Y}$  |  |   |                         | Ì  |     |             |          |  | <u> </u>   |            |            | _          | =          | <u>_</u>                              |   | · · · ·                 | \\\\\             | <b>√</b> , .   |                  |                  | 1                             |                  |
|         | \   |  |   |                         |  |     |             |          |  | 1630   | 1625       | 1620       | 1615       | 1610       | 1600                                  | Time Sampled                                  |                         | TP.               | ä              | (                |                  | 1                             |                  |
|         | 1   |  | 1, 1  | ł                       |  |     |             |          |  | -  |            | -          |            |            |                                       |   | 1                       | <u>≅</u> .        | Fax No:        |                  |                  |                               |                  |
|         |   |  |   |                         | 1  |     |             |          | $\vdash$   | <del>                                     </del> | ┢          |            |            |            |                                       | Field Filtered                                | 1                       |                   | 1              | ļ                |                  |                               |                  |
|         |   |  | ].  |                         |  |     |             |          |  |  |            |            | _          | _          |                                       | Total #. of Containers                        | 1                       | cdstanley@tro     |                | <u> </u>         |                  |                               |                  |
| . 1     |   |  |   | ١                       |  |     |             |          |  | ×  | ×          | ×          | ×          | ×          | ×                                     | Ice   |                         | <u>င sta</u>      |                | l                |                  | 1                             |                  |
|         |   |  |   | 1                       | . [  |     | _           | 1        |  | <del>                                     </del> | <u> </u>   |            |            |            |                                       | HNO₃  | Pres                    |                   |                |                  | 1                |                               |                  |
|         |   | ł  | 1   | ł                       | - 1  |     | <del></del> |          |  |  | -          | _          | 1          | <b>†</b>   |                                       | нсі   | Preservation            | an Ka             |                |                  | }                | 1                             |                  |
|         |   | ļ  |   | '                       | )  |     | -           | -        | -  |  |            | $\vdash$   |            | <b>†</b>   |                                       | H <sub>2</sub> SO <sub>4</sub>                | ion &                   |                   |                | ļ                |                  | 1                             |                  |
|         |   |  |   |                         |  |     | _           | $\vdash$ | <del>                                     </del> |  | -          | $\vdash$   | T          | T .        |                                       | NaOH  | & # of Containers       | csolutions.c      |                |                  |                  | 1                             |                  |
| -       |   |  |   | Ì                       |  |     | <u> </u>    |          | -  |  |            |            |            |            |                                       | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Con                     | 읭든                | 1              |                  |                  |                               |                  |
|         | N.  | <u> </u>   | <del> </del> -  | 1                       | - [  |     | _           | $\vdash$ |  | <u> </u>   | <u> </u>   |            | $\vdash$   | ┢          | Г                                     | None  | taine                   | ဥဒြ               | 1.             |                  | ŀ                | 1                             |                  |
| •       | 7   | }  | ) <u>-</u>  |                         |  | -   |             |          | $\vdash$   | 1  |            | $\vdash$   |            | $\vdash$   |                                       | Other ( Specify)                              | <b>™</b>                | csolutions.com    | }              | }                |                  |                               |                  |
|         | )alle   | Date   | Date  |                         | )  |     |             | -        |  |  |            |            | $\vdash$   | $\vdash$   |                                       | DW=Drinking Water SL=Sludge                   | 甘                       | 의                 | 1              | 1                | •                | ı                             | 1                |
|         |   | [  |   |                         |  |     |             |          |  | Soil   | Soil       | Soil       | Soil       | Soil       | Soil                                  | GW = Groundwater S=Soil/Solid                 | Matrix                  | ر.                | Reg            |                  |                  |                               |                  |
|         | 4   |  |   | 1                       |  | _   | L           | L        |  |  |            |            |            |            |                                       | NP=Non-Potable Specify Other                  | ×                       |                   | ğ              |                  | ₽                |                               | Pro              |
|         | Time<br>233   | Time   | l ime   | 1                       |  |     |             |          |  | ×  | ×          | ×          | ×          | ×          | ×                                     | TPH: 418.1 8015M 80                           | )15B                    |                   | Report Format: |                  | Project Loc:     | Pr                            | Project Name:    |
| -       | الإ <sup>ر</sup> °                                  | •  | °   | 1                       |  |     |             |          |  |  |            |            |            |            |                                       | TPH: TX 1005 TX 1006                          |                         |                   | mat            | Р                | Ct L             | Project #:                    | Nar              |
|         | Ad Re   | ်  | S C 8   | 8                       | Sala   |     |             |          |  |  |            |            |            |            |                                       | Cations (Ca, Mg, Na, K)                       | _]   [                  | . ].              | ı.T            | PO #:            | <u></u>          | #                             | ne:              |
|         | Temperati<br>Received:<br>Adjusted:                 | 효합률  | stod<br>stod  | င္ပ                     | 퓛  |     |             |          |  |  |            |            |            |            |                                       | Anions (Cl, SO4, Alkalinity)                  | 히귀                      |                   | $\boxtimes$    | 1                |                  |                               | 1                |
|         | Temperature Upon Receipt: Received:  Adjusted:  C F | Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | VOCs Free of Headspace? | Laboratory Comments: Sample Containers Intact? |     |             |          |  |  |            |            |            |            | Γ                                     | SAR / ESP / CEC                               | TCLP:                   |                   |                | {.               |                  |                               | 1                |
|         |   | nier?  | cont<br>sals  | of I                    | 를 있  |     | · ·         |          |  |  |            |            |            |            |                                       | Metals: As Ag Ba Cd Cr Pb Hg                  | . 80                    | ≱                 | Standard       | ļ · ·            |                  |                               | 1                |
|         | jor   | Clie   | on c  | Hea                     | 麗劃   |     |             |          |  |  |            |            |            |            |                                       | Volatiles                                     |                         | Analyze For:      | <u>a</u> ,     |                  |                  | _ [                           |                  |
|         |   | wered<br>ant Rep<br>UPS  | S)L(S)  | dsp                     | <u> </u>                                       |     |             |          |  |  |            |            | T          | T          | Γ                                     | Semivolatiles                                 |                         | Ze F              |                | [                | [-               | N S                           | 2                |
|         | ' ့ ဂို<br>ဂို ဂိ ‡                                 | လြမ္   | aine<br>er(s)   | ace.                    | s:   |     |             |          |  | ×  | ×          | ×          | ×          | ×          | ×                                     | BTEX 8021B/5030 or BTEX 82                    | 260                     | 음                 |                |                  | Lea County, NM   | TNM - Monument 18             | Monument 18      |
|         | c Factor  | HE   | Ţ(s)  | "                       |  |     | $\vdash$    |          | _  |  |            | 1          | 1          |            |                                       | RCI   |                         |                   | TRRP           | 1                | oun              | on                            | Щ                |
|         | ğ   | <b>7</b> 8   |   |                         |  | -   |             | Π        |  | 1  |            |            | T          | 1          |                                       | N.O.R.M.                                      |                         | 1                 | 꾸              |                  | Ę.               | ШŽ                            | Įž               |
|         |   | Fe   |   |                         |  |     |             |          | ,  | $\vdash$   |            |            | T          | 1          | T                                     | Chlorides E 300                               |                         |                   |                | ]                | Ź                | )at                           | 8                |
|         |   | FedE ≺ ≺   | : < < =   | (≺                      | <b>∀</b>                                       |     | Η-          |          |  | 一  | T          | Π          | T          | 1          | T                                     | Paint Filter                                  |                         |                   |                |                  |                  | 8                             |                  |
|         |   | 6  |   |                         |  |     | -           | T        |  | <del>                                     </del> |            | 17         | T          | T          | T                                     | TCLP BTEX                                     |                         |                   | NPDES          |                  |                  |                               |                  |
|         |   | Lone Star  | z z z   | zz                      | z  | _   | Ι-          |          | <del>                                     </del> | 1  | <u> </u>   | $\vdash$   | 1          | H          | T                                     | RUSH TAT (Pre-Schedule) 24                    | , 48, 72 hrs            | 7                 | Ď              |                  |                  | 1                             |                  |
|         |   | ă  |   |                         |  | -   | $\vdash$    | $\vdash$ |  | ×  | ×          | ×          | ×          | ×          | ×                                     | Standard TAT                                  | T                       |                   | S              |                  | ]                |                               | 200              |

 $\times \times$ 

Released to Imaging:

× × Standard TAT

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County NM

Lab Order Number: 7B20007



NELAP/TCEQ # T104704156-16-6

Report Date: 02/23/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2017 SP-15 | 7B20007-01    | Soil   | 02/17/17 14:00 | 02-20-2017 10:30 |
| 2017 SP-16 | 7B20007-02    | Soil   | 02/17/17 14:10 | 02-20-2017 10:30 |
| 2017 SP-17 | 7B20007-03    | Soil   | 02/17/17 14:15 | 02-20-2017 10:30 |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street

Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-15 7B20007-01 (Soil)

| Analyte                                       | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---|------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|   | Perm       | ian Basin E        | nvironmer | ıtal Lab, I | L <b>.P.</b> |          |          |               |       |
| Organics by GC                                |            |                    |           |             |              |          |          |               |       |
| Benzene                                       | ND         | 0.00106            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Toluene                                       | ND         | 0.00213            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Ethylbenzene                                  | ND         | 0.00106            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Xylene (p/m)                                  | ND         | 0.00213            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Xylene (o)                                    | ND         | 0.00106            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene               |            | 114 %              | 75-1      | 25          | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene                |            | 101 %              | 75-1      | 25          | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Standar | d Methods  | l                  |           |             |              |          |          |               |       |
| % Moisture                                    | 6.0        | 0.1                | %         | 1           | P7B2102      | 02/21/17 | 02/21/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EPA M  | 1ethod 801 | 5M                 |           |             |              |          |          |               |       |
| C6-C12  | ND         | 26.6               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| >C12-C28                                      | ND         | 26.6               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| >C28-C35                                      | ND         | 26.6               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                     | ·          | 92.1 %             | 70-1      | 30          | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     | ·     |
| Surrogate: o-Terphenyl                        |            | 105 %              | 70-1      | 30          | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35            | ND         | 26.6               | mg/kg dry | 1           | [CALC]       | 02/21/17 | 02/21/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-16 7B20007-02 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Pei        | rmian Basin F      | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                             |            |                    |           |             |              |          |          |               |       |
| Benzene                                    | ND         | 0.00109            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Toluene                                    | ND         | 0.00217            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Ethylbenzene                               | ND         | 0.00109            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Xylene (p/m)                               | ND         | 0.00217            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Xylene (o)                                 | ND         | 0.00109            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene             |            | 110 %              | 75-1      | 25          | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene            |            | 115 %              | 75-1      | 25          | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ods                |           |             |              |          |          |               |       |
| % Moisture                                 | 8.0        | 0.1                | %         | 1           | P7B2102      | 02/21/17 | 02/21/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 8015M              |           |             |              |          |          |               |       |
| C6-C12                                     | ND         | 27.2               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| >C12-C28                                   | ND         | 27.2               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| >C28-C35                                   | ND         | 27.2               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                  |            | 92.6 %             | 70-1      | 30          | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                     |            | 103 %              | 70-1      | 30          | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 27.2               | mg/kg dry | 1           | [CALC]       | 02/21/17 | 02/21/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-17 7B20007-03 (Soil)

| Analyte                                  | Result        | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|---------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Per           | mian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                           |               |                    |           |             |              |          |          |               |       |
| Benzene                                  | ND            | 0.00111            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Toluene                                  | ND            | 0.00222            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Ethylbenzene                             | ND            | 0.00111            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Xylene (p/m)                             | ND            | 0.00222            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Xylene (o)                               | ND            | 0.00111            | mg/kg dry | 1           | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene          |               | 107 %              | 75-1      | 25          | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene           |               | 98.8 %             | 75-1      | 25          | P7B2101      | 02/20/17 | 02/20/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / St | andard Metho  | ds                 |           |             |              |          |          |               |       |
| % Moisture                               | 10.0          | 0.1                | %         | 1           | P7B2102      | 02/21/17 | 02/21/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by   | EPA Method 80 | 015M               |           |             |              |          |          |               |       |
| C6-C12                                   | ND            | 27.8               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| >C12-C28                                 | ND            | 27.8               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| >C28-C35                                 | ND            | 27.8               | mg/kg dry | 1           | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                |               | 90.6 %             | 70-1      | 30          | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                   |               | 104 %              | 70-1      | 30          | P7B2207      | 02/21/17 | 02/21/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35       | ND            | 27.8               | mg/kg dry | 1           | [CALC]       | 02/21/17 | 02/21/17 | calc          |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| 1 mary te                           | Result  | Limit        | Omo       | 20101      | recourt   | , or the   | Limito | IG D | Lillin | 110105 |
|-------------------------------------|---------|--------------|-----------|------------|-----------|------------|--------|------|--------|--------|
| Batch P7B2101 - General Preparation | on (GC) |              |           |            |           |            |        |      |        |        |
| Blank (P7B2101-BLK1)                |         |              |           | Prepared & | Analyzed: | 02/20/17   |        |      |        |        |
| Benzene                             | ND      | 0.00100      | mg/kg wet |            |           |            |        |      |        |        |
| Toluene                             | ND      | 0.00200      | "         |            |           |            |        |      |        |        |
| Ethylbenzene                        | ND      | 0.00100      | "         |            |           |            |        |      |        |        |
| Xylene (p/m)                        | ND      | 0.00200      | "         |            |           |            |        |      |        |        |
| Xylene (o)                          | ND      | 0.00100      | "         |            |           |            |        |      |        |        |
| Surrogate: 4-Bromofluorobenzene     | 0.0674  |              | "         | 0.0600     |           | 112        | 75-125 |      |        |        |
| Surrogate: 1,4-Difluorobenzene      | 0.0648  |              | "         | 0.0600     |           | 108        | 75-125 |      |        |        |
| LCS (P7B2101-BS1)                   |         |              |           | Prepared & | Analyzed: | : 02/20/17 |        |      |        |        |
| Benzene                             | 0.0858  | 0.00100      | mg/kg wet | 0.100      |           | 85.8       | 70-130 |      |        |        |
| Toluene                             | 0.0894  | 0.00200      | "         | 0.100      |           | 89.4       | 70-130 |      |        |        |
| Ethylbenzene                        | 0.101   | 0.00100      | "         | 0.100      |           | 101        | 70-130 |      |        |        |
| Xylene (p/m)                        | 0.184   | 0.00200      | "         | 0.200      |           | 91.9       | 70-130 |      |        |        |
| Xylene (o)                          | 0.0887  | 0.00100      | "         | 0.100      |           | 88.7       | 70-130 |      |        |        |
| Surrogate: 4-Bromofluorobenzene     | 0.0585  |              | "         | 0.0600     |           | 97.6       | 75-125 |      |        |        |
| Surrogate: 1,4-Difluorobenzene      | 0.0637  |              | "         | 0.0600     |           | 106        | 75-125 |      |        |        |
| LCS Dup (P7B2101-BSD1)              |         |              |           | Prepared & | Analyzed: | 02/20/17   |        |      |        |        |
| Benzene                             | 0.0954  | 0.00100      | mg/kg wet | 0.100      |           | 95.4       | 70-130 | 10.6 | 20     |        |
| Toluene                             | 0.0988  | 0.00200      | "         | 0.100      |           | 98.8       | 70-130 | 9.92 | 20     |        |
| Ethylbenzene                        | 0.114   | 0.00100      | "         | 0.100      |           | 114        | 70-130 | 12.9 | 20     |        |
| Xylene (p/m)                        | 0.201   | 0.00200      | "         | 0.200      |           | 101        | 70-130 | 8.99 | 20     |        |
| Xylene (o)                          | 0.0987  | 0.00100      | "         | 0.100      |           | 98.7       | 70-130 | 10.6 | 20     |        |
| Surrogate: 4-Bromofluorobenzene     | 0.0651  |              | "         | 0.0600     |           | 108        | 75-125 |      |        |        |
| Surrogate: 1,4-Difluorobenzene      | 0.0695  |              | "         | 0.0600     |           | 116        | 75-125 |      |        |        |
| Matrix Spike (P7B2101-MS1)          | Sour    | rce: 7B17018 | 3-06      | Prepared & | Analyzed: | 02/20/17   |        |      |        |        |
| Benzene                             | 0.115   | 0.00105      | mg/kg dry | 0.105      | ND        | 109        | 80-120 |      |        |        |
| Toluene                             | 0.115   | 0.00211      | "         | 0.105      | ND        | 110        | 80-120 |      |        |        |
| Ethylbenzene                        | 0.107   | 0.00105      | "         | 0.105      | ND        | 101        | 80-120 |      |        |        |
| Xylene (p/m)                        | 0.168   | 0.00211      | "         | 0.211      | ND        | 79.6       | 80-120 |      |        | QM-0   |
| Xylene (o)                          | 0.0995  | 0.00105      | "         | 0.105      | ND        | 94.6       | 80-120 |      |        |        |
| Surrogate: 1,4-Difluorobenzene      | 0.0627  |              | "         | 0.0632     |           | 99.2       | 75-125 |      |        |        |
| Surrogate: 4-Bromofluorobenzene     | 0.0672  |              | "         | 0.0632     |           | 106        | 75-125 |      |        |        |

Permian Basin Environmental Lab, L.P.

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TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

2057 Commerce Street Midland TX, 79703

Project Manager: Curt Stanley

Fax: (432) 520-7701

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

### **Batch P7B2101 - General Preparation (GC)**

| Matrix Spike Dup (P7B2101-MSD1) | Sour   | Source: 7B17018-06 |           |        |    | 02/20/17 |        |      |    |       |
|---------------------------------|--------|--------------------|-----------|--------|----|----------|--------|------|----|-------|
| Benzene                         | 0.146  | 0.00105            | mg/kg dry | 0.105  | ND | 138      | 80-120 | 23.4 | 20 | QM-07 |
| Toluene                         | 0.152  | 0.00211            | "         | 0.105  | ND | 144      | 80-120 | 27.4 | 20 | QM-07 |
| Ethylbenzene                    | 0.155  | 0.00105            | "         | 0.105  | ND | 147      | 80-120 | 37.0 | 20 | QM-07 |
| Xylene (p/m)                    | 0.273  | 0.00211            | "         | 0.211  | ND | 130      | 80-120 | 47.8 | 20 | QM-07 |
| Xylene (o)                      | 0.145  | 0.00105            | "         | 0.105  | ND | 138      | 80-120 | 37.0 | 20 | QM-07 |
| Surrogate: 4-Bromofluorobenzene | 0.0692 |                    | "         | 0.0632 |    | 110      | 75-125 |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0724 |                    | "         | 0.0632 |    | 115      | 75-125 |      |    |       |

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |        |               |       | ~ "        | ~           |          |        |      |       |       |
|--------------------------------------|--------|---------------|-------|------------|-------------|----------|--------|------|-------|-------|
|                                      |        | Reporting     |       | Spike      | Source      |          | %REC   |      | RPD   |       |
| Analyte                              | Result | Limit         | Units | Level      | Result      | %REC     | Limits | RPD  | Limit | Notes |
| Batch P7B2102 - *** DEFAULT PREP *** |        |               |       |            |             |          |        |      |       |       |
| Blank (P7B2102-BLK1)                 |        |               |       | Prepared & | z Analyzed: | 02/21/17 |        |      |       |       |
| % Moisture                           | ND     | 0.1           | %     |            |             |          |        |      |       |       |
| Blank (P7B2102-BLK2)                 |        |               |       | Prepared & | Analyzed:   | 02/21/17 |        |      |       |       |
| % Moisture                           | ND     | 0.1           | %     |            |             |          |        |      |       |       |
| Duplicate (P7B2102-DUP1)             | Sou    | rce: 7B20003- | 08    | Prepared & | z Analyzed: | 02/21/17 |        |      |       |       |
| % Moisture                           | 10.0   | 0.1           | %     |            | 11.0        |          |        | 9.52 | 20    |       |
| Duplicate (P7B2102-DUP2)             | Sou    | rce: 7B20004- | 11    | Prepared & | z Analyzed: | 02/21/17 |        |      |       |       |
| % Moisture                           | 7.0    | 0.1           | %     |            | 8.0         |          |        | 13.3 | 20    |       |
| Duplicate (P7B2102-DUP3)             | Sou    | rce: 7B20006- | 25    | Prepared & | Analyzed:   | 02/21/17 |        |      |       |       |
| % Moisture                           | 6.0    | 0.1           | %     |            | 7.0         |          |        | 15.4 | 20    |       |

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting    |           | Spike       | Source      |             | %REC   |       | RPD   |       |
|---------------------------------|--------|--------------|-----------|-------------|-------------|-------------|--------|-------|-------|-------|
| Analyte                         | Result | Limit        | Units     | Level       | Result      | %REC        | Limits | RPD   | Limit | Notes |
| Batch P7B2207 - TX 1005         |        |              |           |             |             |             |        |       |       |       |
| Blank (P7B2207-BLK1)            |        |              |           | Prepared &  | ն Analyzed: | 02/21/17    |        |       |       |       |
| C6-C12                          | ND     | 25.0         | mg/kg wet |             |             |             |        |       |       |       |
| >C12-C28                        | ND     | 25.0         | "         |             |             |             |        |       |       |       |
| >C28-C35                        | ND     | 25.0         | "         |             |             |             |        |       |       |       |
| Surrogate: 1-Chlorooctane       | 130    |              | "         | 100         |             | 130         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 74.7   |              | "         | 50.0        |             | 149         | 70-130 |       |       | S-GC  |
| LCS (P7B2207-BS1)               |        |              |           | Prepared &  | k Analyzed: | 02/21/17    |        |       |       |       |
| C6-C12                          | 1190   | 25.0         | mg/kg wet | 1000        |             | 119         | 75-125 |       |       |       |
| >C12-C28                        | 1110   | 25.0         | "         | 1000        |             | 111         | 75-125 |       |       |       |
| Surrogate: 1-Chlorooctane       | 124    |              | "         | 100         |             | 124         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 68.3   |              | "         | 50.0        |             | 137         | 70-130 |       |       | S-GC  |
| LCS Dup (P7B2207-BSD1)          |        |              |           | Prepared &  | ն Analyzed: | 02/21/17    |        |       |       |       |
| C6-C12                          | 1180   | 25.0         | mg/kg wet | 1000        |             | 118         | 75-125 | 1.26  | 20    |       |
| >C12-C28                        | 1080   | 25.0         | "         | 1000        |             | 108         | 75-125 | 3.02  | 20    |       |
| Surrogate: 1-Chlorooctane       | 120    |              | "         | 100         |             | 120         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 65.9   |              | "         | 50.0        |             | 132         | 70-130 |       |       | S-GC  |
| Matrix Spike (P7B2207-MS1)      | Sou    | rce: 7B20011 | -05       | Prepared: ( | 02/21/17 A  | nalyzed: 02 | /22/17 |       |       |       |
| C6-C12                          | 1620   | 29.1         | mg/kg dry | 1160        | 19.2        | 138         | 75-125 |       |       | QM-05 |
| >C12-C28                        | 2370   | 29.1         | "         | 1160        | 308         | 177         | 75-125 |       |       | QM-05 |
| Surrogate: 1-Chlorooctane       | 132    |              | "         | 116         |             | 114         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 50.1   |              | "         | 58.1        |             | 86.2        | 70-130 |       |       |       |
| Matrix Spike Dup (P7B2207-MSD1) | Sou    | rce: 7B20011 | -05       | Prepared: ( | 02/21/17 A: | nalyzed: 02 | /22/17 |       |       |       |
| C6-C12                          | 1660   | 29.1         | mg/kg dry | 1160        | 19.2        | 141         | 75-125 | 2.42  | 20    | QM-05 |
| >C12-C28                        | 2380   | 29.1         | "         | 1160        | 308         | 178         | 75-125 | 0.454 | 20    | QM-05 |
| Surrogate: 1-Chlorooctane       | 133    |              | "         | 116         |             | 114         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 62.7   |              | "         | 58.1        |             | 108         | 70-130 |       |       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

Project Number: TNM-Monument 18

Fax: (432) 520-7701

TNM-Monument 18

Project Manager: Curt Stanley

**Notes and Definitions** 

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

Midland TX, 79703

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were

within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Bren | Darron |       |           |  |
|---------------------|------|--------|-------|-----------|--|
| Report Approved By: |      |        | Date: | 2/23/2017 |  |

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

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2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

| Receive                              | d by   | CD:z  | 78/2020  | 12       | 21:  | 29 1     | PM        |          |   |          |            | Li         |              |   | ြင္          | ) <u>a</u>              |                    |                |                  |                  |                               | Page                | 387 of 61  |
|--------------------------------------|--|---|--|----------|--|----------|-----------|----------|---|----------|------------|------------|--------------|---|--------------|-------------------------|--------------------|----------------|------------------|------------------|-------------------------------|---------------------|--|
| Receive linquished by:               | lingershed by  | ellinquisneo  | pecial Ir  |          |  |          |           |          |   |          | 7          |            |              | LAB # (lab use only)                          | ORDER #:     | (lab use only)          |                    |                |                  |                  |                               |                     | J  |
| ed by:                               | ed by:   | 1   | Instructions:  |          |  |          |           |          |   |          |            |            |              |   | **           |                         | Sampler Signature  | Telephone No:  | City/State/Zip:  | Company Address: | Company Name                  | Project Manager:    | J  |
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| Date                                 | Date   |   |  |          |  |          |           |          |   |          |            |            |              |   | . V          |                         |                    | ! [            | မြ               | Dr.              | ntal                          |                     | HAI  |
| •                                    | <sup>®</sup> ,   | #<br>   |  |          |  |          |           |          |   | -        |            |            |              |   |              |                         | T B                | 1              |                  |                  | Corp                          |                     | . Q  |
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| Trate en estada                      |  |   |  |          |  |          | , ,       |          |   |          |            |            |              | Ending Depth                                  |              |                         | T)                 |                | 1.               |                  |                               |                     | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian Basi 10014 S. Cou |
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|                                      |  |   |  |          |  |          |           |          |   |          |            |            |              |   |              |                         | ,e-mail:           | Fax No:        |                  |                  |                               |                     | .YS  |
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| 1                                    |  |   |  |          |  |          |           | _        |   |          |            | _          |              | Total #. of Containers                        | <del> </del> |                         | cibryant@paalp.com |                |                  |                  |                               | Midland, Texas      | REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213  |
| 1                                    |  |   |  |          |  |          |           |          | - |          | ×          | ×          | ×            | Ice<br>HNO <sub>3</sub>                       | Pre          |                         | Con                |                |                  |                  |                               | , Te                | ES7<br>Bas   |
|                                      |  |   | *.   |          |  |          |           | _        |   |          |            | •          |              | HCI   | eservatio    |                         | yar<br>Yar         |                | <u> </u>         |                  |                               | xas                 | :ST<br>Basin Environmenta<br>County Road 1213                          |
|                                      |  |   |  |          |  |          |           | $\dashv$ |   |          |            |            |              | H <sub>2</sub> SO <sub>4</sub>                | 3            |                         |                    | ′              |                  |                  |                               | 79706               | nviro<br>Roa   |
|                                      |  |   |  |          |  |          |           |          |   |          |            |            |              | NaOH  | % # of (     |                         | paa                | _              |                  |                  |                               | 8                   | onme   |
|                                      |  |   |  |          |  |          |           | _        | , |          |            |            |              | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | Containers   |                         |                    | : -            |                  |                  |                               |                     | ntal<br>213  |
| 4/2                                  | · _  |   |  |          |  |          |           |          | _ | <u> </u> |            | -          | _            | None  | iners        |                         | on                 |                |                  |                  |                               |                     | Lab,   |
| Date<br>  29   7                     | Date   | Date  |  | _        |  | -        |           |          |   | _        |            | ŀ          | H            | Other ( Specify)  DW=Drinking Water SL=Sludge | +            |                         | Dpaalp.com         | l              | l                | 1                | 1                             |                     | 두  |
| 7                                    |  |   |  |          |  |          |           |          |   |          | Soil       | Soil       | Soil         | GW = Groundwater S=Soil/Solid                 | Matrix       |                         | ı                  | Rep            |                  |                  |                               | _                   |  |
| ē 4                                  | 1  | _   | 1  |          |  |          |           |          |   | ļ        |            |            | <u> </u>     | NP=Non-Potable Specify Other                  |              |                         | _                  | on F           |                  | P.               | ٠                             | Proje               |  |
| Io 30                                | Time   | · me  |  | _        |  | <u> </u> |           | -        |   | _        | ×          | ×          | ×            | TPH: 418.1 8015M 8017PH: TX 1005 TX 1006      | 015B<br>     |                         |                    | Report Format: | _                | Project Loc:     | Project #:                    | Project Name:       |  |
| 530 M. AV                            | <u>၂</u>   | ည<br>ည  | ַ<br>ר   |          | <del>                                     </del> |          |           |          |   | <u> </u> |            |            | $\vdash$     | Cations (Ca, Mg, Na, K)                       | ,            |                         |                    | ä              | PO #:            | Loc              | 3Ct #                         | ame                 |  |
| l emperati<br>Received:<br>Adjusted: | by by  | ustod<br>Istod  | ample<br>Cs  |          |  |          |           |          |   |          | -          | $\vdash$   | T            | Anions (CI, SO4, Alkalinity)                  |              | ᅵᅯ                      | [ [                | ×              |                  |                  |                               | <u>'</u>            |  |
|                                      | Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? |          |  |          |           |          |   |          |            |            |              | SAR / ESP / CEC                               |              | TCLP:                   |                    |                |                  |                  |                               |                     | 70   |
|                                      | e se d   | als o   | ntain<br>of Ho   |          |  |          |           | -        |   |          |            |            |              | Metals: As Ag Ba Cd Cr Pb Ho                  | g Se         | ×                       | Ą                  | Standard       |                  |                  |                               |                     | 'non   |
| o on                                 | ilent<br>Lelive  | n cog   | nme<br>ers ir<br>eads  | <u> </u> |  |          | $\square$ | _        |   | <u> </u> | ļ          | _          | _            | Volatiles Semivolatiles                       |              | $\vdash \vdash$         | Analyze            | <u>.</u>       | 1                | 1                | Z                             |                     | .4.  |
| ၂ ေ                                  | ered<br>Rep<br>UPS   | taine<br>ler(s  | nts:<br>itact:<br>pace   |          | <del> </del>                                     | <u> </u> | -         |          |   | $\vdash$ | ×          | ×          | ×            | BTEX 80218/5030 or BTEX 8                     | 260          | $\vdash \vdash$         | For                |                | 1                | Lea              | M -                           | Mor                 | 32-6   |
| elpt:<br>°C Factor                   | . PH<br>PHL  |   |  | -        |  |          | H         |          |   |          | Ť,         | Ĥ          | <del> </del> | RCI   |              |                         |                    | ] TRRP         |                  | Lea County, NM   | NM - Monument                 | Monument 18         | Phone: 432-661-4184  |
| Ö                                    |  |   |  |          |  |          |           |          |   |          |            |            |              | N.O.R.M.                                      |              |                         |                    | 끃              |                  | īţ,              | ume                           | ent 1               | 184  |
| 3                                    | TI<br>O  |   | ^  |          |  |          |           |          |   |          |            |            |              | Chlorides E 300                               |              |                         | H                  |                | '                | ĮΞ               | ĮΞ̈́                          | $\overline{\infty}$ |  |

Paint Filter TCLP BTEX

Standard TAT

RUSH TAT (Pre-Schedule) 24, 48, 72 hrs

Monument 18

Page 1 of 1

Page 12 of 12

NPDES

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea Co NM

Lab Order Number: 7C01012



NELAP/TCEQ # T104704156-16-6

Report Date: 03/06/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2017 SP-18 | 7C01012-01    | Soil   | 02/28/17 16:05 | 03-01-2017 14:38 |
| 2017 SP-19 | 7C01012-02    | Soil   | 02/28/17 16:10 | 03-01-2017 14:38 |
| 2017 SP-20 | 7C01012-03    | Soil   | 02/28/17 16:15 | 03-01-2017 14:38 |
| 2017 SP-21 | 7C01012-04    | Soil   | 02/28/17 16:20 | 03-01-2017 14:38 |
| 2017 SP-22 | 7C01012-05    | Soil   | 02/28/17 16:25 | 03-01-2017 14:38 |

TRC Solutions- Midland, Texas

Project: Monument 18 Project Number: TNM-Monument 18

2057 Commerce Street Midland TX, 79703

Project Manager: Curt Stanley

### 2017 SP-18 7C01012-01 (Soil)

| Analyte                                | Result          | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|-----------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Pern            | nian Basin E       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                         |                 |                    |           |             |              |          |          |               |       |
| Benzene                                | ND              | 0.0213             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                                | ND              | 0.0426             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                           | ND              | 0.0213             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                           | ND              | 0.0426             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                             | ND              | 0.0213             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene        |                 | 98.8 %             | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene         |                 | 99.7 %             | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA /  | Standard Method | ls                 |           |             |              |          |          |               |       |
| % Moisture                             | 6.0             | 0.1                | %         | 1           | P7C0601      | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by | y EPA Method 80 | 15M                |           |             |              |          |          |               |       |
| C6-C12                                 | ND              | 26.6               | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C12-C28                               | ND              | 26.6               | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C28-C35                               | ND              | 26.6               | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane              |                 | 71.0 %             | 70-1      | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                 |                 | 81.2 %             | 70-1      | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35     | ND              | 26.6               | mg/kg dry | 1           | [CALC]       | 03/01/17 | 03/02/17 | calc          |       |

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-19 7C01012-02 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method        | Notes |
|--|------------|--------------------|-----------|-------------|---------|----------|----------|---------------|-------|
|  | Per        | mian Basin E       | Environme | ıtal Lab, l | L.P.    |          |          |               |       |
| Organics by GC                             |            |                    |           |             |         |          |          |               |       |
| Benzene                                    | ND         | 0.00109            | mg/kg dry | 1           | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                                    | ND         | 0.0435             | mg/kg dry | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                               | ND         | 0.0217             | mg/kg dry | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                               | ND         | 0.0435             | mg/kg dry | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                                 | ND         | 0.0217             | mg/kg dry | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene             |            | 100 %              | 75-1      | 25          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene            |            | 100 %              | 75-1      | 25          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ds                 |           |             |         |          |          |               |       |
| % Moisture                                 | 8.0        | 0.1                | %         | 1           | P7C0601 | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 015M               |           |             |         |          |          |               |       |
| C6-C12                                     | ND         | 27.2               | mg/kg dry | 1           | P7C0606 | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C12-C28                                   | ND         | 27.2               | mg/kg dry | 1           | P7C0606 | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C28-C35                                   | ND         | 27.2               | mg/kg dry | 1           | P7C0606 | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                  |            | 80.1 %             | 70-1      | 30          | P7C0606 | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                     |            | 90.8 %             | 70-1      | 30          | P7C0606 | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 27.2               | mg/kg dry | 1           | [CALC]  | 03/01/17 | 03/02/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### 2017 SP-20 7C01012-03 (Soil)

|   |                | Reporting    |           |             |              |          |          |               |       |
|---|----------------|--------------|-----------|-------------|--------------|----------|----------|---------------|-------|
| Analyte                                 | Result         | Limit        | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|   | Pern           | nian Basin E | Environme | ntal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                          |                |              |           |             |              |          |          |               |       |
| Benzene                                 | ND             | 0.0225       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                                 | ND             | 0.0449       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                            | ND             | 0.0225       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                            | ND             | 0.0449       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                              | ND             | 0.0225       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene          |                | 97.6 %       | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene         |                | 94.6 %       | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / S | tandard Method | ls           |           |             |              |          |          |               |       |
| % Moisture                              | 11.0           | 0.1          | %         | 1           | P7C0601      | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by  | EPA Method 80  | 15M          |           |             |              |          |          |               |       |
| C6-C12                                  | ND             | 28.1         | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C12-C28                                | ND             | 28.1         | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C28-C35                                | ND             | 28.1         | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane               |                | 80.5 %       | 70-1      | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                  |                | 90.5 %       | 70-1      | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35      | ND             | 28.1         | mg/kg dry | 1           | [CALC]       | 03/01/17 | 03/02/17 | calc          |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

2017 SP-21 7C01012-04 (Soil)

| Analyte                               | Result            | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---------------------------------------|-------------------|--------------------|------------|-------------|--------------|----------|----------|---------------|-------|
|                                       | Perm              | nian Basin E       | Invironmer | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                        |                   |                    |            |             |              |          |          |               |       |
| Benzene                               | ND                | 0.0215             | mg/kg dry  | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                               | ND                | 0.0430             | mg/kg dry  | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                          | ND                | 0.0215             | mg/kg dry  | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                          | ND                | 0.0430             | mg/kg dry  | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                            | ND                | 0.0215             | mg/kg dry  | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene        |                   | 101 %              | 75-1       | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene       |                   | 95.6 %             | 75-1       | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA/  | Standard Method   | s                  |            |             |              |          |          |               |       |
| % Moisture                            | 7.0               | 0.1                | %          | 1           | P7C0601      | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 h | oy EPA Method 801 | 15M                |            |             |              |          |          |               |       |
| C6-C12                                | ND                | 26.9               | mg/kg dry  | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C12-C28                              | ND                | 26.9               | mg/kg dry  | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C28-C35                              | ND                | 26.9               | mg/kg dry  | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane             |                   | 78.9 %             | 70-1       | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                |                   | 89.1 %             | 70-1       | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35    | ND                | 26.9               | mg/kg dry  | 1           | [CALC]       | 03/01/17 | 03/02/17 | calc          |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### 2017 SP-22 7C01012-05 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit  | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|------------|---------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Per        | mian Basin <b>E</b> | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                             |            |                     |           |             |              |          |          |               |       |
| Benzene                                    | ND         | 0.0217              | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                                    | ND         | 0.0435              | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                               | ND         | 0.0217              | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                               | ND         | 0.0435              | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                                 | ND         | 0.0217              | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene            |            | 101 %               | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene             |            | 102 %               | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ds                  |           |             |              |          |          |               |       |
| % Moisture                                 | 8.0        | 0.1                 | %         | 1           | P7C0601      | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EI  | A Method 8 | 015M                |           |             |              |          |          |               |       |
| C6-C12                                     | ND         | 27.2                | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C12-C28                                   | ND         | 27.2                | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| >C28-C35                                   | ND         | 27.2                | mg/kg dry | 1           | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                  |            | 81.0 %              | 70-1      | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                     |            | 91.9 %              | 70-1      | 30          | P7C0606      | 03/01/17 | 03/02/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 27.2                | mg/kg dry | 1           | [CALC]       | 03/01/17 | 03/02/17 | calc          |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch P7C0605 - General Preparatio | n (GC) |                               |           |            |           |          |        |      |    |      |
|------------------------------------|--------|-------------------------------|-----------|------------|-----------|----------|--------|------|----|------|
| Blank (P7C0605-BLK1)               |        | Prepared & Analyzed: 03/03/17 |           |            |           |          |        |      |    |      |
| Benzene                            | ND     | 0.00100                       | mg/kg wet |            |           |          |        |      |    |      |
| Toluene                            | ND     | 0.00200                       | "         |            |           |          |        |      |    |      |
| Ethylbenzene                       | ND     | 0.00100                       | "         |            |           |          |        |      |    |      |
| Xylene (p/m)                       | ND     | 0.00200                       | "         |            |           |          |        |      |    |      |
| Xylene (o)                         | ND     | 0.00100                       | "         |            |           |          |        |      |    |      |
| Surrogate: 1,4-Difluorobenzene     | 0.0626 |                               | "         | 0.0600     |           | 104      | 75-125 |      |    |      |
| Surrogate: 4-Bromofluorobenzene    | 0.0649 |                               | "         | 0.0600     |           | 108      | 75-125 |      |    |      |
| LCS (P7C0605-BS1)                  |        |                               |           | Prepared & | Analyzed: | 03/03/17 |        |      |    |      |
| Benzene                            | 0.0942 | 0.00100                       | mg/kg wet | 0.100      |           | 94.2     | 70-130 |      |    |      |
| Toluene                            | 0.0977 | 0.00200                       | "         | 0.100      |           | 97.7     | 70-130 |      |    |      |
| Ethylbenzene                       | 0.115  | 0.00100                       | "         | 0.100      |           | 115      | 70-130 |      |    |      |
| Xylene (p/m)                       | 0.210  | 0.00200                       | "         | 0.200      |           | 105      | 70-130 |      |    |      |
| Xylene (o)                         | 0.108  | 0.00100                       | "         | 0.100      |           | 108      | 70-130 |      |    |      |
| Surrogate: 1,4-Difluorobenzene     | 0.0628 |                               | "         | 0.0600     |           | 105      | 75-125 |      |    |      |
| Surrogate: 4-Bromofluorobenzene    | 0.0666 |                               | "         | 0.0600     |           | 111      | 75-125 |      |    |      |
| LCS Dup (P7C0605-BSD1)             |        |                               |           | Prepared & | Analyzed: | 03/03/17 |        |      |    |      |
| Benzene                            | 0.0952 | 0.00100                       | mg/kg wet | 0.100      |           | 95.2     | 70-130 | 1.13 | 20 |      |
| Toluene                            | 0.104  | 0.00200                       | "         | 0.100      |           | 104      | 70-130 | 5.90 | 20 |      |
| Ethylbenzene                       | 0.104  | 0.00100                       | "         | 0.100      |           | 104      | 70-130 | 9.84 | 20 |      |
| Xylene (p/m)                       | 0.197  | 0.00200                       | "         | 0.200      |           | 98.4     | 70-130 | 6.65 | 20 |      |
| Xylene (o)                         | 0.111  | 0.00100                       | "         | 0.100      |           | 111      | 70-130 | 2.37 | 20 |      |
| Surrogate: 4-Bromofluorobenzene    | 0.0692 |                               | "         | 0.0600     |           | 115      | 75-125 |      |    |      |
| Surrogate: 1,4-Difluorobenzene     | 0.0649 |                               | "         | 0.0600     |           | 108      | 75-125 |      |    |      |
| Matrix Spike (P7C0605-MS1)         | Sour   | rce: 7C03007                  | 7-04      | Prepared & | Analyzed: | 03/03/17 |        |      |    |      |
| Benzene                            | 0.223  | 0.0217                        | mg/kg dry | 0.217      | ND        | 102      | 80-120 |      |    |      |
| Toluene                            | 0.210  | 0.0435                        | "         | 0.217      | ND        | 96.6     | 80-120 |      |    |      |
| Ethylbenzene                       | 0.202  | 0.0217                        | "         | 0.217      | ND        | 93.1     | 80-120 |      |    |      |
| Xylene (p/m)                       | 0.321  | 0.0435                        | "         | 0.435      | ND        | 73.9     | 80-120 |      |    | QM-0 |
| Xylene (o)                         | 0.167  | 0.0217                        | "         | 0.217      | ND        | 77.0     | 80-120 |      |    | QM-0 |
| Surrogate: 1,4-Difluorobenzene     | 0.0649 |                               | "         | 0.0652     |           | 99.5     | 75-125 |      |    |      |
| Surrogate: 4-Bromofluorobenzene    | 0.0632 |                               | "         | 0.0652     |           | 96.8     | 75-125 |      |    |      |

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

Fax: (432) 520-7701

2057 Commerce Street Midland TX, 79703

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Matrix Spike Dup (P7C0605-MSD1) | Source: 7C03007-04 |        |           | Prepared & Analyzed: 03/03/17 |    |      |        |      |    |       |
|---------------------------------|--------------------|--------|-----------|-------------------------------|----|------|--------|------|----|-------|
| Benzene                         | 0.203              | 0.0217 | mg/kg dry | 0.217                         | ND | 93.5 | 80-120 | 9.18 | 20 |       |
| Toluene                         | 0.189              | 0.0435 | "         | 0.217                         | ND | 87.0 | 80-120 | 10.5 | 20 |       |
| Ethylbenzene                    | 0.210              | 0.0217 | "         | 0.217                         | ND | 96.8 | 80-120 | 3.90 | 20 |       |
| Xylene (p/m)                    | 0.325              | 0.0435 | "         | 0.435                         | ND | 74.6 | 80-120 | 1.01 | 20 | QM-07 |
| Xylene (o)                      | 0.169              | 0.0217 | "         | 0.217                         | ND | 77.8 | 80-120 | 1.03 | 20 | QM-07 |
| Surrogate: 4-Bromofluorobenzene | 0.0633             |        | "         | 0.0652                        |    | 97.0 | 75-125 |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0650             |        | "         | 0.0652                        |    | 99.7 | 75-125 |      |    |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                              | Result             | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--------------------------------------|--------------------|--------------------|-------|----------------|------------------|----------|----------------|------|--------------|-------|
| Batch P7C0601 - *** DEFAULT PREP *** |                    |                    |       |                |                  |          |                |      |              |       |
| Blank (P7C0601-BLK1)                 |                    |                    |       | Prepared &     | : Analyzed:      | 03/06/17 |                |      |              |       |
| % Moisture                           | ND                 | 0.1                | %     |                |                  |          |                |      |              |       |
| Blank (P7C0601-BLK2)                 |                    |                    |       | Prepared &     | Analyzed:        | 03/06/17 |                |      |              |       |
| % Moisture                           | ND                 | 0.1                | %     |                |                  |          |                |      |              |       |
| Blank (P7C0601-BLK3)                 |                    |                    |       | Prepared &     | Analyzed:        | 03/06/17 |                |      |              |       |
| % Moisture                           | ND                 | 0.1                | %     |                |                  |          |                |      |              |       |
| Duplicate (P7C0601-DUP1)             | Sour               | ce: 7C01012-       | 01    | Prepared &     | Analyzed:        | 03/06/17 |                |      |              |       |
| % Moisture                           | 5.0                | 0.1                | %     | 6.0            |                  |          |                | 18.2 | 20           |       |
| Duplicate (P7C0601-DUP2)             | Source: 7C02004-02 |                    |       | Prepared &     | Analyzed:        | 03/06/17 |                |      |              |       |
| % Moisture                           | 5.0                | 0.1                | %     |                | 5.0              |          |                | 0.00 | 20           |       |
| Duplicate (P7C0601-DUP3)             | Sour               | ce: 7C02006-       | 25    | Prepared &     | Analyzed:        | 03/06/17 |                |      |              |       |
| % Moisture                           | 14.0               | 0.1                | %     |                | 13.0             |          |                | 7.41 | 20           |       |
| Duplicate (P7C0601-DUP4)             | Sour               | ce: 7C02009-       | 03    | Prepared &     | : Analyzed:      | 03/06/17 |                |      |              |       |
| % Moisture                           | 8.0                | 0.1                | %     | •              | 8.0              |          |                | 0.00 | 20           |       |
| Duplicate (P7C0601-DUP5)             | Sou                | ce: 7C02012-       | 02    | Prepared &     | Analyzed:        | 03/06/17 |                |      |              |       |
| % Moisture                           | 13.0               | 0.1                | %     |                | 14.0             |          |                | 7.41 | 20           |       |
| Duplicate (P7C0601-DUP6)             | Sour               | ce: 7C02015-       | 06    | Prepared &     | : Analyzed:      | 03/06/17 |                |      |              |       |
| % Moisture                           | 9.0                | 0.1                | %     | 8.0            |                  |          |                | 11.8 | 20           |       |
| Duplicate (P7C0601-DUP7)             | Sour               | ce: 7C02016-       | 09    | Prepared &     | : Analyzed:      | 03/06/17 |                |      |              |       |
| % Moisture                           | 8.0                | 0.1                | %     |                |                  |          |                | 0.00 | 20           |       |

2057 Commerce Street Project Number: TNM-Monument 18 Midland TX, 79703

Project Manager: Curt Stanley

## General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch P7C0601 - \*\*\* DEFAULT PREP \*\*\*

| Duplicate (P7C0601-DUP8) | Source: 7 | C03002-0 | 2 | Prepared & Analyzed: 03/06/17 |      |    |
|--------------------------|-----------|----------|---|-------------------------------|------|----|
| % Moisture               | 3.0       | 0.1      | % | 3.0                           | 0.00 | 20 |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting   |           | Spike       | Source      |             | %REC   |      | RPD   |       |
|---------------------------------|--------|-------------|-----------|-------------|-------------|-------------|--------|------|-------|-------|
| Analyte                         | Result | Limit       | Units     | Level       | Result      | %REC        | Limits | RPD  | Limit | Notes |
| Batch P7C0606 - TX 1005         |        |             |           |             |             |             |        |      |       |       |
| Blank (P7C0606-BLK1)            |        |             |           | Prepared: ( | 03/01/17 Aı | nalyzed: 03 | /02/17 |      |       |       |
| C6-C12                          | ND     | 25.0        | mg/kg wet |             |             |             |        |      |       |       |
| >C12-C28                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| >C28-C35                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| Surrogate: 1-Chlorooctane       | 99.4   |             | "         | 100         |             | 99.4        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 57.6   |             | "         | 50.0        |             | 115         | 70-130 |      |       |       |
| LCS (P7C0606-BS1)               |        |             |           | Prepared: ( | 03/01/17 Aı | nalyzed: 03 | /02/17 |      |       |       |
| C6-C12                          | 793    | 25.0        | mg/kg wet | 1000        |             | 79.3        | 75-125 |      |       |       |
| >C12-C28                        | 1090   | 25.0        | "         | 1000        |             | 109         | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 116    |             | "         | 100         |             | 116         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 51.0   |             | "         | 50.0        |             | 102         | 70-130 |      |       |       |
| LCS Dup (P7C0606-BSD1)          |        |             |           | Prepared: ( | 03/01/17 Aı | nalyzed: 03 | /02/17 |      |       |       |
| C6-C12                          | 823    | 25.0        | mg/kg wet | 1000        |             | 82.3        | 75-125 | 3.78 | 20    |       |
| >C12-C28                        | 1120   | 25.0        | "         | 1000        |             | 112         | 75-125 | 3.15 | 20    |       |
| Surrogate: 1-Chlorooctane       | 124    |             | "         | 100         |             | 124         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 58.4   |             | "         | 50.0        |             | 117         | 70-130 |      |       |       |
| Matrix Spike (P7C0606-MS1)      | Sour   | ce: 7C01012 | 2-05      | Prepared: ( | 03/01/17 Aı | nalyzed: 03 | /02/17 |      |       |       |
| C6-C12                          | 865    | 27.2        | mg/kg dry | 1090        | 14.4        | 78.2        | 75-125 |      |       |       |
| >C12-C28                        | 1160   | 27.2        | "         | 1090        | ND          | 107         | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 103    |             | "         | 109         |             | 94.9        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 42.2   |             | "         | 54.3        |             | 77.6        | 70-130 |      |       |       |
| Matrix Spike Dup (P7C0606-MSD1) | Sour   | ce: 7C01012 | 2-05      | Prepared: ( | )3/01/17 Aı | nalyzed: 03 | /02/17 |      |       |       |
| C6-C12                          | 902    | 27.2        | mg/kg dry | 1090        | 14.4        | 81.6        | 75-125 | 4.23 | 20    |       |
| >C12-C28                        | 1260   | 27.2        | "         | 1090        | ND          | 116         | 75-125 | 7.67 | 20    |       |
| Surrogate: 1-Chlorooctane       | 106    |             | "         | 109         |             | 97.8        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 45.8   |             | "         | 54.3        |             | 84.3        | 70-130 |      |       |       |

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701
2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### **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.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Burnon |       |          |  |
|---------------------|--------|-------|----------|--|
| Report Approved By: |        | Date: | 3/6/2017 |  |

Brent Barron, Laboratory Director/Technical Director

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Permian Basin Environmental Lab, L.P.

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## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County NM

Lab Order Number: 7C03007



NELAP/TCEQ # T104704156-16-6

Report Date: 03/13/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2017 SP-23 | 7C03007-01    | Soil   | 03/02/17 16:00 | 03-03-2017 10:10 |
| 2017 SP-24 | 7C03007-02    | Soil   | 03/02/17 16:10 | 03-03-2017 10:10 |
| 2017 SP-25 | 7C03007-03    | Soil   | 03/02/17 16:15 | 03-03-2017 10:10 |
| 2017 SP-26 | 7C03007-04    | Soil   | 03/02/17 16:20 | 03-03-2017 10:10 |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

## 2017 SP-23 7C03007-01 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Per        | mian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                             |            |                    |           |             |              |          |          |               |       |
| Benzene                                    | ND         | 0.0206             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                                    | ND         | 0.0412             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                               | ND         | 0.0206             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                               | ND         | 0.0412             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                                 | ND         | 0.0206             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene            |            | 93.8 %             | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene             |            | 97.0 %             | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ds                 |           |             |              |          |          |               |       |
| % Moisture                                 | 3.0        | 0.1                | %         | 1           | P7C0604      | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 015M               |           |             |              |          |          |               |       |
| C6-C12                                     | ND         | 25.8               | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C12-C28                                   | ND         | 25.8               | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C28-C35                                   | ND         | 25.8               | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                  |            | 82.0 %             | 70-1      | 30          | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                     |            | 91.0 %             | 70-1      | 30          | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 25.8               | mg/kg dry | 1           | [CALC]       | 03/07/17 | 03/07/17 | calc          |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

2017 SP-24 7C03007-02 (Soil)

|   |                | Reporting    |           |             |              |          |          |               |       |
|---|----------------|--------------|-----------|-------------|--------------|----------|----------|---------------|-------|
| Analyte                                 | Result         | Limit        | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|   | Pern           | nian Basin E | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                          |                |              |           |             |              |          |          |               |       |
| Benzene                                 | ND             | 0.0204       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                                 | ND             | 0.0408       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                            | ND             | 0.0204       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                            | ND             | 0.0408       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                              | ND             | 0.0204       | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene          |                | 94.4 %       | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene         |                | 89.7 %       | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / S | tandard Method | ls           |           |             |              |          |          |               |       |
| % Moisture                              | 2.0            | 0.1          | %         | 1           | P7C0604      | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by  | EPA Method 80  | 15M          |           |             |              |          |          |               |       |
| C6-C12                                  | ND             | 25.5         | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C12-C28                                | ND             | 25.5         | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C28-C35                                | ND             | 25.5         | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane               |                | 76.5 %       | 70-1      | 30          | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                  |                | 84.3 %       | 70-1      | 30          | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35      | ND             | 25.5         | mg/kg dry | 1           | [CALC]       | 03/07/17 | 03/07/17 | calc          |       |

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

2017 SP-25 7C03007-03 (Soil)

| Analyte                               | Result           | Reporting<br>Limit | Units      | Dilution    | Batch   | Prepared | Analyzed | Method        | Notes |
|---------------------------------------|------------------|--------------------|------------|-------------|---------|----------|----------|---------------|-------|
|                                       | Perm             | nian Basin E       | Invironmen | ıtal Lab, I | P.      |          |          |               |       |
| Organics by GC                        |                  |                    |            |             |         |          |          |               |       |
| Benzene                               | ND               | 0.0220             | mg/kg dry  | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                               | ND               | 0.0440             | mg/kg dry  | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                          | ND               | 0.0220             | mg/kg dry  | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                          | ND               | 0.0440             | mg/kg dry  | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                            | ND               | 0.0220             | mg/kg dry  | 20          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene       |                  | 88.0 %             | 75-1       | 25          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene        |                  | 93.6 %             | 75-1       | 25          | P7C0605 | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA   | Standard Method  | <u>s</u>           |            |             |         |          |          |               |       |
| % Moisture                            | 9.0              | 0.1                | %          | 1           | P7C0604 | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 l | by EPA Method 80 | 15M                |            |             |         |          |          |               |       |
| C6-C12                                | ND               | 27.5               | mg/kg dry  | 1           | P7C0806 | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C12-C28                              | ND               | 27.5               | mg/kg dry  | 1           | P7C0806 | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C28-C35                              | ND               | 27.5               | mg/kg dry  | 1           | P7C0806 | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane             |                  | 83.5 %             | 70-1       | 30          | P7C0806 | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                |                  | 93.4 %             | 70-1       | 30          | P7C0806 | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35    | ND               | 27.5               | mg/kg dry  | 1           | [CALC]  | 03/07/17 | 03/07/17 | calc          |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## 2017 SP-26 7C03007-04 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Per        | mian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                             |            |                    |           |             |              |          |          |               |       |
| Benzene                                    | ND         | 0.0217             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Toluene                                    | ND         | 0.0435             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Ethylbenzene                               | ND         | 0.0217             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (p/m)                               | ND         | 0.0435             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Xylene (o)                                 | ND         | 0.0217             | mg/kg dry | 20          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene             |            | 100 %              | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene            |            | 93.2 %             | 75-1      | 25          | P7C0605      | 03/03/17 | 03/03/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ds                 |           |             |              |          |          |               |       |
| % Moisture                                 | 8.0        | 0.1                | %         | 1           | P7C0604      | 03/06/17 | 03/06/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 015M               |           |             |              |          |          |               |       |
| C6-C12                                     | ND         | 27.2               | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C12-C28                                   | ND         | 27.2               | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| >C28-C35                                   | ND         | 27.2               | mg/kg dry | 1           | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                  |            | 82.4 %             | 70-1      | 30          | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                     |            | 92.5 %             | 70-1      | 30          | P7C0806      | 03/07/17 | 03/07/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 27.2               | mg/kg dry | 1           | [CALC]       | 03/07/17 | 03/07/17 | calc          |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Blank (P7C0605-BLK1)            |        |              |           | Prepared & | Analyzed: | 03/03/17 |        |      |    |       |
|---------------------------------|--------|--------------|-----------|------------|-----------|----------|--------|------|----|-------|
| Benzene                         | ND     | 0.00100      | mg/kg wet |            |           |          |        |      |    |       |
| Toluene                         | ND     | 0.00200      | "         |            |           |          |        |      |    |       |
| Ethylbenzene                    | ND     | 0.00100      | "         |            |           |          |        |      |    |       |
| Xylene (p/m)                    | ND     | 0.00200      | "         |            |           |          |        |      |    |       |
| Xylene (o)                      | ND     | 0.00100      | "         |            |           |          |        |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0649 |              | "         | 0.0600     |           | 108      | 75-125 |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0626 |              | "         | 0.0600     |           | 104      | 75-125 |      |    |       |
| LCS (P7C0605-BS1)               |        |              |           | Prepared & | Analyzed: | 03/03/17 |        |      |    |       |
| Benzene                         | 0.0942 | 0.00100      | mg/kg wet | 0.100      |           | 94.2     | 70-130 |      |    |       |
| Toluene                         | 0.0977 | 0.00200      | "         | 0.100      |           | 97.7     | 70-130 |      |    |       |
| Ethylbenzene                    | 0.115  | 0.00100      | "         | 0.100      |           | 115      | 70-130 |      |    |       |
| Xylene (p/m)                    | 0.210  | 0.00200      | "         | 0.200      |           | 105      | 70-130 |      |    |       |
| Xylene (o)                      | 0.108  | 0.00100      | "         | 0.100      |           | 108      | 70-130 |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0628 |              | "         | 0.0600     |           | 105      | 75-125 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0666 |              | "         | 0.0600     |           | 111      | 75-125 |      |    |       |
| LCS Dup (P7C0605-BSD1)          |        |              |           | Prepared & | Analyzed: | 03/03/17 |        |      |    |       |
| Benzene                         | 0.0952 | 0.00100      | mg/kg wet | 0.100      |           | 95.2     | 70-130 | 1.13 | 20 |       |
| Toluene                         | 0.104  | 0.00200      | "         | 0.100      |           | 104      | 70-130 | 5.90 | 20 |       |
| Ethylbenzene                    | 0.104  | 0.00100      | "         | 0.100      |           | 104      | 70-130 | 9.84 | 20 |       |
| Xylene (p/m)                    | 0.197  | 0.00200      | "         | 0.200      |           | 98.4     | 70-130 | 6.65 | 20 |       |
| Xylene (o)                      | 0.111  | 0.00100      | "         | 0.100      |           | 111      | 70-130 | 2.37 | 20 |       |
| Surrogate: 1,4-Difluorobenzene  | 0.0649 |              | "         | 0.0600     |           | 108      | 75-125 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0692 |              | "         | 0.0600     |           | 115      | 75-125 |      |    |       |
| Matrix Spike (P7C0605-MS1)      | Sour   | rce: 7C03007 | -04       | Prepared & | Analyzed: | 03/03/17 |        |      |    |       |
| Benzene                         | 0.223  | 0.0217       | mg/kg dry | 0.217      | ND        | 102      | 80-120 |      |    |       |
| Toluene                         | 0.210  | 0.0435       | "         | 0.217      | ND        | 96.6     | 80-120 |      |    |       |
| Ethylbenzene                    | 0.202  | 0.0217       | "         | 0.217      | ND        | 93.1     | 80-120 |      |    |       |
| Xylene (p/m)                    | 0.321  | 0.0435       | "         | 0.435      | ND        | 73.9     | 80-120 |      |    | QM-07 |
| Xylene (o)                      | 0.167  | 0.0217       | "         | 0.217      | ND        | 77.0     | 80-120 |      |    | QM-07 |
| Surrogate: 1,4-Difluorobenzene  | 0.0649 |              | "         | 0.0652     |           | 99.5     | 75-125 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0632 |              | "         | 0.0652     |           | 96.8     | 75-125 |      |    |       |

Permian Basin Environmental Lab, L.P.

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TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

#### **Batch P7C0605 - General Preparation (GC)**

| Matrix Spike Dup (P7C0605-MSD1) | Sour   | Source: 7C03007-04 |           |        | Analyzed: | 03/03/17 |        |      |    |       |
|---------------------------------|--------|--------------------|-----------|--------|-----------|----------|--------|------|----|-------|
| Benzene                         | 0.203  | 0.0217             | mg/kg dry | 0.217  | ND        | 93.5     | 80-120 | 9.18 | 20 |       |
| Toluene                         | 0.189  | 0.0435             | "         | 0.217  | ND        | 87.0     | 80-120 | 10.5 | 20 |       |
| Ethylbenzene                    | 0.210  | 0.0217             | "         | 0.217  | ND        | 96.8     | 80-120 | 3.90 | 20 |       |
| Xylene (p/m)                    | 0.325  | 0.0435             | "         | 0.435  | ND        | 74.6     | 80-120 | 1.01 | 20 | QM-07 |
| Xylene (o)                      | 0.169  | 0.0217             | "         | 0.217  | ND        | 77.8     | 80-120 | 1.03 | 20 | QM-07 |
| Surrogate: 1,4-Difluorobenzene  | 0.0650 |                    | "         | 0.0652 |           | 99.7     | 75-125 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0633 |                    | "         | 0.0652 |           | 97.0     | 75-125 |      |    |       |

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyta                              | Result | Reporting<br>Limit | Units | Spike       | Source<br>Result | %REC       | %REC<br>Limits | RPD  | RPD<br>Limit | Natas |
|--------------------------------------|--------|--------------------|-------|-------------|------------------|------------|----------------|------|--------------|-------|
| Analyte                              | Kesuit | Limit              | Units | Level       | Result           | %REC       | Limits         | KPD  | Limit        | Notes |
| Batch P7C0604 - *** DEFAULT PREP *** |        |                    |       |             |                  |            |                |      |              |       |
| Blank (P7C0604-BLK1)                 |        |                    |       | Prepared &  | Analyzed:        | 03/06/17   |                |      |              |       |
| % Moisture                           | ND     | 0.1                | %     |             |                  |            |                |      |              |       |
| Blank (P7C0604-BLK2)                 |        |                    |       | Prepared &  | : Analyzed:      | 03/06/17   |                |      |              |       |
| % Moisture                           | ND     | 0.1                | %     |             |                  |            |                |      |              |       |
| Blank (P7C0604-BLK3)                 |        |                    |       | Prepared &  | : Analyzed:      | 03/06/17   |                |      |              |       |
| % Moisture                           | ND     | 0.1                | %     |             |                  |            |                |      |              |       |
| Duplicate (P7C0604-DUP1)             | Sou    | rce: 7C03007-      | 01    | Prepared &  | : Analyzed:      | 03/06/17   |                |      |              |       |
| % Moisture                           | 3.0    | 0.1                | %     |             | 3.0              |            |                | 0.00 | 20           |       |
| Duplicate (P7C0604-DUP2)             | Sou    | rce: 7C03009-      | 23    | Prepared &  |                  |            |                |      |              |       |
| % Moisture                           | 11.0   | 0.1                | %     |             | 11.0             |            |                | 0.00 | 20           |       |
| Duplicate (P7C0604-DUP3)             | Sou    | rce: 7C03010-      | 05    | Prepared &  | : Analyzed:      | 03/06/17   |                |      |              |       |
| % Moisture                           | 10.0   | 0.1                | %     |             | 11.0             |            |                | 9.52 | 20           |       |
| Duplicate (P7C0604-DUP4)             | Sou    | rce: 7C03011-      | 13    | Prepared &  | : Analyzed:      | 03/06/17   |                |      |              |       |
| % Moisture                           | 10.0   | 0.1                | %     | •           | 10.0             |            |                | 0.00 | 20           |       |
| Duplicate (P7C0604-DUP5)             | Sou    | rce: 7C03011-      | 38    | Prepared &  | Analyzed:        | 03/06/17   |                |      |              |       |
| % Moisture                           | 5.0    | 0.1                | %     |             | 5.0              |            |                | 0.00 | 20           |       |
| Duplicate (P7C0604-DUP6)             | Sou    | rce: 7C03012-      | 16    | Prepared &  | : Analyzed:      | 03/06/17   |                |      |              |       |
| % Moisture                           | 5.0    | 0.1                | %     | •           | 4.0              |            |                | 22.2 | 20           | R     |
| Duplicate (P7C0604-DUP7)             | Sou    | rce: 7C03014-      | 08    | Prepared &  | : Analyzed:      | 03/06/17   |                |      |              |       |
| % Moisture                           | 4.0    | 0.1                | %     | - 10purou 0 | 8.0              | 33, 33, 17 |                | 66.7 | 20           | R     |

2057 Commerce Street Project Number: TNM-Monument 18 Midland TX, 79703

Project Manager: Curt Stanley

## General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |                       | Reporting             |       | Spike      | Source                        |          | %REC   |      | RPD   |       |
|--------------------------------------|-----------------------|-----------------------|-------|------------|-------------------------------|----------|--------|------|-------|-------|
| Analyte                              | Result                | Limit                 | Units | Level      | Result                        | %REC     | Limits | RPD  | Limit | Notes |
| Batch P7C0604 - *** DEFAULT PREP *** |                       |                       |       |            |                               |          |        |      |       |       |
| Duplicate (P7C0604-DUP8)             | Source: 7C03016-06 Pr |                       |       | Prepared & | Analyzed:                     | 03/06/17 |        |      |       |       |
| % Moisture                           | 16.0                  | 0.1                   | %     |            | 17.0                          |          |        | 6.06 | 20    |       |
| Duplicate (P7C0604-DUP9)             | Sour                  | Source: 7C03016-13 Pr |       | Prepared & | Prepared & Analyzed: 03/06/17 |          |        |      |       |       |
| % Moisture                           | 11.0                  | 0.1                   | %     |            | 12.0                          |          |        | 8.70 | 20    |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting                     | _         | Spike       | Source      | _           | %REC   |       | RPD   | _     |  |  |
|---------------------------------|--------|-------------------------------|-----------|-------------|-------------|-------------|--------|-------|-------|-------|--|--|
| Analyte                         | Result | Limit                         | Units     | Level       | Result      | %REC        | Limits | RPD   | Limit | Notes |  |  |
| Batch P7C0806 - TX 1005         |        |                               |           |             |             |             |        |       |       |       |  |  |
| Blank (P7C0806-BLK1)            |        |                               |           | Prepared &  | z Analyzed: | 03/07/17    |        |       |       |       |  |  |
| C6-C12                          | ND     | 25.0                          | mg/kg wet |             |             |             |        |       |       |       |  |  |
| >C12-C28                        | ND     | 25.0                          | "         |             |             |             |        |       |       |       |  |  |
| >C28-C35                        | ND     | 25.0                          | "         |             |             |             |        |       |       |       |  |  |
| Surrogate: 1-Chlorooctane       | 83.2   |                               | "         | 100         |             | 83.2        | 70-130 |       |       |       |  |  |
| Surrogate: o-Terphenyl          | 47.2   |                               | "         | 50.0        |             | 94.5        | 70-130 |       |       |       |  |  |
| LCS (P7C0806-BS1)               |        |                               |           | Prepared &  | Analyzed:   | 03/07/17    |        |       |       |       |  |  |
| C6-C12                          | 1120   | 25.0                          | mg/kg wet | 1000        |             | 112         | 75-125 |       |       |       |  |  |
| >C12-C28                        | 1070   | 25.0                          | "         | 1000        |             | 107         | 75-125 |       |       |       |  |  |
| Surrogate: 1-Chlorooctane       | 91.4   |                               | "         | 100         |             | 91.4        | 70-130 |       |       |       |  |  |
| Surrogate: o-Terphenyl          | 40.4   |                               | "         | 50.0        |             | 80.7        | 70-130 |       |       |       |  |  |
| LCS Dup (P7C0806-BSD1)          |        | Prepared & Analyzed: 03/07/17 |           |             |             |             |        |       |       |       |  |  |
| C6-C12                          | 1090   | 25.0                          | mg/kg wet | 1000        |             | 109         | 75-125 | 3.01  | 20    |       |  |  |
| >C12-C28                        | 1060   | 25.0                          | "         | 1000        |             | 106         | 75-125 | 1.05  | 20    |       |  |  |
| Surrogate: 1-Chlorooctane       | 81.9   |                               | "         | 100         |             | 81.9        | 70-130 |       |       |       |  |  |
| Surrogate: o-Terphenyl          | 36.0   |                               | "         | 50.0        |             | 72.0        | 70-130 |       |       |       |  |  |
| Matrix Spike (P7C0806-MS1)      | Source | e: 7C03007                    | 7-01      | Prepared: ( | 03/07/17 Aı | nalyzed: 03 | /08/17 |       |       |       |  |  |
| C6-C12                          | 1160   | 25.8                          | mg/kg dry | 1030        | 14.6        | 111         | 75-125 |       |       |       |  |  |
| >C12-C28                        | 1090   | 25.8                          | "         | 1030        | 22.0        | 104         | 75-125 |       |       |       |  |  |
| Surrogate: 1-Chlorooctane       | 93.9   |                               | "         | 103         |             | 91.1        | 70-130 |       |       |       |  |  |
| Surrogate: o-Terphenyl          | 44.4   |                               | "         | 51.5        |             | 86.0        | 70-130 |       |       |       |  |  |
| Matrix Spike Dup (P7C0806-MSD1) | Source | e: 7C03007                    | 7-01      | Prepared: ( | 03/07/17 Aı | nalyzed: 03 | /08/17 |       |       |       |  |  |
| C6-C12                          | 1160   | 25.8                          | mg/kg dry | 1030        | 14.6        | 112         | 75-125 | 0.666 | 20    |       |  |  |
| >C12-C28                        | 1100   | 25.8                          | "         | 1030        | 22.0        | 105         | 75-125 | 0.801 | 20    |       |  |  |
| Surrogate: 1-Chlorooctane       | 91.9   |                               | "         | 103         |             | 89.1        | 70-130 |       |       |       |  |  |
| Surrogate: o-Terphenyl          | 45.0   |                               | "         | 51.5        |             | 87.2        | 70-130 |       |       |       |  |  |

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701
2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### **Notes and Definitions**

R3 The RPD exceeded the acceptance limit due to sample matrix effects.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Dien | Devicor C |       |           |  |
|---------------------|------|-----------|-------|-----------|--|
| Report Approved By: |      |           | Date: | 3/13/2017 |  |

Brent Barron, Laboratory Director/Technical Director

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Permian Basin Environmental Lab, L.P.

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## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea Co NM

Lab Order Number: 7C24008



NELAP/TCEQ # T104704156-16-6

Report Date: 04/05/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2017 SP-27 | 7C24008-01    | Soil   | 03/21/17 18:00 | 03-24-2017 15:10 |
| 2017 SP-28 | 7C24008-02    | Soil   | 03/21/17 18:10 | 03-24-2017 15:10 |
| 2017 SP-29 | 7C24008-03    | Soil   | 03/21/17 18:15 | 03-24-2017 15:10 |
| 2017 SP-30 | 7C24008-04    | Soil   | 03/21/17 18:20 | 03-24-2017 15:10 |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

## 2017 SP-27 7C24008-01 (Soil)

| Analyte Result                                    | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes   |
|---|--------------------|-----------|-------------|--------------|----------|----------|---------------|---------|
| 1   | Permian Basin F    | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |         |
| Organics by GC                                    |                    |           |             |              |          |          |               |         |
| Benzene ND  | 0.0208             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |         |
| Toluene ND  | 0.0417             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |         |
| Ethylbenzene ND                                   | 0.0208             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |         |
| Xylene (p/m) ND                                   | 0.0417             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |         |
| Xylene (o) ND                                     | 0.0208             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |         |
| Surrogate: 4-Bromofluorobenzene                   | 96.9 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |         |
| Surrogate: 1,4-Difluorobenzene                    | 89.1 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |         |
| General Chemistry Parameters by EPA / Standard Me | thods              |           |             |              |          |          |               |         |
| % Moisture 4.0                                    | 0.1                | %         | 1           | P7C2909      | 03/29/17 | 03/29/17 | % calculation |         |
| Total Petroleum Hydrocarbons C6-C35 by EPA Metho  | d 8015M            |           |             |              |          |          |               |         |
| C6-C12 ND   | 26.0               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |         |
| >C12-C28 ND                                       | 26.0               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |         |
| >C28-C35 ND                                       | 26.0               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |         |
| Surrogate: 1-Chlorooctane                         | 77.2 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     | <u></u> |
| Surrogate: o-Terphenyl                            | 82.8 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |         |
| Total Petroleum Hydrocarbon C6-C35 ND             | 26.0               | mg/kg dry | 1           | [CALC]       | 03/30/17 | 03/31/17 | calc          |         |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## 2017 SP-28 7C24008-02 (Soil)

| Analyte   | Result       | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|---|--------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|   | Per          | mian Basin F       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                                  |              |                    |           |             |              |          |          |               |       |
| Benzene   | ND           | 0.0208             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Toluene   | ND           | 0.0417             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Ethylbenzene                                    | ND           | 0.0208             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Xylene (p/m)                                    | ND           | 0.0417             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Xylene (o)                                      | ND           | 0.0208             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene                  |              | 88.7 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene                 |              | 96.7 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / Star      | ndard Metho  | ds                 |           |             |              |          |          |               |       |
| % Moisture                                      | 4.0          | 0.1                | %         | 1           | P7C2909      | 03/29/17 | 03/29/17 | % calculation |       |
| <b>Total Petroleum Hydrocarbons C6-C35 by E</b> | PA Method 80 | 015M               |           |             |              |          |          |               |       |
| C6-C12  | ND           | 26.0               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| >C12-C28  | ND           | 26.0               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| >C28-C35  | ND           | 26.0               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                       |              | 76.8 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                          |              | 83.7 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35              | ND           | 26.0               | mg/kg dry | 1           | [CALC]       | 03/30/17 | 03/31/17 | calc          |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street

Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## 2017 SP-29 7C24008-03 (Soil)

| Analyte                                  | Result        | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|---------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Peri          | mian Basin H       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                           |               |                    |           |             |              |          |          |               |       |
| Benzene                                  | ND            | 0.0213             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Toluene                                  | ND            | 0.0426             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Ethylbenzene                             | ND            | 0.0213             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Xylene (p/m)                             | ND            | 0.0426             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Xylene (o)                               | ND            | 0.0213             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene          |               | 97.8 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene           |               | 89.6 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / St | andard Method | ds                 |           |             |              |          |          |               |       |
| % Moisture                               | 6.0           | 0.1                | %         | 1           | P7C2909      | 03/29/17 | 03/29/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by   | EPA Method 80 | )15M               |           |             |              |          |          |               |       |
| C6-C12                                   | ND            | 26.6               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| >C12-C28                                 | ND            | 26.6               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| >C28-C35                                 | ND            | 26.6               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                |               | 76.0 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                   |               | 82.9 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35       | ND            | 26.6               | mg/kg dry | 1           | [CALC]       | 03/30/17 | 03/31/17 | calc          |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## 2017 SP-30 7C24008-04 (Soil)

| Analyte                                  | Result        | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method        | Notes |
|--|---------------|--------------------|-----------|-------------|--------------|----------|----------|---------------|-------|
|  | Peri          | nian Basin E       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |               |       |
| Organics by GC                           |               |                    |           |             |              |          |          |               |       |
| Benzene                                  | ND            | 0.0211             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Toluene                                  | ND            | 0.0421             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Ethylbenzene                             | ND            | 0.0211             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Xylene (p/m)                             | ND            | 0.0421             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Xylene (o)                               | ND            | 0.0211             | mg/kg dry | 20          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Surrogate: 1,4-Difluorobenzene           |               | 88.0 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| Surrogate: 4-Bromofluorobenzene          |               | 96.7 %             | 75-1      | 25          | P7C2705      | 03/24/17 | 03/25/17 | EPA 8021B     |       |
| General Chemistry Parameters by EPA / St | andard Method | ds                 |           |             |              |          |          |               |       |
| % Moisture                               | 5.0           | 0.1                | %         | 1           | P7C2909      | 03/29/17 | 03/29/17 | % calculation |       |
| Total Petroleum Hydrocarbons C6-C35 by   | EPA Method 80 | )15M               |           |             |              |          |          |               |       |
| C6-C12                                   | ND            | 26.3               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| >C12-C28                                 | ND            | 26.3               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| >C28-C35                                 | ND            | 26.3               | mg/kg dry | 1           | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Surrogate: 1-Chlorooctane                |               | 74.1 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Surrogate: o-Terphenyl                   |               | 78.6 %             | 70-1      | 30          | P7D0205      | 03/30/17 | 03/31/17 | TPH 8015M     |       |
| Total Petroleum Hydrocarbon C6-C35       | ND            | 26.3               | mg/kg dry | 1           | [CALC]       | 03/30/17 | 03/31/17 | calc          |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Analyte                            | Result  | Limit        | Units     | Levei       | Result     | %KEC        | Limits  | KPD  | Limit | Notes |
|------------------------------------|---------|--------------|-----------|-------------|------------|-------------|---------|------|-------|-------|
| Batch P7C2705 - General Preparatio | on (GC) |              |           |             |            |             |         |      |       |       |
| Blank (P7C2705-BLK1)               |         |              |           | Prepared &  | Analyzed:  | 03/24/17    |         |      |       |       |
| Benzene                            | ND      | 0.00100      | mg/kg wet |             |            |             |         |      |       |       |
| Toluene                            | ND      | 0.00200      | "         |             |            |             |         |      |       |       |
| Ethylbenzene                       | ND      | 0.00100      | "         |             |            |             |         |      |       |       |
| Xylene (p/m)                       | ND      | 0.00200      | "         |             |            |             |         |      |       |       |
| Xylene (o)                         | ND      | 0.00100      | "         |             |            |             |         |      |       |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0546  |              | "         | 0.0600      |            | 91.1        | 75-125  |      |       |       |
| Surrogate: 4-Bromofluorobenzene    | 0.0570  |              | "         | 0.0600      |            | 95.0        | 75-125  |      |       |       |
| LCS (P7C2705-BS1)                  |         |              |           | Prepared &  | Analyzed:  | 03/24/17    |         |      |       |       |
| Benzene                            | 0.0917  | 0.00100      | mg/kg wet | 0.100       |            | 91.7        | 70-130  |      |       |       |
| Toluene                            | 0.0900  | 0.00200      | "         | 0.100       |            | 90.0        | 70-130  |      |       |       |
| Ethylbenzene                       | 0.0984  | 0.00100      | "         | 0.100       |            | 98.4        | 70-130  |      |       |       |
| Xylene (p/m)                       | 0.192   | 0.00200      | "         | 0.200       |            | 95.8        | 70-130  |      |       |       |
| Xylene (o)                         | 0.0897  | 0.00100      | "         | 0.100       |            | 89.7        | 70-130  |      |       |       |
| Surrogate: 4-Bromofluorobenzene    | 0.0620  |              | "         | 0.0600      |            | 103         | 75-125  |      |       |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0606  |              | "         | 0.0600      |            | 101         | 75-125  |      |       |       |
| LCS Dup (P7C2705-BSD1)             |         |              |           | Prepared &  | Analyzed:  | 03/24/17    |         |      |       |       |
| Benzene                            | 0.0852  | 0.00100      | mg/kg wet | 0.100       |            | 85.2        | 70-130  | 7.30 | 20    |       |
| Toluene                            | 0.0842  | 0.00200      | "         | 0.100       |            | 84.2        | 70-130  | 6.69 | 20    |       |
| Ethylbenzene                       | 0.0939  | 0.00100      | "         | 0.100       |            | 93.9        | 70-130  | 4.64 | 20    |       |
| Xylene (p/m)                       | 0.186   | 0.00200      | "         | 0.200       |            | 93.2        | 70-130  | 2.77 | 20    |       |
| Xylene (o)                         | 0.0870  | 0.00100      | "         | 0.100       |            | 87.0        | 70-130  | 3.08 | 20    |       |
| Surrogate: 4-Bromofluorobenzene    | 0.0625  |              | "         | 0.0600      |            | 104         | 75-125  |      |       |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0606  |              | "         | 0.0600      |            | 101         | 75-125  |      |       |       |
| Matrix Spike (P7C2705-MS1)         | Sour    | rce: 7C24008 | 3-04      | Prepared: 0 | 3/24/17 At | nalyzed: 03 | 3/25/17 |      |       |       |
| Benzene                            | 0.134   | 0.0211       | mg/kg dry | 0.211       | ND         | 63.5        | 80-120  |      |       | QM-0  |
| Toluene                            | 0.146   | 0.0421       | "         | 0.211       | ND         | 69.4        | 80-120  |      |       | QM-0  |
| Ethylbenzene                       | 0.178   | 0.0211       | "         | 0.211       | ND         | 84.6        | 80-120  |      |       |       |
| Xylene (p/m)                       | 0.370   | 0.0421       | "         | 0.421       | 0.0238     | 82.2        | 80-120  |      |       |       |
| Xylene (o)                         | 0.158   | 0.0211       | "         | 0.211       | 0.0158     | 67.4        | 80-120  |      |       | QM-0  |
| Surrogate: 4-Bromofluorobenzene    | 0.0636  |              | "         | 0.0632      |            | 101         | 75-125  |      |       |       |
| Surrogate: 1,4-Difluorobenzene     | 0.0593  |              | "         | 0.0632      |            | 94.0        | 75-125  |      |       |       |
|                                    |         |              |           |             |            |             |         |      |       |       |

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch P7C2705 - General Preparation (G | C | ) |
|--|---|---|
|--|---|---|

| Matrix Spike Dup (P7C2705-MSD1) | Sour   | ce: 7C24008 | 3-04      | 4 Prepared: 03/24/17 Analyzed: 03/25/17 |        |      |        |      |    |       |  |  |
|---------------------------------|--------|-------------|-----------|---|--------|------|--------|------|----|-------|--|--|
| Benzene                         | 0.129  | 0.0211      | mg/kg dry | 0.211                                   | ND     | 61.5 | 80-120 | 3.20 | 20 | QM-07 |  |  |
| Toluene                         | 0.135  | 0.0421      | "         | 0.211                                   | ND     | 64.0 | 80-120 | 8.10 | 20 | QM-07 |  |  |
| Ethylbenzene                    | 0.163  | 0.0211      | "         | 0.211                                   | ND     | 77.3 | 80-120 | 9.02 | 20 | QM-07 |  |  |
| Xylene (p/m)                    | 0.352  | 0.0421      | "         | 0.421                                   | 0.0238 | 78.0 | 80-120 | 5.31 | 20 | QM-07 |  |  |
| Xylene (o)                      | 0.148  | 0.0211      | "         | 0.211                                   | 0.0158 | 63.0 | 80-120 | 6.75 | 20 | QM-07 |  |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0581 |             | "         | 0.0632                                  |        | 91.9 | 75-125 |      |    |       |  |  |
| Surrogate: 4-Bromofluorobenzene | 0.0614 |             | "         | 0.0632                                  |        | 97.2 | 75-125 |      |    |       |  |  |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                              | Result              | Reporting<br>Limit | Units | Spike<br>Level                | Source<br>Result              | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--------------------------------------|---------------------|--------------------|-------|-------------------------------|-------------------------------|----------|----------------|------|--------------|-------|
| amaryo                               | icouit              | Liiiit             | Omis  | Level                         | Result                        | /UKEC    | Lillius        | KI D | Liiiit       | Notes |
| Batch P7C2909 - *** DEFAULT PREP *** |                     |                    |       |                               |                               |          |                |      |              |       |
| Blank (P7C2909-BLK1)                 | Prepared & Analyzed |                    |       |                               |                               | 03/29/17 |                |      |              |       |
| % Moisture                           | ND                  | 0.1                | %     |                               |                               |          |                |      |              |       |
| Duplicate (P7C2909-DUP1)             | Sou                 | rce: 7C24009-      | 16    | Prepared &                    | Analyzed:                     | 03/29/17 |                |      |              |       |
| % Moisture                           | 14.0                | 0.1                | %     |                               | 15.0                          |          |                | 6.90 | 20           |       |
| Duplicate (P7C2909-DUP2)             | Sou                 | rce: 7C27001-      | 26    | Prepared &                    | Analyzed:                     | 03/29/17 |                |      |              |       |
| % Moisture                           | 11.0                | 0.1                | %     |                               | 11.0                          |          |                | 0.00 | 20           |       |
| Duplicate (P7C2909-DUP3)             | Sou                 | rce: 7C27002-      | 24    | Prepared &                    | Prepared & Analyzed: 03/29/17 |          |                |      |              |       |
| % Moisture                           | 8.0                 | 0.1                | %     |                               | 9.0                           |          |                | 11.8 | 20           |       |
| Duplicate (P7C2909-DUP4)             | Sou                 | rce: 7C27003-      | 10    | Prepared & Analyzed: 03/29/17 |                               |          |                |      |              |       |
| % Moisture                           | 7.0                 | 0.1                | %     |                               | 10.0                          |          |                | 35.3 | 20           |       |
| Duplicate (P7C2909-DUP5)             | Sou                 | rce: 7C27004-      | 05    | Prepared &                    | k Analyzed:                   | 03/29/17 |                |      |              |       |
| % Moisture                           | 3.0                 | 0.1                | %     |                               | 3.0                           |          |                | 0.00 | 20           |       |
| Duplicate (P7C2909-DUP6)             | Sou                 | rce: 7C27004-      | 29    | Prepared &                    | Analyzed:                     | 03/29/17 |                |      |              |       |
| % Moisture                           | 8.0                 | 0.1                | %     | 8.0                           |                               |          | 0.00           | 20   |              |       |
| Duplicate (P7C2909-DUP7)             | Source: 7C28001-01  |                    |       | Prepared & Analyzed: 03/29/17 |                               |          |                |      |              |       |
| % Moisture                           | 5.0                 | 0.1                | %     | •                             | 11.0                          |          |                | 75.0 | 20           |       |

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting   |           | Spike       | Source      | N/PEG       | %REC   | 222  | RPD   |       |
|---------------------------------|--------|-------------|-----------|-------------|-------------|-------------|--------|------|-------|-------|
| Analyte                         | Result | Limit       | Units     | Level       | Result      | %REC        | Limits | RPD  | Limit | Notes |
| Batch P7D0205 - TX 1005         |        |             |           |             |             |             |        |      |       |       |
| Blank (P7D0205-BLK1)            |        |             |           | Prepared: ( | 03/30/17 At | nalyzed: 03 | /31/17 |      |       |       |
| C6-C12                          | ND     | 25.0        | mg/kg wet |             |             |             |        |      |       |       |
| >C12-C28                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| >C28-C35                        | ND     | 25.0        | "         |             |             |             |        |      |       |       |
| Surrogate: 1-Chlorooctane       | 84.6   |             | "         | 100         |             | 84.6        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 44.6   |             | "         | 50.0        |             | 89.1        | 70-130 |      |       |       |
| LCS (P7D0205-BS1)               |        |             |           | Prepared: ( | 03/30/17 A  | nalyzed: 03 | /31/17 |      |       |       |
| C6-C12                          | 843    | 25.0        | mg/kg wet | 1000        |             | 84.3        | 75-125 |      |       |       |
| >C12-C28                        | 870    | 25.0        | "         | 1000        |             | 87.0        | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 102    |             | "         | 100         |             | 102         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 44.5   |             | "         | 50.0        |             | 89.0        | 70-130 |      |       |       |
| LCS Dup (P7D0205-BSD1)          |        |             |           | Prepared: ( | 03/30/17 At | nalyzed: 03 | /31/17 |      |       |       |
| C6-C12                          | 817    | 25.0        | mg/kg wet | 1000        |             | 81.7        | 75-125 | 3.17 | 20    |       |
| >C12-C28                        | 855    | 25.0        | "         | 1000        |             | 85.5        | 75-125 | 1.80 | 20    |       |
| Surrogate: 1-Chlorooctane       | 98.1   |             | "         | 100         |             | 98.1        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 42.0   |             | "         | 50.0        |             | 84.1        | 70-130 |      |       |       |
| Matrix Spike (P7D0205-MS1)      | Source | ce: 7C24006 | 5-13      | Prepared: ( | 03/30/17 At | nalyzed: 03 | /31/17 |      |       |       |
| C6-C12                          | 811    | 26.9        | mg/kg dry | 1080        | 21.1        | 73.4        | 75-125 |      |       | QM-0  |
| >C12-C28                        | 839    | 26.9        | "         | 1080        | 13.3        | 76.8        | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 99.0   |             | "         | 108         |             | 92.1        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 49.9   |             | "         | 53.8        |             | 92.9        | 70-130 |      |       |       |
| Matrix Spike Dup (P7D0205-MSD1) | Source | ce: 7C24006 | 5-13      | Prepared: ( | 03/30/17 Aı | nalyzed: 03 | /31/17 |      |       |       |
| C6-C12                          | 872    | 26.9        | mg/kg dry | 1080        | 21.1        | 79.2        | 75-125 | 7.50 | 20    |       |
| >C12-C28                        | 894    | 26.9        | "         | 1080        | 13.3        | 81.9        | 75-125 | 6.45 | 20    |       |
| Surrogate: 1-Chlorooctane       | 105    |             | "         | 108         |             | 98.0        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 52.2   |             | "         | 53.8        |             | 97.2        | 70-130 |      |       |       |

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas

Project: Monument 18

Project Number: TNM-Monument 18

Fax: (432) 520-7701

Midland TX, 79703 Project Manager: Curt Stanley

#### **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.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Burn Barron |       |          |
|---------------------|-------------|-------|----------|
| Report Approved By: |             | Date: | 4/5/2017 |

Brent Barron, Laboratory Director/Technical Director

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Permian Basin Environmental Lab, L.P.

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## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea Co NM

Lab Order Number: 7E08026



NELAP/TCEQ # T104704156-16-6

Report Date: 05/18/17

TRC Solutions- Midland, Texas Project: Monument 18
2057 Commerce Street Project Number: TNM-Monument 18
Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2017 SP-31 | 7E08026-01    | Soil   | 05/04/17 17:30 | 05-08-2017 13:30 |
| 2017 SP-32 | 7E08026-02    | Soil   | 05/04/17 17:45 | 05-08-2017 13:30 |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street

Project Number: TNM-Monument 18

Midland TX, 79703

Project Manager: Curt Stanley

2017 SP-31 7E08026-01 (Soil)

|               | Domonti  |  |  |  |   |  |               |       |
|---------------|--|--|--|--|---|--|---------------|-------|
| Result        | Limit  | Units  | Dilution   | Batch  | Prepared                                  | Analyzed   | Method        | Notes |
| Pern          | nian Basin E   | Environme  | ıtal Lab, l  | L <b>.P.</b>   |   |  |               |       |
|               |  |  |  |  |   |  |               |       |
| ND            | 0.0202   | mg/kg dry  | 20   | P7E1007  | 05/09/17                                  | 05/10/17   | EPA 8021B     |       |
| ND            | 0.0404   | mg/kg dry  | 20   | P7E1007  | 05/09/17                                  | 05/10/17   | EPA 8021B     |       |
| ND            | 0.0202   | mg/kg dry  | 20   | P7E1007  | 05/09/17                                  | 05/10/17   | EPA 8021B     |       |
| ND            | 0.0404   | mg/kg dry  | 20   | P7E1007  | 05/09/17                                  | 05/10/17   | EPA 8021B     |       |
| ND            | 0.0202   | mg/kg dry  | 20   | P7E1007  | 05/09/17                                  | 05/10/17   | EPA 8021B     |       |
|               | 94.6 %   | 75-1   | 25   | P7E1007  | 05/09/17                                  | 05/10/17   | EPA 8021B     |       |
|               | 98.9 %   | 75-1   | 25   | P7E1007  | 05/09/17                                  | 05/10/17   | EPA 8021B     |       |
| andard Method | ls   |  |  |  |   |  |               |       |
| 1.0           | 0.1  | %  | 1  | P7E1101  | 05/11/17                                  | 05/11/17   | % calculation |       |
| EPA Method 80 | 15M  |  |  |  |   |  |               |       |
| ND            | 25.3   | mg/kg dry  | 1  | P7E1601  | 05/10/17                                  | 05/11/17   | TPH 8015M     |       |
| ND            | 25.3   | mg/kg dry  | 1  | P7E1601  | 05/10/17                                  | 05/11/17   | TPH 8015M     |       |
| ND            | 25.3   | mg/kg dry  | 1  | P7E1601  | 05/10/17                                  | 05/11/17   | TPH 8015M     |       |
|               | 81.5 %   | 70-1   | 30   | P7E1601  | 05/10/17                                  | 05/11/17   | TPH 8015M     |       |
|               | 88.5 %   | 70-1   | 30   | P7E1601  | 05/10/17                                  | 05/11/17   | TPH 8015M     |       |
| ND            | 25.3   | mg/kg dry  | 1  | [CALC]   | 05/10/17                                  | 05/11/17   | calc          |       |
|               | Pern ND ND ND ND  Andard Method 1.0  EPA Method 80 ND ND ND ND | ND   0.0202     ND   0.0404     ND   0.0404     ND   0.0404     ND   0.0202     ND   0.0404     ND   0.0202     94.6 %     98.9 %     Sandard Methods     1.0   0.1     EPA Method 8015M     ND   25.3     ND   25.3     ND   25.3     ND   25.3     81.5 %     88.5 % | ND   0.0202   mg/kg dry     ND   0.0404   mg/kg dry     ND   0.0404   mg/kg dry     ND   0.0404   mg/kg dry     ND   0.0404   mg/kg dry     ND   0.0202   mg/kg dry     ND   0.0202   mg/kg dry     ND   0.0202   mg/kg dry     Sandard Methods     1.0   0.1   %     EPA Method 8015M     ND   25.3   mg/kg dry     ND   25.3   mg/kg d | ND   0.0202   mg/kg dry   20     ND   0.0404   mg/kg dry   20     ND   0.0202   mg/kg dry   20     ND   0.0202   mg/kg dry   20     Separation of the state o | Result   Limit   Units   Dilution   Batch | Result   Limit   Units   Dilution   Batch   Prepared | ND            | ND    |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

## 2017 SP-32 7E08026-02 (Soil)

|  |                | Domontino.         |           |          |         |          |          |               |       |  |  |
|--|----------------|--------------------|-----------|----------|---------|----------|----------|---------------|-------|--|--|
| Analyte  | Result         | Reporting<br>Limit | Units     | Dilution | Batch   | Prepared | Analyzed | Method        | Notes |  |  |
| Permian Basin Environmental Lab, L.P.              |                |                    |           |          |         |          |          |               |       |  |  |
| Organics by GC                                     | Organics by GC |                    |           |          |         |          |          |               |       |  |  |
| Benzene  | ND             | 0.0215             | mg/kg dry | 20       | P7E1007 | 05/09/17 | 05/10/17 | EPA 8021B     |       |  |  |
| Toluene  | ND             | 0.0430             | mg/kg dry | 20       | P7E1007 | 05/09/17 | 05/10/17 | EPA 8021B     |       |  |  |
| Ethylbenzene                                       | ND             | 0.0215             | mg/kg dry | 20       | P7E1007 | 05/09/17 | 05/10/17 | EPA 8021B     |       |  |  |
| Xylene (p/m)                                       | ND             | 0.0430             | mg/kg dry | 20       | P7E1007 | 05/09/17 | 05/10/17 | EPA 8021B     |       |  |  |
| Xylene (o)   | ND             | 0.0215             | mg/kg dry | 20       | P7E1007 | 05/09/17 | 05/10/17 | EPA 8021B     |       |  |  |
| Surrogate: 4-Bromofluorobenzene                    |                | 94.0 %             | 75-1      | 25       | P7E1007 | 05/09/17 | 05/10/17 | EPA 8021B     |       |  |  |
| Surrogate: 1,4-Difluorobenzene                     |                | 95.7 %             | 75-1      | 25       | P7E1007 | 05/09/17 | 05/10/17 | EPA 8021B     |       |  |  |
| <b>General Chemistry Parameters by EPA / Stand</b> | lard Method    | ds                 |           |          |         |          |          |               |       |  |  |
| % Moisture   | 7.0            | 0.1                | %         | 1        | P7E1101 | 05/11/17 | 05/11/17 | % calculation |       |  |  |
| Total Petroleum Hydrocarbons C6-C35 by EPA         | A Method 80    | )15M               |           |          |         |          |          |               |       |  |  |
| C6-C12   | ND             | 26.9               | mg/kg dry | 1        | P7E1704 | 05/16/17 | 05/17/17 | TPH 8015M     |       |  |  |
| >C12-C28   | ND             | 26.9               | mg/kg dry | 1        | P7E1704 | 05/16/17 | 05/17/17 | TPH 8015M     |       |  |  |
| >C28-C35   | ND             | 26.9               | mg/kg dry | 1        | P7E1704 | 05/16/17 | 05/17/17 | TPH 8015M     |       |  |  |
| Surrogate: 1-Chlorooctane                          |                | 125 %              | 70-1      | 30       | P7E1704 | 05/16/17 | 05/17/17 | TPH 8015M     |       |  |  |
| Total Petroleum Hydrocarbon C6-C35                 | ND             | 26.9               | mg/kg dry | 1        | [CALC]  | 05/16/17 | 05/17/17 | calc          |       |  |  |

RPD

%REC

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703

LCS (P7E1007-BS1)

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## **Organics by GC - Quality Control** Permian Basin Environmental Lab, L.P.

Spike

Source

Prepared & Analyzed: 05/09/17

| Analyte                              | Result | Limit   | Units     | Level      | Result      | %REC     | Limits | RPD | Limit | Notes |
|--------------------------------------|--------|---------|-----------|------------|-------------|----------|--------|-----|-------|-------|
| Batch P7E1007 - *** DEFAULT PREP *** |        |         |           |            |             |          |        |     |       |       |
| Blank (P7E1007-BLK1)                 |        |         |           | Prepared & | & Analyzed: | 05/09/17 |        |     |       |       |
| Benzene                              | ND     | 0.00100 | mg/kg wet |            |             |          |        |     |       |       |
| Toluene                              | ND     | 0.00200 | "         |            |             |          |        |     |       |       |
| Ethylbenzene                         | ND     | 0.00100 | "         |            |             |          |        |     |       |       |
| Xylene (p/m)                         | ND     | 0.00200 | "         |            |             |          |        |     |       |       |

| Xylene (o)                     | ND     | 0.00100 | "  |        |     |        |
|--------------------------------|--------|---------|----|--------|-----|--------|
| Surrogate: 1,4-Difluorobenzene | 0.0602 |         | "  | 0.0600 | 100 | 75-125 |
| G                              | 0.0626 |         | ,, | 0.0600 | 106 | 75 125 |

Reporting

| Surrogate: 4-Bromofluorobenzene | 0.0636 | " | 0.0600 | 106 | 75-125 |
|---------------------------------|--------|---|--------|-----|--------|
|                                 |        |   |        |     |        |

| Benzene                         | 0.119  | 0.00100 | mg/kg wet | 0.100  | 119 | 70-130 |  |
|---------------------------------|--------|---------|-----------|--------|-----|--------|--|
| Toluene                         | 0.106  | 0.00200 | "         | 0.100  | 106 | 70-130 |  |
| Ethylbenzene                    | 0.116  | 0.00100 | "         | 0.100  | 116 | 70-130 |  |
| Xylene (p/m)                    | 0.203  | 0.00200 | "         |        |     | 70-130 |  |
| Xylene (o)                      | 0.101  | 0.00100 | "         |        |     | 70-130 |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0616 |         | "         | 0.0600 | 103 | 75-125 |  |
| Surrogate: 4-Bromofluorobenzene | 0.0627 |         | "         | 0.0600 | 105 | 75-125 |  |
|                                 |        |         |           |        |     |        |  |

| 3                      |       |                               |           |       |     |        |       |    |  |  |
|------------------------|-------|-------------------------------|-----------|-------|-----|--------|-------|----|--|--|
| LCS Dup (P7E1007-BSD1) |       | Prepared & Analyzed: 05/09/17 |           |       |     |        |       |    |  |  |
| Benzene                | 0.117 | 0.00100                       | mg/kg wet | 0.100 | 117 | 70-130 | 2.32  | 20 |  |  |
| Toluene                | 0.109 | 0.00200                       | "         | 0.100 | 109 | 70-130 | 2.24  | 20 |  |  |
| Ethylbenzene           | 0.117 | 0.00100                       | "         | 0.100 | 117 | 70-130 | 0.815 | 20 |  |  |
| Xylene (p/m)           | 0.201 | 0.00200                       | "         |       |     | 70-130 |       | 20 |  |  |
| Xvlene (o)             | 0.101 | 0.00100                       | "         |       |     | 70-130 |       | 20 |  |  |

| Affence (b)                     | 0.101  | 0.00100 |        |      | 70 150 |
|---------------------------------|--------|---------|--------|------|--------|
| Surrogate: 1,4-Difluorobenzene  | 0.0627 | "       | 0.0600 | 104  | 75-125 |
| Surrogate: 4-Bromofluorobenzene | 0.0589 | "       | 0.0600 | 98.2 | 75-125 |
|                                 |        |         |        |      |        |

| Matrix Spike (P7E1007-MS1)      | Source | Source: 7E08026-02 |           |      | 05/09/17 A | nalyzed: 05 | 5/10/17 |       |
|---------------------------------|--------|--------------------|-----------|------|------------|-------------|---------|-------|
| Benzene                         | 1.68   | 0.0215             | mg/kg dry | 4.30 | ND         | 39.1        | 80-120  | QM-07 |
| Toluene                         | 1.48   | 0.0430             | "         | 4.30 | ND         | 34.3        | 80-120  | QM-07 |
| Ethylbenzene                    | 1.57   | 0.0215             | "         | 4.30 | ND         | 36.5        | 80-120  | QM-07 |
| Xylene (p/m)                    | 3.70   | 0.0430             | "         |      | ND         |             | 80-120  | QM-07 |
| Xylene (o)                      | 1.69   | 0.0215             | "         |      | ND         |             | 80-120  | QM-07 |
| Surrogate: 1,4-Difluorobenzene  | 1.29   |                    | "         | 1.29 |            | 100         | 75-125  |       |
| Surrogate: 4-Bromofluorobenzene | 1.28   |                    | "         | 1.29 |            | 99.6        | 75-125  |       |

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

Fax: (432) 520-7701

2057 Commerce Street Midland TX, 79703

Project Manager: Curt Stanley

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         | I      | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

#### Batch P7E1007 - \*\*\* DEFAULT PREP \*\*\*

| Matrix Spike Dup (P7E1007-MSD1) | Sour | Source: 7E08026-02 |           |      | Prepared: 05/09/17 Analyzed: 05/10/17 |      |        |      |    |       |
|---------------------------------|------|--------------------|-----------|------|---------------------------------------|------|--------|------|----|-------|
| Benzene                         | 1.64 | 0.0215             | mg/kg dry | 4.30 | ND                                    | 38.1 | 80-120 | 2.59 | 20 | QM-07 |
| Toluene                         | 2.20 | 0.0430             | "         | 4.30 | ND                                    | 51.2 | 80-120 | 39.5 | 20 | QM-07 |
| Ethylbenzene                    | 1.75 | 0.0215             | "         | 4.30 | ND                                    | 40.7 | 80-120 | 10.9 | 20 | QM-07 |
| Xylene (p/m)                    | 4.19 | 0.0430             | "         |      | ND                                    |      | 80-120 |      | 20 | QM-07 |
| Xylene (o)                      | 1.54 | 0.0215             | "         |      | ND                                    |      | 80-120 |      | 20 | QM-07 |
| Surrogate: 1,4-Difluorobenzene  | 1.26 |                    | "         | 1.29 |                                       | 98.0 | 75-125 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 1.34 |                    | "         | 1.29 |                                       | 104  | 75-125 |      |    |       |

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |   | Reporting   |       | Spike      | Source    |            | %REC   |      | RPD   |       |
|--------------------------------------|---|---|-------|------------|-----------|------------|--------|------|-------|-------|
| Analyte                              | Result  | Limit   | Units | Level      | Result    | %REC       | Limits | RPD  | Limit | Notes |
| Batch P7E1101 - *** DEFAULT PREP *** |   |   |       |            |           |            |        |      |       |       |
| Blank (P7E1101-BLK1)                 |   |   |       | Prepared & | Analyzed: | 05/11/17   |        |      |       |       |
| % Moisture                           | ND  | 0.1   | %     |            |           |            |        |      |       |       |
| Blank (P7E1101-BLK2)                 |   |   |       | Prepared & | Analyzed: | : 05/11/17 |        |      |       |       |
| % Moisture                           | ND  | 0.1   | %     |            |           |            |        |      |       |       |
| Duplicate (P7E1101-DUP1)             | Sour  | rce: 7E08001-   | 26    | Prepared & | Analyzed: | : 05/11/17 |        |      |       |       |
| % Moisture                           | 15.0  | 0.1   | %     |            | 15.0      |            |        | 0.00 | 20    |       |
| Duplicate (P7E1101-DUP2)             | Sour  | rce: 7E08022-   | 10    | Prepared & | Analyzed: | : 05/11/17 |        |      |       |       |
| % Moisture                           | 12.0  | 0.1   | %     |            | 13.0      |            |        | 8.00 | 20    |       |
| Duplicate (P7E1101-DUP3)             | Sou   | <b>Source: 7E09001-14</b> Prepared & Analyzed: 05/11/17 |       |            |           |            |        |      |       |       |
| % Moisture                           | 12.0  | 0.1   | %     |            | 13.0      |            |        | 8.00 | 20    |       |
| Duplicate (P7E1101-DUP4)             | <b>Source: 7E09005-04</b> Prepared & Analyzed: 05/11/17 |   |       |            |           |            |        |      |       |       |
| % Moisture                           | 1.0   | 0.1   | %     |            | 2.0       |            |        | 66.7 | 20    |       |
| Duplicate (P7E1101-DUP5)             | Sou   | rce: 7E10007-   | 26    | Prepared & | Analyzed: | : 05/11/17 |        |      |       |       |
| % Moisture                           | 13.0  | 0.1   | %     |            | 14.0      |            |        | 7.41 | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

| Batch P7E1601 - SW846-1311   Barch P7E1601 - BLK1)   |                                 |        | Reporting  |           | Spike       | Source      |             | %REC   |      | RPD   |       |
|--|---------------------------------|--------|------------|-----------|-------------|-------------|-------------|--------|------|-------|-------|
| Prepared: 05/10/17   Analyzed: 05/11/17  | Analyte                         | Result | Limit      | Units     | Level       | Result      | %REC        | Limits | RPD  | Limit | Notes |
| ND   | Batch P7E1601 - SW846-1311      |        |            |           |             |             |             |        |      |       |       |
| ND   25.0   "  | Blank (P7E1601-BLK1)            |        |            |           | Prepared: ( | 05/10/17 At | nalyzed: 05 | /11/17 |      |       |       |
| ND   25.0   "   100   93.0   70-130   Surrogate: o-Terphenyl   52.7   " 50.0   105   70-130   Surrogate: o-Terphenyl   52.7   " 50.0   100   82.0   75-125   Surrogate: o-Terphenyl   52.0   " 1000   100   70-130   Surrogate: o-Terphenyl   51.3   " 1000   118   75-125   3.55   20   Surrogate: o-Terphenyl   51.3   " 1000   118   75-125   14.8   20   Surrogate: o-Terphenyl   51.3   " 1000   118   75-125   14.8   20   Surrogate: o-Terphenyl   51.3   " 1000   123   70-130   Surrogate: o-Terphenyl   51.3   " 1000   100   100   100   Surrogate: o-Terphenyl   51.3   " 1000   100   100   Surrogate: o-Terphenyl   51.3   " 1000   100   Surrogate: o-Terphenyl   51.3   " 1000   Surrogate: o-Terphenyl   51.3   " 1000   Surrogate: o-Terphenyl   Surrogate: o-Terphenyl   51.3   " 1000   Surrogate: o-Terphenyl   Surrogate: o-Terphenyl   51.3   " 1000   Surrogate: o-Terphenyl   Surrogate: o-Terphenyl   Surrogate: o-Terphenyl   To-To-To-To-To-To-To-To-To-To-To-To-To-T  | C6-C12                          | ND     | 25.0       | mg/kg wet |             |             |             |        |      |       |       |
| Surrogate: I-Chlorooctane   93.0   "   100   93.0   70-130     Surrogate: o-Terphenyl   52.7   "   50.0   105   70-130     CCC-C12   | >C12-C28                        | ND     | 25.0       | "         |             |             |             |        |      |       |       |
| Surrogate: o-Terphenyl   S2.7   " S0.0   S0.10/17   Analyzed: 05/11/17   | >C28-C35                        | ND     | 25.0       | "         |             |             |             |        |      |       |       |
| No.   Prepared: 05/10/17   Analyzed: 05/11/17   Analyzed: 05/11/17   | Surrogate: 1-Chlorooctane       | 93.0   |            | "         | 100         |             | 93.0        | 70-130 |      |       |       |
| Surrogate: 1-Chlorooctane   106   "   100   106   70-130   | Surrogate: o-Terphenyl          | 52.7   |            | "         | 50.0        |             | 105         | 70-130 |      |       |       |
| Color   Colo | LCS (P7E1601-BS1)               |        |            |           | Prepared: ( | 05/10/17 Aı | nalyzed: 05 | /11/17 |      |       |       |
| Surrogate: I-Chlorooctane   106  | C6-C12                          | 820    | 25.0       | mg/kg wet | 1000        |             | 82.0        | 75-125 |      |       |       |
| Surrogate: o-Terphenyl   45.2  | >C12-C28                        | 1020   | 25.0       | "         | 1000        |             | 102         | 75-125 |      |       |       |
| LCS Dup (PTE1601-BSD1)   Prepared: 05/10/17   Analyzed: 05/11/17   | Surrogate: 1-Chlorooctane       | 106    |            | "         | 100         |             | 106         | 70-130 |      |       |       |
| Surrogate: 1-Chlorooctane   Source: 7E08026-01   Prepared: 05/10/17   Analyzed: 05/11/17   | Surrogate: o-Terphenyl          | 45.2   |            | "         | 50.0        |             | 90.5        | 70-130 |      |       |       |
| Surrogate: 1-Chlorooctane   123  | LCS Dup (P7E1601-BSD1)          |        |            |           | Prepared: ( | 05/10/17 Aı | nalyzed: 05 | /11/17 |      |       |       |
| Surrogate: 1-Chlorooctane   123  | C6-C12                          | 850    | 25.0       | mg/kg wet | 1000        |             | 85.0        | 75-125 | 3.55 | 20    |       |
| Surrogate: 0-Terphenyl   Si.3   "   Source: 7E08026-01   Prepared: 05/10/17   Analyzed: 05/11/17   | >C12-C28                        | 1180   | 25.0       | "         | 1000        |             | 118         | 75-125 | 14.8 | 20    |       |
| Matrix Spike (P7E1601-MS1)         Source: 7E08026-01         Prepared: 05/10/17 Analyzed: 05/11/17           C6-C12         327         25.3 mg/kg dry         1010 ND 32.3 75-125           >C12-C28         339         25.3 " 1010 24.7 31.1 75-125           Surrogate: I-Chlorooctane         45.2 " 101 44.8 70-130           Surrogate: o-Terphenyl         17.8 " 50.5 35.3 70-130           Matrix Spike Dup (P7E1601-MSD1)         Source: 7E08026-01 Prepared: 05/10/17 Analyzed: 05/11/17           C6-C12         315 25.3 mg/kg dry 1010 ND 31.2 75-125 3.51 20           >C12-C28         324 25.3 " 1010 24.7 29.6 75-125 4.84 20           Surrogate: I-Chlorooctane         43.3 " 101 42.9 70-130  | Surrogate: 1-Chlorooctane       | 123    |            | "         | 100         |             | 123         | 70-130 |      |       |       |
| C6-C12   327   25.3 mg/kg dry   1010 ND   32.3   75-125  | Surrogate: o-Terphenyl          | 51.3   |            | "         | 50.0        |             | 103         | 70-130 |      |       |       |
| Surrogate: I-Chlorooctane   45.2   | Matrix Spike (P7E1601-MS1)      | Sourc  | e: 7E08026 | 5-01      | Prepared: ( | 05/10/17 Aı | nalyzed: 05 | /11/17 |      |       |       |
| Surrogate: I-Chlorooctane  | C6-C12                          | 327    | 25.3       | mg/kg dry | 1010        | ND          | 32.3        | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane   43.2   101   44.8   70-130   | >C12-C28                        | 339    | 25.3       | "         | 1010        | 24.7        | 31.1        | 75-125 |      |       |       |
| Matrix Spike Dup (P7E1601-MSD1)         Source: 7E08026-01         Prepared: 05/10/17 Analyzed: 05/11/17           C6-C12         315         25.3 mg/kg dry         1010 ND         31.2 75-125         3.51         20           >C12-C28         324         25.3 "         1010         24.7 29.6 75-125         4.84         20           Surrogate: 1-Chlorooctane         43.3 "         101         42.9 70-130  | Surrogate: 1-Chlorooctane       | 45.2   |            | "         | 101         |             | 44.8        | 70-130 |      |       |       |
| C6-C12     315     25.3 mg/kg dry     1010 ND     31.2 75-125 3.51 20       >C12-C28     324     25.3 " 1010 24.7 29.6 75-125 4.84 20       Surrogate: 1-Chlorooctane     43.3 " 101 42.9 70-130   | Surrogate: o-Terphenyl          | 17.8   |            | "         | 50.5        |             | 35.3        | 70-130 |      |       |       |
| >C12-C28 324 25.3 " 1010 24.7 29.6 75-125 4.84 20 Surrogate: I-Chlorooctane 43.3 " 101 42.9 70-130   | Matrix Spike Dup (P7E1601-MSD1) | Sourc  | e: 7E08026 | 5-01      | Prepared: ( | 05/10/17 Aı | nalyzed: 05 | /11/17 |      |       |       |
| Surrogate: 1-Chlorooctane 43.3 " 101 42.9 70-130   | C6-C12                          | 315    | 25.3       | mg/kg dry | 1010        | ND          | 31.2        | 75-125 | 3.51 | 20    |       |
| Surrogate. 1-Chiorocciane 45.5 101 42.9 /0-130   | >C12-C28                        | 324    | 25.3       | "         | 1010        | 24.7        | 29.6        | 75-125 | 4.84 | 20    |       |
| Surrogate: o-Terphenvl 17.0 " 50.5 33.6 70-130   | Surrogate: 1-Chlorooctane       | 43.3   |            | "         | 101         |             | 42.9        | 70-130 |      |       |       |
|  | Surrogate: o-Terphenyl          | 17.0   |            | "         | 50.5        |             | 33.6        | 70-130 |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                |        | Reporting   |           | Spike       | Source      |             | %REC   |       | RPD   |       |
|--------------------------------|--------|-------------|-----------|-------------|-------------|-------------|--------|-------|-------|-------|
| alyte                          | Result | Limit       | Units     | Level       | Result      | %REC        | Limits | RPD   | Limit | Notes |
| tch P7E1704 - TX 1005          |        |             |           |             |             |             |        |       |       |       |
| ank (P7E1704-BLK1)             |        |             |           | Prepared: ( | 05/16/17 At | nalyzed: 05 | /17/17 |       |       |       |
| -C12                           | ND     | 25.0        | mg/kg wet |             |             |             |        |       |       |       |
| 12-C28                         | ND     | 25.0        | "         |             |             |             |        |       |       |       |
| 28-C35                         | ND     | 25.0        | "         |             |             |             |        |       |       |       |
| rogate: 1-Chlorooctane         | 97.0   |             | "         | 100         |             | 97.0        | 70-130 |       |       |       |
| rogate: o-Terphenyl            | 51.0   |             | "         | 50.0        |             | 102         | 70-130 |       |       |       |
| CS (P7E1704-BS1)               |        |             |           | Prepared: ( | 05/16/17 Aı | nalyzed: 05 | /17/17 |       |       |       |
| -C12                           | 843    | 25.0        | mg/kg wet | 1000        |             | 84.3        | 75-125 |       |       |       |
| 12-C28                         | 839    | 25.0        | "         | 1000        |             | 83.9        | 75-125 |       |       |       |
| rogate: 1-Chlorooctane         | 98.3   |             | "         | 100         |             | 98.3        | 70-130 |       |       |       |
| rogate: o-Terphenyl            | 47.4   |             | "         | 50.0        |             | 94.7        | 70-130 |       |       |       |
| CS Dup (P7E1704-BSD1)          |        |             |           | Prepared: ( | 05/16/17 Aı | nalyzed: 05 | /17/17 |       |       |       |
| -C12                           | 883    | 25.0        | mg/kg wet | 1000        |             | 88.3        | 75-125 | 4.70  | 20    |       |
| 12-C28                         | 862    | 25.0        | "         | 1000        |             | 86.2        | 75-125 | 2.71  | 20    |       |
| rogate: 1-Chlorooctane         | 100    |             | "         | 100         |             | 100         | 70-130 |       |       |       |
| rogate: o-Terphenyl            | 48.0   |             | "         | 50.0        |             | 96.1        | 70-130 |       |       |       |
| atrix Spike (P7E1704-MS1)      | Sour   | ce: 7E15004 | 1-05      | Prepared: ( | 05/16/17 Aı | nalyzed: 05 | /17/17 |       |       |       |
| -C12                           | 868    | 26.3        | mg/kg dry | 1050        | 16.9        | 80.9        | 75-125 |       |       |       |
| 12-C28                         | 860    | 26.3        | "         | 1050        | 38.9        | 78.0        | 75-125 |       |       |       |
| rogate: 1-Chlorooctane         | 102    |             | "         | 105         |             | 96.8        | 70-130 |       |       |       |
| rogate: o-Terphenyl            | 52.0   |             | "         | 52.6        |             | 98.9        | 70-130 |       |       |       |
| atrix Spike Dup (P7E1704-MSD1) | Sour   | ce: 7E15004 | I-05      | Prepared: ( | 05/16/17 Aı | nalyzed: 05 | /17/17 |       |       |       |
| -C12                           | 865    | 26.3        | mg/kg dry | 1050        | 16.9        | 80.6        | 75-125 | 0.380 | 20    |       |
| 12-C28                         | 853    | 26.3        | "         | 1050        | 38.9        | 77.4        | 75-125 | 0.880 | 20    |       |
| rogate: 1-Chlorooctane         | 103    |             | "         | 105         |             | 97.7        | 70-130 |       |       |       |
| rogate: o-Terphenyl            | 48.9   |             | "         | 52.6        |             | 92.9        | 70-130 |       |       |       |
| rogate: o-Terphenyl            | 48.9   |             | "         | 52.6        |             | 92.9        | 70-130 |       |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701
2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### **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.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Bun Barron |       |           |
|---------------------|------------|-------|-----------|
| Report Approved By: |            | Date: | 5/18/2017 |

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



## Analytical Report

#### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 7F09002



NELAP/TCEQ # T104704516-16-7

Report Date: 06/14/17

TRC Solutions- Midland, Texas 2057 Commerce Street

Project: Monument 18
Project Number: TNM-Monument 18

Midland TX, 79703

Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID   | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|-------------|---------------|--------|----------------|------------------|
| 2017- SP-33 | 7F09002-01    | Soil   | 06/06/17 15:00 | 06-09-2017 13:30 |
| 2017- SP-34 | 7F09002-02    | Soil   | 06/06/17 15:30 | 06-09-2017 13:30 |

TRC Solutions- Midland, Texas

Project: Monument 18 2057 Commerce Street Project Number: TNM-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

> 2017- SP-33 7F09002-01 (Soil)

| Analyte                               | Result              | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|---------------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|                                       | Pern                | nian Basin E       | Environmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                        |                     |                    |            |             |              |          |          |            |       |
| Benzene                               | ND                  | 0.00109            | mg/kg dry  | 1           | P7F1402      | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Toluene                               | ND                  | 0.00217            | mg/kg dry  | 1           | P7F1402      | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Ethylbenzene                          | ND                  | 0.00109            | mg/kg dry  | 1           | P7F1402      | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Xylene (p/m)                          | ND                  | 0.00217            | mg/kg dry  | 1           | P7F1402      | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Xylene (o)                            | ND                  | 0.00109            | mg/kg dry  | 1           | P7F1402      | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                     | 94.1 %             | 75-1       | 25          | P7F1402      | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                     | 88.7 %             | 75-1       | 25          | P7F1402      | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA   | A / Standard Method | ls                 |            |             |              |          |          |            |       |
| % Moisture                            | 8.0                 | 0.1                | %          | 1           | P7F1205      | 06/12/17 | 06/12/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C3    | 5 by EPA Method 80  | 015M               |            |             |              |          |          |            |       |
| C6-C12                                | ND                  | 27.2               | mg/kg dry  | 1           | P7F1204      | 06/09/17 | 06/10/17 | TPH 8015M  | ,     |
| >C12-C28                              | 204                 | 27.2               | mg/kg dry  | 1           | P7F1204      | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| >C28-C35                              | 89.2                | 27.2               | mg/kg dry  | 1           | P7F1204      | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                     | 92.1 %             | 70-1       | 30          | P7F1204      | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                     | 92.5 %             | 70-1       | 30          | P7F1204      | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon<br>C6-C35 | 293                 | 27.2               | mg/kg dry  | 1           | [CALC]       | 06/09/17 | 06/10/17 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

2017- SP-34 7F09002-02 (Soil)

| Analyte                               | Result           | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|------------------|--------------------|-----------|-------------|---------|----------|----------|------------|-------|
|                                       | Perm             | ian Basin E        | nvironmen | ıtal Lab, I | P.      |          |          |            |       |
| Organics by GC                        |                  |                    |           |             |         |          |          |            |       |
| Benzene                               | ND               | 0.00106            | mg/kg dry | 1           | P7F1402 | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Toluene                               | ND               | 0.00213            | mg/kg dry | 1           | P7F1402 | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Ethylbenzene                          | ND               | 0.00106            | mg/kg dry | 1           | P7F1402 | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Xylene (p/m)                          | ND               | 0.00213            | mg/kg dry | 1           | P7F1402 | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Xylene (o)                            | ND               | 0.00106            | mg/kg dry | 1           | P7F1402 | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                  | 94.0 %             | 75-1      | 25          | P7F1402 | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                  | 85.4 %             | 75-1      | 25          | P7F1402 | 06/13/17 | 06/13/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA   | Standard Method  | ls                 |           |             |         |          |          |            |       |
| % Moisture                            | 6.0              | 0.1                | %         | 1           | P7F1205 | 06/12/17 | 06/12/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 h | oy EPA Method 80 | 15M                |           |             |         |          |          |            |       |
| C6-C12                                | ND               | 26.6               | mg/kg dry | 1           | P7F1204 | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| >C12-C28                              | ND               | 26.6               | mg/kg dry | 1           | P7F1204 | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| >C28-C35                              | ND               | 26.6               | mg/kg dry | 1           | P7F1204 | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                  | 91.9 %             | 70-1      | 30          | P7F1204 | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                  | 94.0 %             | 70-1      | 30          | P7F1204 | 06/09/17 | 06/10/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35    | ND               | 26.6               | mg/kg dry | 1           | [CALC]  | 06/09/17 | 06/10/17 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
|         |        |           |       |       |        |      |        |     |       |       |

| Batch P7F1402 - General Preparatio | n (GC) |             |           |              |           |          |        |      |    |   |
|------------------------------------|--------|-------------|-----------|--------------|-----------|----------|--------|------|----|---|
| Blank (P7F1402-BLK1)               |        |             |           | Prepared & A | Analyzed: | 06/13/17 |        |      |    |   |
| Benzene                            | ND     | 0.00100     | mg/kg wet |              |           |          |        |      |    |   |
| Toluene                            | ND     | 0.00200     | "         |              |           |          |        |      |    |   |
| Ethylbenzene                       | ND     | 0.00100     | "         |              |           |          |        |      |    |   |
| Xylene (p/m)                       | ND     | 0.00200     | "         |              |           |          |        |      |    |   |
| Xylene (o)                         | ND     | 0.00100     | "         |              |           |          |        |      |    |   |
| Surrogate: 1,4-Difluorobenzene     | 0.0534 |             | "         | 0.0600       |           | 89.1     | 75-125 |      |    |   |
| Surrogate: 4-Bromofluorobenzene    | 0.0525 |             | "         | 0.0600       |           | 87.5     | 75-125 |      |    |   |
| LCS (P7F1402-BS1)                  |        |             |           | Prepared & A | Analyzed: | 06/13/17 |        |      |    |   |
| Benzene                            | 0.147  | 0.00100     | mg/kg wet | 0.140        |           | 105      | 70-130 |      |    |   |
| Toluene                            | 0.131  | 0.00200     | "         | 0.140        |           | 93.5     | 70-130 |      |    |   |
| Ethylbenzene                       | 0.142  | 0.00100     | "         | 0.140        |           | 102      | 70-130 |      |    |   |
| Xylene (p/m)                       | 0.246  | 0.00200     | "         |              |           |          | 70-130 |      |    |   |
| Xylene (o)                         | 0.124  | 0.00100     | "         |              |           |          | 70-130 |      |    |   |
| Surrogate: 4-Bromofluorobenzene    | 0.0554 |             | "         | 0.0600       |           | 92.4     | 75-125 |      |    | - |
| Surrogate: 1,4-Difluorobenzene     | 0.0637 |             | "         | 0.0600       |           | 106      | 75-125 |      |    |   |
| LCS Dup (P7F1402-BSD1)             |        |             |           | Prepared & A | Analyzed: | 06/13/17 |        |      |    |   |
| Benzene                            | 0.143  | 0.00100     | mg/kg wet | 0.140        |           | 102      | 70-130 | 2.69 | 20 |   |
| Γoluene                            | 0.129  | 0.00200     | "         | 0.140        |           | 92.2     | 70-130 | 1.40 | 20 |   |
| Ethylbenzene                       | 0.138  | 0.00100     | "         | 0.140        |           | 98.9     | 70-130 | 2.78 | 20 |   |
| Xylene (p/m)                       | 0.236  | 0.00200     | "         |              |           |          | 70-130 |      | 20 |   |
| Xylene (o)                         | 0.116  | 0.00100     | "         |              |           |          | 70-130 |      | 20 |   |
| Surrogate: 4-Bromofluorobenzene    | 0.0552 |             | "         | 0.0600       |           | 91.9     | 75-125 |      |    |   |
| Surrogate: 1,4-Difluorobenzene     | 0.0633 |             | "         | 0.0600       |           | 105      | 75-125 |      |    |   |
| Duplicate (P7F1402-DUP1)           | Sour   | ce: 7F12010 | -01       | Prepared & A | Analyzed: | 06/13/17 |        |      |    |   |
| Benzene                            | ND     | 0.00123     | mg/kg dry |              | ND        |          |        |      | 20 |   |
| Γoluene                            | ND     | 0.00247     | "         |              | ND        |          |        |      | 20 |   |
| Ethylbenzene                       | ND     | 0.00123     | "         |              | ND        |          |        |      | 20 |   |
| Kylene (p/m)                       | ND     | 0.00247     | "         |              | ND        |          |        |      | 20 |   |
| Xylene (o)                         | ND     | 0.00123     | "         |              | ND        |          |        |      | 20 |   |
| Surrogate: 4-Bromofluorobenzene    | 0.0694 |             | "         | 0.0741       |           | 93.6     | 75-125 |      |    |   |
| Surrogate: 1,4-Difluorobenzene     | 0.0661 |             | "         | 0.0741       |           | 89.3     | 75-125 |      |    |   |

Permian Basin Environmental Lab, L.P.

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce Street Project Number: TNM-Monument 18 Midland TX, 79703

Project Manager: Curt Stanley

### General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
|         |        |           |       |       |        |      |        |     |       |       |

Batch P7F1205 - \*\*\* DEFAULT PREP \*\*\*

Blank (P7F1205-BLK1) Prepared & Analyzed: 06/12/17

% Moisture ND 0.1 %

Source: 7F12019-04 **Duplicate (P7F1205-DUP1)** Prepared & Analyzed: 06/12/17 % Moisture 0.1 7.0 15.4 20

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting  |           | Spike       | Source     |             | %REC   | ·     | RPD   |       |
|---------------------------------|--------|------------|-----------|-------------|------------|-------------|--------|-------|-------|-------|
| Analyte                         | Result | Limit      | Units     | Level       | Result     | %REC        | Limits | RPD   | Limit | Notes |
| Batch P7F1204 - TX 1005         |        |            |           |             |            |             |        |       |       |       |
| Blank (P7F1204-BLK1)            |        |            |           | Prepared: ( | 06/09/17 A | nalyzed: 06 | /10/17 |       |       |       |
| C6-C12                          | ND     | 25.0       | mg/kg wet |             |            |             |        |       |       |       |
| >C12-C28                        | ND     | 25.0       | "         |             |            |             |        |       |       |       |
| >C28-C35                        | ND     | 25.0       | "         |             |            |             |        |       |       |       |
| Surrogate: 1-Chlorooctane       | 112    |            | "         | 100         |            | 112         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 58.6   |            | "         | 50.0        |            | 117         | 70-130 |       |       |       |
| LCS (P7F1204-BS1)               |        |            |           | Prepared: ( | 06/09/17 A | nalyzed: 06 | /10/17 |       |       |       |
| C6-C12                          | 871    | 25.0       | mg/kg wet | 1000        |            | 87.1        | 75-125 |       |       |       |
| >C12-C28                        | 841    | 25.0       | "         | 1000        |            | 84.1        | 75-125 |       |       |       |
| Surrogate: 1-Chlorooctane       | 114    |            | "         | 100         |            | 114         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 55.2   |            | "         | 50.0        |            | 110         | 70-130 |       |       |       |
| LCS Dup (P7F1204-BSD1)          |        |            |           | Prepared: ( | 06/09/17 A | nalyzed: 06 | /10/17 |       |       |       |
| C6-C12                          | 856    | 25.0       | mg/kg wet | 1000        |            | 85.6        | 75-125 | 1.81  | 20    |       |
| >C12-C28                        | 838    | 25.0       | "         | 1000        |            | 83.8        | 75-125 | 0.384 | 20    |       |
| Surrogate: 1-Chlorooctane       | 116    |            | "         | 100         |            | 116         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 55.5   |            | "         | 50.0        |            | 111         | 70-130 |       |       |       |
| Matrix Spike (P7F1204-MS1)      | Sourc  | e: 7F08006 | 5-06      | Prepared: ( | 06/09/17 A | nalyzed: 06 | /10/17 |       |       |       |
| C6-C12                          | 873    | 26.9       | mg/kg dry | 1080        | 11.5       | 80.1        | 75-125 |       |       |       |
| >C12-C28                        | 834    | 26.9       | "         | 1080        | ND         | 77.5        | 75-125 |       |       |       |
| Surrogate: 1-Chlorooctane       | 99.6   |            | "         | 108         |            | 92.7        | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 44.4   |            | "         | 53.8        |            | 82.6        | 70-130 |       |       |       |
| Matrix Spike Dup (P7F1204-MSD1) | Sourc  | e: 7F08006 | 5-06      | Prepared: ( | 06/09/17 A | nalyzed: 06 | /10/17 |       |       |       |
| C6-C12                          | 875    | 26.9       | mg/kg dry | 1080        | 11.5       | 80.3        | 75-125 | 0.183 | 20    |       |
| >C12-C28                        | 860    | 26.9       | "         | 1080        | ND         | 80.0        | 75-125 | 3.19  | 20    |       |
| Surrogate: 1-Chlorooctane       | 99.2   |            | "         | 108         |            | 92.3        | 70-130 |       |       |       |
| Surrogate: o-Terphenyl          | 45.6   |            | "         | 53.8        |            | 84.8        | 70-130 |       |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701
2057 Commerce Street Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### **Notes and Definitions**

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

Midland TX, 79703

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Burnon |       |           |
|---------------------|--------|-------|-----------|
| Report Approved By: |        | Date: | 6/14/2017 |

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

| Raceived by OCD: Relinquished by:  Relinquished by:  | /8/2021<br>Specii  | <u>12:</u> | 21-2            | 20 P | M      |          |          |       |            | 2            | 0           | LAB#(lab use only)  | ORD               | lab u             | 120       |                   |                |                  |                   |                               | Pag              | ge 446 of 6   |
|--|--|------------|-----------------|------|--------|----------|----------|-------|------------|--------------|-------------|---|-------------------|-------------------|-----------|-------------------|----------------|------------------|-------------------|-------------------------------|------------------|---|
| Relinquished by  | Special Instructions:  |            |                 |      |        |          |          |       |            |              |             |   | ORDER #:          | (lab use of lity) |           | Sa                | Te             | °<br>C <u>t</u>  | င္ပ               | င္ပ                           | Pro              |   |
| N N N  | uction   |            |                 |      |        | ·: .     | . }      |       |            |              |             | 70 mg   |                   | <u>\</u>          |           | Sampler Signature | Telephone No:  | City/State/Zip:  | Company Address:  | Company Name                  | Project Manager: | TO S  |
|  | X is:  |            |                 |      |        |          |          |       |            |              |             |   |                   | Ī                 |           | Sign              | ne N           | te/Zip           | ıy Ad             | ıy Na                         | Mana             |   |
|  |  |            |                 |      |        |          |          |       |            | 20           | 20          | <br>  <b>::</b>   |                   | う                 |           | ature             | Ö              | 9                | dress             | me                            | ger:             |   |
| 1 4 1 1  | - <i>J</i> -   |            |                 |      |        |          |          |       |            | 2017 SP-34   | 2017 SP-33  | FIELD CODE  | (                 | Ş                 | (         |                   | 7              | ≨                |                   | 뒮                             | Įδ               |   |
|  |  |            | -               |      | 1. 11  | İ        |          |       |            | P-34         | P-33        | ODE .   |                   | 3                 |           | R                 | 332)52         | Midland/TX/79703 | 2057 Commerce Dr. | C En                          | Curt Stanley     |   |
|  |  |            |                 |      |        |          |          |       |            |              |             |   |                   | $\supset$         | $\bigcap$ | 1                 | 772            | 7                | mme               | viron                         | nley             |   |
| 6  |  |            |                 |      |        |          |          |       |            | }            |             |   | 1                 | J                 | 1         |                   |                | 9703             | rce D             | nenta                         |                  | £   |
| Date Date  |  |            |                 |      |        |          |          |       |            |              |             |   | \$6.00°           |                   | <u>之</u>  |                   | 4)             |                  | ~                 | Cor                           |                  | N C   |
|  |  |            | $\vdash$        | 1    |        | _        | $\dashv$ |       |            | -            |             |   | 7                 |                   |           | 3                 | 1              |                  |                   | TRC Environmental Corporation | 1                | )F Q  |
| Time   |  |            |                 |      |        |          | _        |       | . !        |              |             | Beginning Depth   |                   |                   |           |                   | ,              | 1 .              |                   | 9                             | 1                | USTO  |
|  |  |            |                 |      |        |          |          | !     | !          |              |             | Ending Depth  |                   |                   |           | め                 |                |                  |                   |                               |                  | 700   |
| Received by:   |  |            |                 |      |        |          |          |       | , J        | 6/6          | 6/6         |   |                   |                   |           |                   |                | ŀ                |                   |                               |                  | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian Basl 10014 S. Coo Midland, Tey             |
| ved b  |  |            |                 |      |        |          |          |       |            | 6/6/2017     | 6/6/2017    | Date Sampled  |                   |                   |           | 1 <b>/</b> ' `    |                |                  |                   | '                             | 1                | ORD.  |
| d by:  |  |            |                 |      |        |          |          |       |            | 7            | 7           |   |                   |                   |           | SALO A e-mail:    |                | } .              |                   |                               |                  | ANI   |
|  |  |            |                 |      |        |          |          |       |            |              |             |   |                   |                   | :         |                   |                | 1                |                   |                               |                  | A   |
| M  |  |            |                 |      |        |          |          |       |            | 1530         | 1500        | Time Sampled  |                   |                   |           | d-m               | Fax No:        | 1                | 1                 |                               |                  | ALY   |
|  |  |            |                 |      | _      | $\dashv$ |          |       | •          | _            |             | er 14 eu  |                   |                   |           | <u>a</u>          | ę<br>Į         |                  |                   |                               |                  | SIS<br>P  |
|  |  | <u> </u>   | H               |      |        |          | -        |       |            |              | _           | Field Filtered  Total #. of Containers                      | 1                 |                   |           | 8                 |                |                  |                   |                               |                  | \$ REQUEST  Permian Basin Environmental Lab, LP 10014 S. County Road 1213  Midland, Texas 79706 |
|  | ļ  |            |                 |      |        |          |          |       |            | ×            | ×           | Icè   |                   |                   | 읻         | cdstanley@tro     |                |                  |                   |                               |                  | UES<br>an Ba<br>S. C<br>nd, T   |
|  |  |            |                 |      |        | _        |          |       |            |              |             | HNO₃  | Preservation      |                   | orya      | llev              |                |                  |                   |                               |                  | Isin E  |
|  |  | -          | $\vdash$        |      |        | $\dashv$ | -        |       |            |              |             | HCI<br>H <sub>2</sub> SO <sub>4</sub>                       |                   | L.                |           | ( <u>0</u> )      |                |                  |                   |                               |                  | Environn<br>y Road<br>79706   |
|  |  |            |                 |      |        | _        |          |       |            |              |             | NaOH  | & # of Containers |                   | paalp.com | csolutions.com    |                |                  |                   |                               |                  | onme<br>ad 1:   |
|  |  |            |                 |      |        |          |          |       | -          |              |             | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>               | Contai            |                   | H         | utio              |                |                  |                   |                               |                  | ntal  <br>213   |
|  |  |            |                 |      | -      | $\dashv$ |          |       |            | _            | _           | None Other ( Specify)                                       | ners              |                   | Öm        | ns.c              | 1              |                  |                   |                               |                  | Lab,  |
| Date Date  |  | _          |                 |      |        |          |          |       |            | _            |             | DW=Drinking Water SL=Sludge                                 | Ī                 |                   |           | Öm                | ,              | J                |                   | ,                             |                  | 2   |
|  |  |            |                 |      |        |          |          |       | <i>:</i> . | So <u>il</u> | Soil        | GW = Groundwater S=Soil/Solid  NP=Non-Potable Specify Other | Matrix            |                   |           |                   | (epoi          |                  |                   |                               | P                |   |
| Time Time  |  |            |                 | `    |        | _        |          |       |            | ×            | ×           |   | 15B               | T                 | Τ         |                   | Report Format: |                  | Project Loc:      | Pro                           | Project Name:    |   |
|  | <b>∠</b> (68 −   |            |                 |      | $\Box$ | $\Box$   |          |       |            |              |             | TPH: TX 1005 TX 1006  |                   |                   |           |                   | mat:           | P0 #:            | 다                 | Project#:                     | Nam              |   |
| Labelson Custody: Cus | .abor  |            |                 |      |        | $\dashv$ |          |       |            | _            |             | Cations (Ca, Mg, Na, K) Anions (Cl, SO4, Alkalinity)        | -                 | 77                |           | }                 | $\boxtimes$    | #<br>            | <br>              | ;#<br>                        | , P.             |   |
| dy se dy se dy se le Ha Samt Courre eratur eratur ed:  | atory<br>e Co<br>Free  |            |                 |      |        |          |          |       |            |              |             | SAR / ESP / CEC   |                   | TOTAL:            | 2         |                   |                |                  |                   |                               |                  | 70  |
| ontal also or  | Con  |            |                 |      | $\Box$ | $\Box$   |          |       |            |              |             | Metals: As Ag Ba Cd Cr Pb Hg                                | Se                | П                 | Ana       |                   | Standard       |                  |                   |                               |                  | ňon   |
| Labels on container(s). Custody seals on contain Custody seals on cooler Custody seals on cooler Custody seals on cooler Custody seals on cooler Custody seals on cooler Custody seals on cooler Custody Sampler/Client Report   | Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? |            | $\vdash \vdash$ |      | _      | $\dashv$ | $\dashv$ |       |            | -            | -           | Volatiles<br>Semivolatiles                                  | -                 | +                 | Analyze I |                   |                |                  |                   | Z Z                           |                  | e:<br>43  |
| Uabels on container(s) Custody seals on container(s) Custody seals on container(s) Custody seals on cooler(s) Sample Hand Delivered by Sampler/Client Rep.? by Courier? UPS DHL Temperature Upon Receipt Received: Received: Adjusted:  Custody Seals on cooler(s) Custody Seals on cooler(s) Custody Seals on container(s) Custody Seals on con | ts:<br>lacing<br>ace?  |            |                 |      |        |          |          |       |            | ×            | ×           | BTE 8021 /5030 or BTEX 82                                   | 60                |                   | For:      |                   |                |                  | Lea County, NM    | 「NM-Monument 18               | Monument 18      | Phone: 432-661-4184   |
| (s)<br>DHL   |  |            |                 |      |        |          |          | -, -  | - T        |              |             | RCI   |                   |                   |           |                   | TRRP           |                  | ounty             | mur                           | men              | 14.   |
| Z mal  |  | -          | $\vdash$        |      |        | $\dashv$ |          |       |            | <u> </u>     | <u> </u>    | N.O.R.M.<br>Chlorides E 300                                 |                   |                   |           |                   | U              |                  | N.                | ent                           | t 18             | 4   |
| <b>WW</b> 步引   |  |            |                 |      |        |          |          |       |            |              |             | Paint Filter  |                   |                   | ]         |                   |                |                  |                   | 18                            |                  | Pag   |
|  | z z  |            |                 |      |        | $\Box$   |          |       |            | F., 1        |             | TCLP BTEX   |                   |                   | L         |                   | NPDES          |                  |                   |                               |                  | Page 1 of 1   |
|  | ZZ   |            | $\vdash$        |      |        | +        | _        |       |            | ×            | ×           | RUSH TAT (Pre-Schedule) 24,<br>Standard TAT                 | 48,               | 72 hrs            |           | J                 | ES             |                  |                   |                               |                  |   |
| Released to Imaging  | : 6/8/20   | 21 .       | 2:45            | :07  | PM     |          |          | · · · |            |              | <del></del> |   | ١.                |                   |           |                   |                |                  | 1                 |                               | -age             | e 9 of 9  |

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



## Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
2057 Commerce Street
Midland, TX 79703

Project: Monument 18

Project Number: SRS-Monument 18

Location: Lea Co NM

Lab Order Number: 7G06005



NELAP/TCEQ # T104704516-16-7

Report Date: 07/10/17

TRC Solutions- Midland, Texas

Project: Monument 18 2057 Commerce Street Project Number: SRS-Monument 18 Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID        | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------------|---------------|--------|----------------|------------------|
| 2017 ESW-1 @ 18' | 7G06005-01    | Soil   | 07/05/17 14:00 | 07-06-2017 09:48 |
| 2017 ESW-2 @ 18' | 7G06005-02    | Soil   | 07/05/17 14:05 | 07-06-2017 09:48 |
| 2017 ESW-3 @ 18' | 7G06005-03    | Soil   | 07/05/17 14:10 | 07-06-2017 09:48 |
| 2017 ESW-4 @ 18' | 7G06005-04    | Soil   | 07/05/17 14:15 | 07-06-2017 09:48 |
| 2017 ESW-5 @ 18' | 7G06005-05    | Soil   | 07/05/17 14:20 | 07-06-2017 09:48 |
| 2017 ESW-6 @ 18' | 7G06005-06    | Soil   | 07/05/17 14:25 | 07-06-2017 09:48 |
| 2017 ESW-7 @ 18' | 7G06005-07    | Soil   | 07/05/17 14:30 | 07-06-2017 09:48 |
| 2017 NSW-1 @ 18' | 7G06005-08    | Soil   | 07/05/17 14:35 | 07-06-2017 09:48 |
| 2017 NSW-2 @ 18' | 7G06005-09    | Soil   | 07/05/17 14:40 | 07-06-2017 09:48 |
| 2017 NSW-3 @ 18' | 7G06005-10    | Soil   | 07/05/17 14:45 | 07-06-2017 09:48 |

TRC Solutions- Midland, Texas

Project: Monument 18 2057 Commerce Street Project Number: SRS-Monument 18 Midland TX, 79703 Project Manager: Curt Stanley

Fax: (432) 520-7701

#### 2017 ESW-1 @ 18' 7G06005-01 (Soil)

| Analyte                                     | Result    | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---|-----------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|   | Peri      | mian Basin E       | nvironmei | ntal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                              |           |                    |           |             |              |          |          |            |       |
| Benzene                                     | ND        | 0.00128            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                     | ND        | 0.00256            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                                | ND        | 0.00128            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                                | ND        | 0.00256            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                                  | ND        | 0.00128            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene             |           | 96.8 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene              |           | 85.9 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stand | ard Metho | ds                 |           |             |              |          |          |            |       |
| % Moisture                                  | 22.0      | 0.1                | %         | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EPA  | Method 8  | 015M               |           |             |              |          |          |            |       |
| C6-C12                                      | ND        | 32.1               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                    | ND        | 32.1               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                    | ND        | 32.1               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                   |           | 94.4 %             | 70-1      | 30          | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                      |           | 98.8 %             | 70-1      | 30          | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35          | ND        | 32.1               | mg/kg dry | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce StreetProject Number:SRS-Monument 18Midland TX, 79703Project Manager:Curt Stanley

2017 ESW-2 @ 18' 7G06005-02 (Soil)

| Analyte                                    | Result    | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-----------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per       | mian Basin E       | nvironmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |           |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND        | 0.00118            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                    | ND        | 0.00235            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                               | ND        | 0.00118            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                               | ND        | 0.00235            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                                 | ND        | 0.00118            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |           | 96.3 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |           | 86.8 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stan | dard Meth | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 15.0      | 0.1                | %         | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method  | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND        | 29.4               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                   | ND        | 29.4               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                   | ND        | 29.4               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |           | 93.7 %             | 70-1      | 30          | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |           | 97.8 %             | 70-1      | 30          | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND        | 29.4               | mg/kg dry | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas

2057 Commerce Street Midland TX, 79703 Project: Monument 18

Project Number: SRS-Monument 18 Project Manager: Curt Stanley

#### 2017 ESW-3 @ 18' 7G06005-03 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per        | mian Basin E       | nvironmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |            |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND         | 0.00125            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                    | ND         | 0.00250            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                               | ND         | 0.00125            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                               | ND         | 0.00250            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                                 | ND         | 0.00125            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |            | 88.8 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |            | 94.5 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 20.0       | 0.1                | %         | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method   | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND         | 31.2               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                   | ND         | 31.2               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                   | ND         | 31.2               | mg/kg dry | 1           | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |            | 96.3 %             | 70-1      | 30          | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |            | 99.4 %             | 70-1      | 30          | P7G0710      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 31.2               | mg/kg dry | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce StreetProject Number:SRS-Monument 18Midland TX, 79703Project Manager:Curt Stanley

#### 2017 ESW-4 @ 18' 7G06005-04 (Soil)

| Analyte                                    | Result    | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-----------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per       | mian Basin E       | nvironmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |           |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND        | 0.00112            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                    | ND        | 0.00225            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                               | ND        | 0.00112            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                               | ND        | 0.00225            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                                 | ND        | 0.00112            | mg/kg dry | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |           | 83.2 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |           | 93.1 %             | 75-1      | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stan | dard Meth | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 11.0      | 0.1                | %         | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method  | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND        | 28.1               | mg/kg dry | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                   | ND        | 28.1               | mg/kg dry | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                   | ND        | 28.1               | mg/kg dry | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |           | 93.2 %             | 70-1      | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |           | 96.7 %             | 70-1      | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND        | 28.1               | mg/kg dry | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

2057 Commerce Street

Fax: (432) 520-7701

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: SRS-Monument 18
Project Manager: Curt Stapley

Midland TX, 79703 Project Manager: Curt Stanley

#### 2017 ESW-5 @ 18' 7G06005-05 (Soil)

| Analyte                                  | Result       | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|--------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|  | Peri         | mian Basin E       | Environmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                           |              |                    |            |             |              |          |          |            |       |
| Benzene                                  | ND           | 0.00118            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                  | ND           | 0.00235            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                             | ND           | 0.00118            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                             | ND           | 0.00235            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                               | ND           | 0.00118            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene          |              | 98.2 %             | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene           |              | 91.1 %             | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / St | andard Metho | ds                 |            |             |              |          |          |            |       |
| % Moisture                               | 15.0         | 0.1                | %          | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by   | EPA Method 8 | 8015M              |            |             |              |          |          |            |       |
| C6-C12                                   | ND           | 29.4               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                 | ND           | 29.4               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                 | ND           | 29.4               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                |              | 89.1 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                   |              | 92.1 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35       | ND           | 29.4               | mg/kg dry  | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: SRS-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

#### 2017 ESW-6 @ 18' 7G06005-06 (Soil)

| Analyte   | Result      | Reporting<br>Limit | Units      | Dilution    | Batch     | Prepared | Analyzed | Method     | Notes |
|---|-------------|--------------------|------------|-------------|-----------|----------|----------|------------|-------|
|   | Per         | mian Basin E       | Environmer | ıtal Lab, l | <b>P.</b> |          |          |            |       |
| Organics by GC                                    |             |                    |            |             |           |          |          |            |       |
| Benzene   | ND          | 0.00105            | mg/kg dry  | 1           | P7G0702   | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene   | ND          | 0.00211            | mg/kg dry  | 1           | P7G0702   | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                                      | ND          | 0.00105            | mg/kg dry  | 1           | P7G0702   | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                                      | ND          | 0.00211            | mg/kg dry  | 1           | P7G0702   | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)  | ND          | 0.00105            | mg/kg dry  | 1           | P7G0702   | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene                   |             | 95.7 %             | 75-1       | 25          | P7G0702   | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene                    |             | 89.9 %             | 75-1       | 25          | P7G0702   | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| <b>General Chemistry Parameters by EPA / Stat</b> | ndard Metho | ods                |            |             |           |          |          |            |       |
| % Moisture  | 5.0         | 0.1                | %          | 1           | P7G1001   | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by El         | PA Method 8 | 8015M              |            |             |           |          |          |            |       |
| C6-C12  | ND          | 26.3               | mg/kg dry  | 1           | P7G0711   | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28  | ND          | 26.3               | mg/kg dry  | 1           | P7G0711   | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35  | ND          | 26.3               | mg/kg dry  | 1           | P7G0711   | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                         |             | 86.0 %             | 70-1       | 30          | P7G0711   | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                            |             | 89.1 %             | 70-1       | 30          | P7G0711   | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35                | ND          | 26.3               | mg/kg dry  | 1           | [CALC]    | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: SRS-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

#### 2017 ESW-7 @ 18' 7G06005-07 (Soil)

| Analyte                             | Result            | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|-------------------------------------|-------------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|                                     | Pern              | nian Basin E       | Environmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                      |                   |                    |            |             |              |          |          |            |       |
| Benzene                             | ND                | 0.00123            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                             | ND                | 0.00247            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                        | ND                | 0.00123            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                        | ND                | 0.00247            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                          | ND                | 0.00123            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene      |                   | 90.0 %             | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene     |                   | 90.9 %             | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA | / Standard Method | ls                 |            |             |              |          |          |            |       |
| % Moisture                          | 19.0              | 0.1                | %          | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 | by EPA Method 80  | 015M               |            |             |              |          |          |            |       |
| C6-C12                              | ND                | 30.9               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                            | ND                | 30.9               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                            | ND                | 30.9               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane           |                   | 83.2 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl              |                   | 85.0 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35  | ND                | 30.9               | mg/kg dry  | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas Project: Monument 18

2057 Commerce StreetProject Number:SRS-Monument 18Midland TX, 79703Project Manager:Curt Stanley

2017 NSW-1 @ 18' 7G06005-08 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|  | Per        | mian Basin E       | Environmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |            |                    |            |             |              |          |          |            |       |
| Benzene                                    | ND         | 0.00128            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                    | ND         | 0.00256            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                               | ND         | 0.00128            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                               | ND         | 0.00256            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                                 | ND         | 0.00128            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |            | 84.5 %             | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |            | 91.5 %             | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ods                |            |             |              |          |          |            |       |
| % Moisture                                 | 22.0       | 0.1                | %          | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method   | 8015M              |            |             |              |          |          |            |       |
| C6-C12                                     | ND         | 32.1               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                   | ND         | 32.1               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                   | ND         | 32.1               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |            | 84.7 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |            | 87.5 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 32.1               | mg/kg dry  | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce StreetProject Number:SRS-Monument 18Midland TX, 79703Project Manager:Curt Stanley

2017 NSW-2 @ 18' 7G06005-09 (Soil)

| Analyte                                 | Result        | Reporting<br>Limit | Units     | Dilution   | Batch   | Prepared | Analyzed | Method     | Notes |
|---|---------------|--------------------|-----------|------------|---------|----------|----------|------------|-------|
|   | Perr          | nian Basin E       | nvironmen | tal Lab, l | P.      |          |          |            |       |
| Organics by GC                          |               |                    |           |            |         |          |          |            |       |
| Benzene                                 | ND            | 0.00106            | mg/kg dry | 1          | P7G0702 | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                 | ND            | 0.00213            | mg/kg dry | 1          | P7G0702 | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                            | ND            | 0.00106            | mg/kg dry | 1          | P7G0702 | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                            | ND            | 0.00213            | mg/kg dry | 1          | P7G0702 | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                              | ND            | 0.00106            | mg/kg dry | 1          | P7G0702 | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene          |               | 85.0 %             | 75-1.     | 25         | P7G0702 | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene         |               | 93.7 %             | 75-1.     | 25         | P7G0702 | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / S | tandard Metho | ds                 |           |            |         |          |          |            |       |
| % Moisture                              | 6.0           | 0.1                | %         | 1          | P7G1001 | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by  | EPA Method 8  | 015M               |           |            |         |          |          |            |       |
| C6-C12                                  | ND            | 26.6               | mg/kg dry | 1          | P7G0711 | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                | ND            | 26.6               | mg/kg dry | 1          | P7G0711 | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                | ND            | 26.6               | mg/kg dry | 1          | P7G0711 | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane               |               | 88.2 %             | 70-1.     | 30         | P7G0711 | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                  |               | 92.2 %             | 70-1.     | 30         | P7G0711 | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35      | ND            | 26.6               | mg/kg dry | 1          | [CALC]  | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: SRS-Monument 18

Project Manager: Curt Stanley

#### 2017 NSW-3 @ 18' 7G06005-10 (Soil)

| Analyte                                    | Result      | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|  | Per         | mian Basin E       | Invironmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |             |                    |            |             |              |          |          |            |       |
| Benzene                                    | ND          | 0.00114            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Toluene                                    | ND          | 0.00227            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Ethylbenzene                               | ND          | 0.00114            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (p/m)                               | ND          | 0.00227            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Xylene (o)                                 | ND          | 0.00114            | mg/kg dry  | 1           | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |             | 90.2 %             | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |             | 100 %              | 75-1       | 25          | P7G0702      | 07/06/17 | 07/06/17 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stat | ndard Metho | ods                |            |             |              |          |          |            |       |
| % Moisture                                 | 12.0        | 0.1                | %          | 1           | P7G1001      | 07/10/17 | 07/10/17 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by E   | PA Method 8 | 8015M              |            |             |              |          |          |            |       |
| C6-C12                                     | ND          | 28.4               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C12-C28                                   | ND          | 28.4               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| >C28-C35                                   | ND          | 28.4               | mg/kg dry  | 1           | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |             | 85.5 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |             | 89.1 %             | 70-1       | 30          | P7G0711      | 07/06/17 | 07/07/17 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND          | 28.4               | mg/kg dry  | 1           | [CALC]       | 07/06/17 | 07/07/17 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18 Project Number: SRS-Monument 18

2057 Commerce Street Midland TX, 79703

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
|         |        |           |       |       |        |      |        |     |       |       |

| Blank (P7G0702-BLK1)            |        |             |           | Prepared & | Analyzed: | 07/06/17 |        |      |    |  |
|---------------------------------|--------|-------------|-----------|------------|-----------|----------|--------|------|----|--|
| Benzene                         | ND     | 0.00100     | mg/kg wet |            |           |          |        |      |    |  |
| Toluene                         | ND     | 0.00200     | "         |            |           |          |        |      |    |  |
| Ethylbenzene                    | ND     | 0.00100     | "         |            |           |          |        |      |    |  |
| Xylene (p/m)                    | ND     | 0.00200     | "         |            |           |          |        |      |    |  |
| Xylene (o)                      | ND     | 0.00100     | "         |            |           |          |        |      |    |  |
| Surrogate: 4-Bromofluorobenzene | 0.0568 |             | "         | 0.0600     |           | 94.6     | 75-125 |      |    |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0537 |             | "         | 0.0600     |           | 89.5     | 75-125 |      |    |  |
| LCS (P7G0702-BS1)               |        |             |           | Prepared & | Analyzed: | 07/06/17 |        |      |    |  |
| Benzene                         | 0.118  | 0.00100     | mg/kg wet | 0.100      |           | 118      | 70-130 |      |    |  |
| Toluene                         | 0.113  | 0.00200     | "         | 0.100      |           | 113      | 70-130 |      |    |  |
| Ethylbenzene                    | 0.115  | 0.00100     | "         | 0.100      |           | 115      | 70-130 |      |    |  |
| Xylene (p/m)                    | 0.205  | 0.00200     | "         |            |           |          | 70-130 |      |    |  |
| Xylene (o)                      | 0.0999 | 0.00100     | "         |            |           |          | 70-130 |      |    |  |
| Surrogate: 4-Bromofluorobenzene | 0.0600 |             | "         | 0.0600     |           | 100      | 75-125 |      |    |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0651 |             | "         | 0.0600     |           | 108      | 75-125 |      |    |  |
| LCS Dup (P7G0702-BSD1)          |        |             |           | Prepared & | Analyzed: | 07/06/17 |        |      |    |  |
| Benzene                         | 0.109  | 0.00100     | mg/kg wet | 0.100      |           | 109      | 70-130 | 7.85 | 20 |  |
| Toluene                         | 0.100  | 0.00200     | "         | 0.100      |           | 100      | 70-130 | 11.7 | 20 |  |
| Ethylbenzene                    | 0.104  | 0.00100     | "         | 0.100      |           | 104      | 70-130 | 10.1 | 20 |  |
| Xylene (p/m)                    | 0.184  | 0.00200     | "         |            |           |          | 70-130 |      | 20 |  |
| Xylene (o)                      | 0.0901 | 0.00100     | "         |            |           |          | 70-130 |      | 20 |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0591 |             | "         | 0.0600     |           | 98.5     | 75-125 |      |    |  |
| Surrogate: 4-Bromofluorobenzene | 0.0577 |             | "         | 0.0600     |           | 96.2     | 75-125 |      |    |  |
| Matrix Spike (P7G0702-MS1)      | Sour   | ce: 7G05008 | 3-01      | Prepared & | Analyzed: | 07/06/17 |        |      |    |  |
| Benzene                         | 0.113  | 0.00105     | mg/kg dry | 0.105      | ND        | 108      | 80-120 |      |    |  |
| Toluene                         | 0.110  | 0.00211     | "         | 0.105      | ND        | 104      | 80-120 |      |    |  |
| Ethylbenzene                    | 0.114  | 0.00105     | "         | 0.105      | ND        | 109      | 80-120 |      |    |  |
| Xylene (p/m)                    | 0.209  | 0.00211     | "         |            | ND        |          | 80-120 |      |    |  |
| Xylene (o)                      | 0.102  | 0.00105     | "         |            | ND        |          | 80-120 |      |    |  |
| Surrogate: 4-Bromofluorobenzene | 0.0735 |             | "         | 0.0632     |           | 116      | 75-125 |      |    |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0687 |             | "         | 0.0632     |           | 109      | 75-125 |      |    |  |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

2057 Commerce Street Midland TX, 79703 Project: Monument 18

Project Number: SRS-Monument 18 Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

#### **Batch P7G0702 - General Preparation (GC)**

| Matrix Spike Dup (P7G0702-MSD1) | Sour   | ce: 7G05008 | 3-01      | Prepared & | Analyzed: | 07/06/17 |        |       |    |
|---------------------------------|--------|-------------|-----------|------------|-----------|----------|--------|-------|----|
| Benzene                         | 0.124  | 0.00105     | mg/kg dry | 0.105      | ND        | 118      | 80-120 | 9.00  | 20 |
| Toluene                         | 0.112  | 0.00211     | "         | 0.105      | ND        | 107      | 80-120 | 2.02  | 20 |
| Ethylbenzene                    | 0.113  | 0.00105     | "         | 0.105      | ND        | 108      | 80-120 | 0.878 | 20 |
| Xylene (p/m)                    | 0.200  | 0.00211     | "         |            | ND        |          | 80-120 |       | 20 |
| Xylene (o)                      | 0.103  | 0.00105     | "         |            | ND        |          | 80-120 |       | 20 |
| Surrogate: 1,4-Difluorobenzene  | 0.0655 |             | "         | 0.0632     |           | 104      | 75-125 |       |    |
| Surrogate: 4-Bromofluorobenzene | 0.0633 |             | "         | 0.0632     |           | 100      | 75-125 |       |    |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

2057 Commerce StreetProject Number:SRS-Monument 18Midland TX, 79703Project Manager:Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                              | Result                        | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--------------------------------------|-------------------------------|--------------------|-------|----------------|------------------|----------|----------------|------|--------------|-------|
| Batch P7G1001 - *** DEFAULT PREP *** |                               |                    |       |                |                  |          |                |      |              |       |
| Blank (P7G1001-BLK1)                 | Prepared & Analyzed: 07/10/17 |                    |       |                |                  |          |                |      |              |       |
| % Moisture                           | ND                            | 0.1                | %     |                |                  |          |                |      |              |       |
| Duplicate (P7G1001-DUP1)             | Source: 7G06003-14 P          |                    |       | Prepared &     | Analyzed:        | 07/10/17 |                |      |              |       |
| % Moisture                           | 12.0                          | 0.1                | %     |                | 13.0             |          |                | 8.00 | 20           |       |
| Duplicate (P7G1001-DUP2)             | Sourc                         | e: 7G06005-0       | )9    | Prepared &     | Analyzed:        | 07/10/17 |                |      |              |       |
| % Moisture                           | 6.0                           | 0.1                | %     |                |                  | 0.00     | 20             |      |              |       |

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: SRS-Monument 18 Project Manager: Curt Stanley

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                         | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|---------------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Batch P7G0710 - TX 1005         |        |                    |           |                |                  |             |                |       |              |       |
| Blank (P7G0710-BLK1)            |        |                    |           | Prepared &     | t Analyzed:      | : 07/06/17  |                |       |              |       |
| C6-C12                          | ND     | 25.0               | mg/kg wet |                |                  |             |                |       |              |       |
| >C12-C28                        | ND     | 25.0               | "         |                |                  |             |                |       |              |       |
| >C28-C35                        | ND     | 25.0               | "         |                |                  |             |                |       |              |       |
| Surrogate: 1-Chlorooctane       | 101    |                    | "         | 100            |                  | 101         | 70-130         |       |              |       |
| Surrogate: o-Terphenyl          | 54.8   |                    | "         | 50.0           |                  | 110         | 70-130         |       |              |       |
| LCS (P7G0710-BS1)               |        |                    |           | Prepared &     | k Analyzed:      | : 07/06/17  |                |       |              |       |
| C6-C12                          | 965    | 25.0               | mg/kg wet | 1000           |                  | 96.5        | 75-125         |       |              |       |
| >C12-C28                        | 918    | 25.0               | "         | 1000           |                  | 91.8        | 75-125         |       |              |       |
| Surrogate: 1-Chlorooctane       | 97.8   |                    | "         | 100            |                  | 97.8        | 70-130         |       |              |       |
| Surrogate: o-Terphenyl          | 53.9   |                    | "         | 50.0           |                  | 108         | 70-130         |       |              |       |
| LCS Dup (P7G0710-BSD1)          |        |                    |           | Prepared &     | k Analyzed:      | : 07/06/17  |                |       |              |       |
| C6-C12                          | 972    | 25.0               | mg/kg wet | 1000           |                  | 97.2        | 75-125         | 0.762 | 20           |       |
| >C12-C28                        | 939    | 25.0               | "         | 1000           |                  | 93.9        | 75-125         | 2.29  | 20           |       |
| Surrogate: 1-Chlorooctane       | 98.8   |                    | "         | 100            |                  | 98.8        | 70-130         |       |              |       |
| Surrogate: o-Terphenyl          | 45.6   |                    | "         | 50.0           |                  | 91.1        | 70-130         |       |              |       |
| Matrix Spike (P7G0710-MS1)      | Sour   | ce: 7G06001        | 1-09      | Prepared: (    | 07/06/17 A       | nalyzed: 07 | 7/07/17        |       |              |       |
| C6-C12                          | 928    | 26.9               | mg/kg dry | 1080           | ND               | 86.3        | 75-125         |       |              |       |
| >C12-C28                        | 892    | 26.9               | "         | 1080           | 40.6             | 79.2        | 75-125         |       |              |       |
| Surrogate: 1-Chlorooctane       | 97.6   |                    | "         | 108            |                  | 90.8        | 70-130         |       |              |       |
| Surrogate: o-Terphenyl          | 46.1   |                    | "         | 53.8           |                  | 85.8        | 70-130         |       |              |       |
| Matrix Spike Dup (P7G0710-MSD1) | Sour   | ce: 7G06001        | 1-09      | Prepared: (    | 07/06/17 A       | nalyzed: 07 | 7/07/17        |       |              |       |
| C6-C12                          | 927    | 26.9               | mg/kg dry | 1080           | ND               | 86.2        | 75-125         | 0.123 | 20           |       |
| >C12-C28                        | 913    | 26.9               | "         | 1080           | 40.6             | 81.1        | 75-125         | 2.46  | 20           |       |
| Surrogate: 1-Chlorooctane       | 96.8   |                    | "         | 108            |                  | 90.0        | 70-130         |       |              |       |
| Surrogate: o-Terphenyl          | 45.4   |                    | "         | 53.8           |                  | 84.4        | 70-130         |       |              |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

2057 Commerce Street Midland TX, 79703 Project Number: SRS-Monument 18 Project Manager: Curt Stanley

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                         | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD    | RPD<br>Limit | Notes |
|---------------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|--------|--------------|-------|
| Batch P7G0711 - TX 1005         |        |                    |           |                |                  |             |                |        |              |       |
| Blank (P7G0711-BLK1)            |        |                    |           | Prepared: (    | 07/06/17 A:      | nalyzed: 07 | //07/17        |        |              |       |
| C6-C12                          | ND     | 25.0               | mg/kg wet | -              |                  |             |                |        |              |       |
| >C12-C28                        | ND     | 25.0               | "         |                |                  |             |                |        |              |       |
| >C28-C35                        | ND     | 25.0               | "         |                |                  |             |                |        |              |       |
| Surrogate: 1-Chlorooctane       | 104    |                    | "         | 100            |                  | 104         | 70-130         |        |              |       |
| Surrogate: o-Terphenyl          | 57.6   |                    | "         | 50.0           |                  | 115         | 70-130         |        |              |       |
| LCS (P7G0711-BS1)               |        |                    |           | Prepared: (    | 07/06/17 A       | nalyzed: 07 | //07/17        |        |              |       |
| C6-C12                          | 1010   | 25.0               | mg/kg wet | 1000           |                  | 101         | 75-125         |        |              |       |
| >C12-C28                        | 1000   | 25.0               | "         | 1000           |                  | 100         | 75-125         |        |              |       |
| Surrogate: 1-Chlorooctane       | 102    |                    | "         | 100            |                  | 102         | 70-130         |        |              |       |
| Surrogate: o-Terphenyl          | 48.8   |                    | "         | 50.0           |                  | 97.6        | 70-130         |        |              |       |
| LCS Dup (P7G0711-BSD1)          |        |                    |           | Prepared: (    | 07/06/17 A       | nalyzed: 07 | //07/17        |        |              |       |
| C6-C12                          | 993    | 25.0               | mg/kg wet | 1000           |                  | 99.3        | 75-125         | 1.84   | 20           |       |
| >C12-C28                        | 1000   | 25.0               | "         | 1000           |                  | 100         | 75-125         | 0.0588 | 20           |       |
| Surrogate: 1-Chlorooctane       | 102    |                    | "         | 100            |                  | 102         | 70-130         |        |              |       |
| Surrogate: o-Terphenyl          | 48.8   |                    | "         | 50.0           |                  | 97.5        | 70-130         |        |              |       |
| Matrix Spike (P7G0711-MS1)      | Sour   | ce: 7G06005        | 5-04      | Prepared: (    | 07/06/17 A       | nalyzed: 07 | //07/17        |        |              |       |
| C6-C12                          | 985    | 28.1               | mg/kg dry | 1120           | ND               | 87.7        | 75-125         |        |              |       |
| >C12-C28                        | 980    | 28.1               | "         | 1120           | ND               | 87.3        | 75-125         |        |              |       |
| Surrogate: 1-Chlorooctane       | 108    |                    | "         | 112            |                  | 96.0        | 70-130         |        |              |       |
| Surrogate: o-Terphenyl          | 51.4   |                    | "         | 56.2           |                  | 91.5        | 70-130         |        |              |       |
| Matrix Spike Dup (P7G0711-MSD1) | Sour   | ce: 7G06005        | 5-04      | Prepared: (    | 07/06/17 A       | nalyzed: 07 | //07/17        |        |              |       |
| C6-C12                          | 991    | 28.1               | mg/kg dry | 1120           | ND               | 88.2        | 75-125         | 0.601  | 20           |       |
| >C12-C28                        | 996    | 28.1               | "         | 1120           | ND               | 88.6        | 75-125         | 1.55   | 20           |       |
| Surrogate: 1-Chlorooctane       | 109    |                    | "         | 112            |                  | 97.0        | 70-130         |        |              |       |
| Surrogate: o-Terphenyl          | 52.1   |                    | "         | 56.2           |                  | 92.8        | 70-130         |        |              |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 2057 Commerce Street Project Number: SRS-Monument 18

Midland TX, 79703 Project Manager: Curt Stanley

#### **Notes and Definitions**

BULK Samples received in Bulk soil containers

Analyte DETECTED DET

Analyte NOT DETECTED at or above the reporting limit ND

NR Not Reported

Sample results reported on a dry weight basis dry

RPD Relative Percent Difference

LCS Laboratory Control Spike

Matrix Spike MS Dup Duplicate

|                     | Drew | Darlor |       |           |
|---------------------|------|--------|-------|-----------|
| Report Approved By: |      |        | Date: | 7/10/2017 |

D AR

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

| Curt Stanley  TRC Environmental Corporation  2057 Commerce Dr.  MidlandTX/79703  Fax No:  (#32)5207720  #420  #500  | CHAIN OF CU  |
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| Fax No: e-mail: 1440 11440 11445  | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian Basi 10014 S. Coi |
|   | ANALYSIS   |
| Field Filtered  | REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213  |
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| NaOH 8# of C 8 aaa 1706   | ımeı<br>d 12   |
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| Other ( Specify)  Other ( Specify)  Other ( Specify)  | 7  |
| S S S S S S S S S S S S S S S S S S S   |  |
| NP=Non-Potable   Specify Other   Specify Other   NP=Non-Potable   Specify Other   NP=Non-Potable   |  |
| TPH: TX 1005 TX 1006  |  |
| Cations (Ca, Mg, Na, K)  Anions (Cl, SO4, Alkalinity)  Anions (Cl, SO4, Alkalinity)  Anions (Cl, SO4, Alkalinity)  SAR / ESP / CEC  Symple Hance  Symple Hance  Symple Hance  Symple Hance  Symple Hance  Symple Hance  Symple Hance  Symple Hance  Metals: As An Ba Cd Cr Ph Ho Se   |  |
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| SAR / ESP / CEC  TAI:  Syling of High Control   | ňor  |
| Cations (Ca, Mg, Na, K)  Anions (Cl, SO4, Alkalinity)  TOTAL:  SAR / ESP / CEC  Analyze  Sample Contements  Sample Contements  Sample Hand Delivered  By Sample Hand Delivered  Semivolatiles  Semivolatiles  Semivolatiles  Semivolatiles  Semivolatiles   | Б  |
| Cations (Ca, Mg, Na, K)  Anions (Cl, SO4, Alkalinity)  Anions (Cl, SO4, Alkalinity)  SAR / ESP / CEC  Analyze  Sample Gontanger  Custody seals on container  Custody seals on container  Semivolatiles   | 132-   |
| でのも   3   <b>図</b>   <b>                                    </b>  | Phone: 432-661-4184  |
| Factor RCI N.O.R.M.   | 4<br>%   |
| Chlorides E 300   | 4-   |
| Chlorides E 300  Paint Filter  □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □  |  |
| St 6 TCLP BTEX ₹  | Pa   |
| TCLP BTEX  RUSH TAT (Pre-Schedule) 24, 48, 72 hrs   | Page 1   |
| Released to Imaging: 6/8/2021 2:45:07 PM  | Page 1 of 1  |

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



## Analytical Report

#### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18 Location: Lea County, New Mexico

Lab Order Number: 8K27013



NELAP/TCEQ # T104704516-17-8

Report Date: 12/05/18

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2018 SP-35 | 8K27013-01    | Soil   | 11/27/18 09:10 | 11-27-2018 16:46 |

TRC Solutions- Midland, Texas

Project: Monument 18 10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley Fax: (432) 520-7701

#### 2018 SP-35 8K27013-01 (Soil)

| Analyte                               | Result            | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|-------------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|                                       | Pern              | nian Basin E       | nvironmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                        |                   |                    |           |             |              |          |          |            |       |
| Benzene                               | ND                | 0.00109            | mg/kg dry | 1           | P8K3001      | 11/30/18 | 11/30/18 | EPA 8021B  |       |
| Toluene                               | ND                | 0.0109             | mg/kg dry | 1           | P8K3001      | 11/30/18 | 11/30/18 | EPA 8021B  |       |
| Ethylbenzene                          | ND                | 0.00543            | mg/kg dry | 1           | P8K3001      | 11/30/18 | 11/30/18 | EPA 8021B  |       |
| Xylene (p/m)                          | ND                | 0.0217             | mg/kg dry | 1           | P8K3001      | 11/30/18 | 11/30/18 | EPA 8021B  |       |
| Xylene (o)                            | ND                | 0.0109             | mg/kg dry | 1           | P8K3001      | 11/30/18 | 11/30/18 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                   | 103 %              | 75-1      | 25          | P8K3001      | 11/30/18 | 11/30/18 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                   | 86.0 %             | 75-1      | 25          | P8K3001      | 11/30/18 | 11/30/18 | EPA 8021B  |       |
| General Chemistry Parameters by EPA   | / Standard Method | ls                 |           |             |              |          |          |            |       |
| % Moisture                            | 8.0               | 0.1                | %         | 1           | P8L0301      | 12/03/18 | 12/03/18 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35   | by EPA Method 80  | 015M               |           |             |              |          |          |            |       |
| C6-C12                                | ND                | 27.2               | mg/kg dry | 1           | P8K2908      | 11/29/18 | 11/30/18 | TPH 8015M  |       |
| >C12-C28                              | 261               | 27.2               | mg/kg dry | 1           | P8K2908      | 11/29/18 | 11/30/18 | TPH 8015M  |       |
| >C28-C35                              | 96.5              | 27.2               | mg/kg dry | 1           | P8K2908      | 11/29/18 | 11/30/18 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                   | 103 %              | 70-1      | 30          | P8K2908      | 11/29/18 | 11/30/18 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                   | 119 %              | 70-1      | 30          | P8K2908      | 11/29/18 | 11/30/18 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon<br>C6-C35 | 358               | 27.2               | mg/kg dry | 1           | [CALC]       | 11/29/18 | 11/30/18 | calc       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18
Project Number: TNM-Monument 18

Project Manager: Curt Stanley

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| 7 that y to                        | Result  | Dillit       | Cinto     | Level      | resure      | 70TCLC   | Limits | МЪ    | Limit | 110103 |
|------------------------------------|---------|--------------|-----------|------------|-------------|----------|--------|-------|-------|--------|
| Batch P8K3001 - General Preparatio | on (GC) |              |           |            |             |          |        |       |       |        |
| Blank (P8K3001-BLK1)               |         |              |           | Prepared & | : Analyzed: | 11/30/18 |        |       |       |        |
| Benzene                            | ND      | 0.00100      | mg/kg wet |            |             |          |        |       |       |        |
| Toluene                            | ND      | 0.0100       | "         |            |             |          |        |       |       |        |
| Ethylbenzene                       | ND      | 0.00500      | "         |            |             |          |        |       |       |        |
| Xylene (p/m)                       | ND      | 0.0200       | "         |            |             |          |        |       |       |        |
| Xylene (o)                         | ND      | 0.0100       | "         |            |             |          |        |       |       |        |
| Surrogate: 1,4-Difluorobenzene     | 0.0518  |              | "         | 0.0600     |             | 86.4     | 75-125 |       |       |        |
| Surrogate: 4-Bromofluorobenzene    | 0.0560  |              | "         | 0.0600     |             | 93.3     | 75-125 |       |       |        |
| LCS (P8K3001-BS1)                  |         |              |           | Prepared & | Analyzed:   | 11/30/18 |        |       |       |        |
| Benzene                            | 0.115   | 0.00100      | mg/kg wet | 0.100      |             | 115      | 70-130 |       |       |        |
| Toluene                            | 0.107   | 0.0100       | "         | 0.100      |             | 107      | 70-130 |       |       |        |
| Ethylbenzene                       | 0.117   | 0.00500      | "         | 0.100      |             | 117      | 70-130 |       |       |        |
| Xylene (p/m)                       | 0.201   | 0.0200       | "         | 0.200      |             | 101      | 70-130 |       |       |        |
| Xylene (o)                         | 0.105   | 0.0100       | "         | 0.100      |             | 105      | 70-130 |       |       |        |
| Surrogate: 4-Bromofluorobenzene    | 0.0620  |              | "         | 0.0600     |             | 103      | 75-125 |       |       |        |
| Surrogate: 1,4-Difluorobenzene     | 0.0632  |              | "         | 0.0600     |             | 105      | 75-125 |       |       |        |
| LCS Dup (P8K3001-BSD1)             |         |              |           | Prepared & | Analyzed:   | 11/30/18 |        |       |       |        |
| Benzene                            | 0.112   | 0.00100      | mg/kg wet | 0.100      |             | 112      | 70-130 | 2.70  | 20    |        |
| Toluene                            | 0.106   | 0.0100       | "         | 0.100      |             | 106      | 70-130 | 0.678 | 20    |        |
| Ethylbenzene                       | 0.117   | 0.00500      | "         | 0.100      |             | 117      | 70-130 | 0.307 | 20    |        |
| Xylene (p/m)                       | 0.208   | 0.0200       | "         | 0.200      |             | 104      | 70-130 | 3.24  | 20    |        |
| Xylene (o)                         | 0.114   | 0.0100       | "         | 0.100      |             | 114      | 70-130 | 7.91  | 20    |        |
| Surrogate: 4-Bromofluorobenzene    | 0.0651  |              | "         | 0.0600     |             | 108      | 75-125 |       |       |        |
| Surrogate: 1,4-Difluorobenzene     | 0.0636  |              | "         | 0.0600     |             | 106      | 75-125 |       |       |        |
| Matrix Spike (P8K3001-MS1)         | Sour    | rce: 8K29000 | 6-02      | Prepared & | Analyzed:   | 11/30/18 |        |       |       |        |
| Benzene                            | 0.0961  | 0.00119      | mg/kg dry | 0.119      | ND          | 80.8     | 80-120 |       |       |        |
| Toluene                            | 0.0806  | 0.0119       | "         | 0.119      | 0.00346     | 64.8     | 80-120 |       |       | QM-0   |
| Ethylbenzene                       | 0.0754  | 0.00595      | "         | 0.119      | 0.0109      | 54.2     | 80-120 |       |       | QM-0   |
| Xylene (p/m)                       | 0.141   | 0.0238       | "         | 0.238      | 0.0506      | 37.9     | 80-120 |       |       | QM-0   |
| Xylene (o)                         | 0.0804  | 0.0119       | "         | 0.119      | 0.0347      | 38.4     | 80-120 |       |       | QM-0   |
| Surrogate: 4-Bromofluorobenzene    | 0.0770  |              | "         | 0.0714     |             | 108      | 75-125 |       |       |        |
| Surrogate: 1,4-Difluorobenzene     | 0.0728  |              | "         | 0.0714     |             | 102      | 75-125 |       |       |        |
|                                    |         |              |           |            |             |          |        |       |       |        |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

# Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch P8K3001 - General Preparation (C | GC | ) |
|--|----|---|
|--|----|---|

| Matrix Spike Dup (P8K3001-MSD1) | Sour   | rce: 8K29006 | 5-02      | Prepared: | 11/30/18 Ar | nalyzed: 12 |        |       |    |       |
|---------------------------------|--------|--------------|-----------|-----------|-------------|-------------|--------|-------|----|-------|
| Benzene                         | 0.0894 | 0.00119      | mg/kg dry | 0.119     | ND          | 75.1        | 80-120 | 7.29  | 20 | QM-05 |
| Toluene                         | 0.0784 | 0.0119       | "         | 0.119     | 0.00346     | 62.9        | 80-120 | 2.96  | 20 | QM-05 |
| Ethylbenzene                    | 0.0753 | 0.00595      | "         | 0.119     | 0.0109      | 54.1        | 80-120 | 0.166 | 20 | QM-05 |
| Xylene (p/m)                    | 0.151  | 0.0238       | "         | 0.238     | 0.0506      | 42.3        | 80-120 | 11.0  | 20 | QM-05 |
| Xylene (o)                      | 0.0834 | 0.0119       | "         | 0.119     | 0.0347      | 40.9        | 80-120 | 6.35  | 20 | QM-05 |
| Surrogate: 1,4-Difluorobenzene  | 0.0784 |              | "         | 0.0714    |             | 110         | 75-125 |       |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0826 |              | "         | 0.0714    |             | 116         | 75-125 |       |    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      | D. I   | Reporting     | TT :  | Spike      | Source    | 0/DEC    | %REC   | DDD  | RPD   | N     |
|--------------------------------------|--------|---------------|-------|------------|-----------|----------|--------|------|-------|-------|
| Analyte                              | Result | Limit         | Units | Level      | Result    | %REC     | Limits | RPD  | Limit | Notes |
| Batch P8L0301 - *** DEFAULT PREP *** |        |               |       |            |           |          |        |      |       |       |
| Blank (P8L0301-BLK1)                 |        |               |       | Prepared & | Analyzed: | 12/03/18 |        |      |       |       |
| % Moisture                           | ND     | 0.1           | %     |            |           |          |        |      |       |       |
| Duplicate (P8L0301-DUP1)             | Sou    | rce: 8K28012- | 10    | Prepared & | Analyzed: | 12/03/18 |        |      |       |       |
| % Moisture                           | 22.0   | 0.1           | %     |            | 22.0      |          |        | 0.00 | 20    |       |
| Duplicate (P8L0301-DUP2)             | Sou    | rce: 8K28017- | 06    | Prepared & | Analyzed: | 12/03/18 |        |      |       |       |
| % Moisture                           | 14.0   | 0.1           | %     |            | 16.0      |          |        | 13.3 | 20    |       |
| Duplicate (P8L0301-DUP3)             | Sou    | rce: 8K28018- | 14    | Prepared & | Analyzed: | 12/03/18 |        |      |       |       |
| % Moisture                           | 17.0   | 0.1           | %     |            | 17.0      |          |        | 0.00 | 20    |       |
| Duplicate (P8L0301-DUP4)             | Sou    | rce: 8K28020- | 02    | Prepared & | Analyzed: | 12/03/18 |        |      |       |       |
| % Moisture                           | 15.0   | 0.1           | %     |            | 16.0      |          |        | 6.45 | 20    |       |
| Duplicate (P8L0301-DUP5)             | Sou    | rce: 8K28021- | 07    | Prepared & | Analyzed: | 12/03/18 |        |      |       |       |
| % Moisture                           | 18.0   | 0.1           | %     |            | 15.0      |          |        | 18.2 | 20    |       |
| Duplicate (P8L0301-DUP6)             | Sou    | rce: 8K28022- | 01    | Prepared & | Analyzed: | 12/03/18 |        |      |       |       |
| % Moisture                           | 9.0    | 0.1           | %     |            | 10.0      |          |        | 10.5 | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                 |        | Reporting    |           | Spike     | Source     |             | %REC   |      | RPD   |       |
|---------------------------------|--------|--------------|-----------|-----------|------------|-------------|--------|------|-------|-------|
| Analyte                         | Result | Limit        | Units     | Level     | Result     | %REC        | Limits | RPD  | Limit | Notes |
| Batch P8K2908 - TX 1005         |        |              |           |           |            |             |        |      |       |       |
| Blank (P8K2908-BLK1)            |        |              |           | Prepared: | 11/29/18 A | nalyzed: 11 | /30/18 |      |       |       |
| C6-C12                          | ND     | 25.0         | mg/kg wet |           |            |             |        |      |       |       |
| >C12-C28                        | ND     | 25.0         | "         |           |            |             |        |      |       |       |
| >C28-C35                        | ND     | 25.0         | "         |           |            |             |        |      |       |       |
| Surrogate: 1-Chlorooctane       | 118    |              | "         | 100       |            | 118         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 68.2   |              | "         | 50.0      |            | 136         | 70-130 |      |       | S-GC  |
| LCS (P8K2908-BS1)               |        |              |           | Prepared: | 11/29/18 A | nalyzed: 11 | /30/18 |      |       |       |
| C6-C12                          | 1070   | 25.0         | mg/kg wet | 1000      |            | 107         | 75-125 |      |       |       |
| >C12-C28                        | 1220   | 25.0         | "         | 1000      |            | 122         | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 127    |              | "         | 100       |            | 127         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 60.9   |              | "         | 50.0      |            | 122         | 70-130 |      |       |       |
| Matrix Spike (P8K2908-MS1)      | Sou    | rce: 8K28003 | 3-07      | Prepared: | 11/29/18 A | nalyzed: 11 | /30/18 |      |       |       |
| C6-C12                          | 1150   | 28.1         | mg/kg dry | 1120      | 13.8       | 101         | 75-125 |      |       |       |
| >C12-C28                        | 1280   | 28.1         | "         | 1120      | 142        | 101         | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane       | 125    |              | "         | 112       |            | 111         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 60.7   |              | "         | 56.2      |            | 108         | 70-130 |      |       |       |
| Matrix Spike Dup (P8K2908-MSD1) | Sou    | rce: 8K28003 | 3-07      | Prepared: | 11/29/18 A | nalyzed: 11 | /30/18 |      |       |       |
| C6-C12                          | 1120   | 28.1         | mg/kg dry | 1120      | 13.8       | 98.8        | 75-125 | 2.19 | 20    |       |
| >C12-C28                        | 1250   | 28.1         | "         | 1120      | 142        | 99.0        | 75-125 | 2.39 | 20    |       |
| Surrogate: 1-Chlorooctane       | 122    |              | "         | 112       |            | 109         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl          | 59.2   |              | "         | 56.2      |            | 105         | 70-130 |      |       |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were

within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Drew | Darron |       |           |
|---------------------|------|--------|-------|-----------|
| Report Approved By: |      |        | Date: | 12/5/2019 |

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

0 0

Permian Basin Environmental Lab, L.P.

| Rec       | Relinquished by:          | Relinquished by:   | elipquish   | <del>/8/202/</del> pecial Ir   | 12:<br>  | 21:                                     | 19 T            | V        |          | 12.0%<br>W.T.A<br>2.7% | # Y %    |          | 0          | LAB # (lab use only)  | ORDER#                                   |                    |                    |                            | _                                |                                   |  |                               | Page 474 a   | of 613                                |
|-----------|---------------------------|--|---|--|----------|---|-----------------|----------|----------|------------------------|----------|----------|------------|---|--|--------------------|--------------------|----------------------------|----------------------------------|-----------------------------------|--|-------------------------------|--|---------------------------------------|
|           | ed by:                    | ed by:   | The Stand   | pecial Instructions:<br>Bill to Plains                                 |          | *************************************** |                 |          |          |                        |          |          | 2018 SP-35 | FIELD CODE  | (da) use (viily)<br>ORDER #: 公(く 2) 0 (3 |                    | Sampler Signature: | Telephone No: (432)5207720 | City/State/Zip: Midland/TX/79703 | Company Address: 2057 Commerce Dr | Company Name TRC Environmental Corporation | Project Manager: Curt Stanley | BBIL/AB  |                                       |
| .         | Date                      | Date   | -   |  |          |   |                 |          |          |                        |          |          |            |   |  |                    | Micho              | ->                         | 3                                | Dr.                               | tal Corpora                                |                               | IAIN OF  |                                       |
|           | Time                      | Time   | 162   |  |          |   |                 |          |          |                        |          |          |            | Beginning Depth   |  |                    | ₩<br>(             |                            |                                  |                                   | tion                                       |                               | CUST   |                                       |
|           | Ð                         | <u>.</u>   | ) ie  |  | ь        | <br>                                    |                 |          |          |                        |          |          |            | Ending Depth  | ,  |                    | 100                |                            |                                  |                                   |  |                               | ODY  |                                       |
| THE WAR   | Received by PBE           | Received by:   | Received by:  |  |          |   |                 |          |          |                        |          |          | 11/27/2018 | Date Sampled  |  |                    | BACKUO             |                            |                                  |                                   |  |                               | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian Basi 10014 S. Cou                     |                                       |
|           |                           |  | To the  |  |          |   |                 |          |          |                        |          |          | 0910       | Time Sampled  |  |                    | ACといいう e-mail:     | Fax No:                    |                                  |                                   |  |                               | D ANALYSIS   |                                       |
| 10/01     |                           |  |   |  |          | -                                       |                 |          |          |                        | _        | 1        |            | Field Filtered  Total #. of Containers                        |  |                    | 8                  |                            |                                  |                                   |  |                               | REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213 Midland. Texas 79706 |                                       |
|           |                           |  |   |  |          |   |                 |          |          |                        |          |          | ×          | lce   |  | cibryant@paalp.com | sta                |                            |                                  |                                   |  |                               | an B   |                                       |
|           |                           |  | $\prod_{i=1}^{n}$   |  |          |   |                 |          |          |                        |          |          |            | HNO₃  | Prese                                    | )<br>VIO           | nle)               |                            |                                  |                                   |  | 1                             | 37<br>asin<br>cour   |                                       |
|           |                           | -  | V.  |  | -        | ـــ                                     |                 | .        |          |                        | $\vdash$ |          | -          | HCI   | Preservation &                           | Int(               | <u>@</u>           |                            |                                  | \ .                               | 1  |                               | Enviro   |                                       |
| 10        |                           |  | į   |  | $\vdash$ | ┢                                       | $\vdash$        |          |          | $\dashv$               |          |          |            | H₂SO₄<br>NaOH   |  | pe                 | CS                 |                            |                                  |                                   |  |                               | ronn<br>oad  |                                       |
|           |                           | -  |   |  | -        | $\vdash$                                | 7               |          | $\dashv$ |                        | _        |          |            | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>                 | # of Containers                          | alp                | olut.              |                            |                                  |                                   |  |                               | nent<br>121:   | · · · · · · · · · · · · · · · · · · · |
| 1         |                           |  | =   | 1  |          |   |                 |          |          |                        |          |          |            | None  | tainer                                   | 8                  | <u>ion</u>         |                            |                                  |                                   |  |                               | 3 <u>al</u>  |                                       |
| 01.10     | Date                      | Date   | )<br>  27   |  |          |   |                 |          |          |                        |          |          |            | Other ( Specify)  | σ,                                       | 13                 | ς<br>Σ             |                            |                                  |                                   |  |                               | E  |                                       |
| ୁ         | ु ह                       |  | 7/<br>  X   |  |          |   |                 |          |          |                        |          |          | S          | DW=Drinking Water SL=Sludga                                   | <u>≅</u>                                 |                    | Ĭ                  | Z)                         |                                  |                                   |  |                               | 70   |                                       |
| 2.5       |                           |  |   |  |          |   |                 |          |          |                        | ٠.       |          | Soil       | GW = Groundwatar S=Soli/Solid<br>NP=Non-Potabla Specify Other | Matrix                                   |                    |                    | epoi                       |                                  | _                                 | -  | 20                            |  |                                       |
|           | 2 D. V.                   | Time   | 1 (62   |  |          |   |                 |          |          | 寸                      |          |          | ×          | TPH: 418.1 (8015M) 801  | 5B                                       | П                  |                    | t Fo                       |                                  | Proje                             | ָּדַ.                                      | ojec                          |  |                                       |
|           | 17 10 20                  |  |   | <u>.</u>   |          |   |                 |          |          |                        |          |          |            | TPH: TX 1005 TX 1006  |  |                    |                    | Report Format:             | PC                               | Project Loc:                      | Project #:                                 | Project Name:                 |  |                                       |
| Agu       | Temperature Upon Receipt: | Sample Hand Delivered<br>by Sampler/Client Rep. ?<br>by Courier? UPS | Cus   | Laboratory Comments: Sample Containe's Intact? VOCs Free of Headspace? |          |   |                 |          |          |                        |          |          | -          | Cations (Ca, Mg, Na, K)                                       | _  | $\  \ $            |                    | **                         | PO#:                             | ်င္ပ                              | #  | ne:                           |  |                                       |
| sted      | pera<br>vived             | nple Hand I<br>by Samplen<br>by Courier?                             | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | Laboratory Comments: Sample Containers intact? VOCs Free of Headspace? | <u> </u> |   |                 |          |          | 4                      |          |          |            | Anions (CI, SO4, Alkalinity)                                  | TOTAL                                    |                    |                    | ×                          |                                  |                                   |  |                               |  |                                       |
| l.        |                           | tano<br>imple  | seal<br>Seal  | ee o   |          | $\vdash$                                |                 |          | -        | -                      |          | $\dashv$ |            | SAR / ESP / CEC   |  | 1. 1               |                    | Standard                   |                                  |                                   | ļ ·  | Į .                           | . 2  |                                       |
| 6         | 요음                        | ,5 <u>5</u> _6   | 9 9 B   | Tame on  |          |   |                 | $\vdash$ | $\dashv$ |                        |          |          |            | Metals: As Ag Ba Cd Cr Pb Hg S<br>Volatiles                   | ie >                                     | Analyze            |                    | dard                       |                                  |                                   |  |                               | JO N   |                                       |
| 13 T      | J.Z.                      | ent R  | 000 CO  | adsp<br>men  | $\vdash$ | $\vdash$                                | $\vdash$        |          | -        | $\dashv$               | -        |          | -          | Semivolatiles   | ╅╂┉                                      | YZ e               |                    |                            |                                  | _                                 | Z  |                               | Phone: 432-661-4184  |                                       |
| င်        | ုင်<br>C                  | ered<br>ItRep<br>UPS   | aine<br>er(s)   | ace;   | H        | <b>—</b>                                |                 |          | $\dashv$ | $\dashv$               |          |          | ×          | BTEX 8021B/5030 or BTEX 826                                   | 0 +                                      | 짂                  |                    |                            |                                  | ea (                              | M  | ğ                             | 32-6   |                                       |
| °C Factor |                           | 도.)<br>문   | Ġ.  |  |          |   |                 |          |          |                        | _        |          | -          | RCI   |  | 1                  |                    | TRRP                       |                                  | oun                               | onu  | Ĭ                             | <u>6</u>   |                                       |
| Q.        |                           |  |   |  |          |   |                 |          |          |                        |          |          |            | N.O.R.M.  |  | ]                  |                    | 꾸                          |                                  | Lea County, NM                    | me   | Monument 18                   | 184  |                                       |
| 1         | Z                         |  |   |  |          |   |                 |          |          |                        |          |          |            | Chlorides E 300   |  | ]                  |                    |                            |                                  | Ź                                 | TNM Monument 18                            | ∞                             |  |                                       |
| - N       | 383 a 763                 |  | ⋞⋞  | /*\ <b>X</b>   |          |   | Ш               |          |          | $\Box$                 | ]        |          |            | Paint Filter  |  | ]                  |                    |                            |                                  |                                   | 000  |                               | Pag  |                                       |
|           |                           | Lone Star  |   |  |          | <u> </u>                                |                 | Щ        | _        |                        | _        | _        |            | TCLP BTEX   |  | Ц                  |                    | NPDES                      |                                  |                                   |  |                               | Page 1.of  |                                       |
|           |                           | y z z  | z z z   | N N  |          |   | $\vdash \vdash$ |          |          |                        |          |          |            | RUSH TAT (Pre-Schedule) 24, 4                                 | 48, 72 hrs                               |                    |                    | Š                          |                                  |                                   | -  | D-                            |  | ·                                     |
|           | 14.57                     | 1,4 A f 6,   |   |  |          |   | L               |          |          |                        |          |          | ×          | Standard TAT  |  |                    |                    |                            | 1                                | 1                                 | I L  | ra                            | ge 9 of 9  |                                       |

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

## **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: TNM Monument 18
Project Number: tnm Monument 18
Location: Lea County, NM

Lab Order Number: 9E15013



NELAP/TCEQ # T104704516-18-9

Report Date: 05/30/19

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E

Midland TX, 79705

Project Number: TNM Monument 18
Project Number: tnm Monument 18
Project Manager: Curt Stanley

Fax: (432) 520-7701

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2019 SP-36 | 9E15013-01    | Soil   | 05/14/19 10:00 | 05-15-2019 15:57 |
| 2019 SP-37 | 9E15013-02    | Soil   | 05/14/19 10:10 | 05-15-2019 15:57 |
| 2019 SP-38 | 9E15013-03    | Soil   | 05/14/19 10:20 | 05-15-2019 15:57 |
| 2019 SP-39 | 9E15013-04    | Soil   | 05/14/19 10:30 | 05-15-2019 15:57 |
| 2019 SP-40 | 9E15013-05    | Soil   | 05/14/19 10:40 | 05-15-2019 15:57 |
| 2019 SP-41 | 9E15013-06    | Soil   | 05/14/19 10:50 | 05-15-2019 15:57 |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project Number: tnm Monument 18
Project Manager: Curt Stanley

Fax: (432) 520-7701

## 2019 SP-36 9E15013-01 (Soil)

| Analyte Re                                     | Reporting Sult Limit | Units      | Dilution   | Batch        | Prepared | Analyzed | Method     | Notes |
|--|----------------------|------------|------------|--------------|----------|----------|------------|-------|
|  | Permian Basin E      | Environmen | tal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                                 |                      |            |            |              |          |          |            |       |
| Benzene  | ND 0.0233            | mg/kg dry  | 20         | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Toluene  | ND 0.0233            | mg/kg dry  | 20         | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Ethylbenzene                                   | ND 0.0233            | mg/kg dry  | 20         | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (p/m)                                   | ND 0.0465            | mg/kg dry  | 20         | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (o)                                     | ND 0.0233            | mg/kg dry  | 20         | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene                | 71.4 %               | 75-12      | 25         | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  | S-GC  |
| Surrogate: 1,4-Difluorobenzene                 | 116 %                | 75-12      | 25         | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Standard | Methods              |            |            |              |          |          |            |       |
| % Moisture 1                                   | <b>4.0</b> 0.1       | %          | 1          | P9E1602      | 05/16/19 | 05/16/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EPA Me  | ethod 8015M          |            |            |              |          |          |            |       |
| C6-C12   | ND 29.1              | mg/kg dry  | 1          | P9E1802      | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C12-C28                                       | ND 29.1              | mg/kg dry  | 1          | P9E1802      | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C28-C35                                       | ND 29.1              | mg/kg dry  | 1          | P9E1802      | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                      | 94.9 %               | 70-13      | 30         | P9E1802      | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                         | 109 %                | 70-13      | 30         | P9E1802      | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35             | ND 29.1              | mg/kg dry  | 1          | [CALC]       | 05/18/19 | 05/18/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: TNM Monument 18
Project Number: tnm Monument 18
Project Manager: Curt Stanley

10 Desta Dr STE 150E Midland TX, 79705

> 2019 SP-37 9E15013-02 (Soil)

|  |               | Reporting    |           |             |         |          |          |            |       |
|--|---------------|--------------|-----------|-------------|---------|----------|----------|------------|-------|
| Analyte                                  | Result        | Limit        | Units     | Dilution    | Batch   | Prepared | Analyzed | Method     | Notes |
|  | Perr          | nian Basin E | nvironmen | ıtal Lab, I | P.      |          |          |            |       |
| Organics by GC                           |               |              |           |             |         |          |          |            |       |
| Benzene                                  | ND            | 0.0227       | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Toluene                                  | ND            | 0.0227       | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Ethylbenzene                             | ND            | 0.0227       | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (p/m)                             | ND            | 0.0455       | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (o)                               | ND            | 0.0227       | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene           |               | 93.3 %       | 75-1      | 25          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene          |               | 83.3 %       | 75-1      | 25          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / St | tandard Metho | ds           |           |             |         |          |          |            |       |
| % Moisture                               | 12.0          | 0.1          | %         | 1           | P9E1602 | 05/16/19 | 05/16/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by   | EPA Method 8  | 015M         |           |             |         |          |          |            |       |
| C6-C12                                   | ND            | 28.4         | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C12-C28                                 | ND            | 28.4         | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C28-C35                                 | ND            | 28.4         | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                |               | 91.8 %       | 70-1      | 30          | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                   |               | 99.9 %       | 70-1      | 30          | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35       | ND            | 28.4         | mg/kg dry | 1           | [CALC]  | 05/18/19 | 05/18/19 | calc       |       |

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E

Project: TNM Monument 18 Project Number: tnm Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

## 2019 SP-38 9E15013-03 (Soil)

| Analyte                                   | Result      | Reporting<br>Limit | Units     | Dilution | Batch   | Prepared | Analyzed | Method     | Notes |
|---|-------------|--------------------|-----------|----------|---------|----------|----------|------------|-------|
|   |             | mian Basin E       |           |          |         |          |          |            |       |
| Organics by GC                            |             |                    |           |          |         |          |          |            |       |
| Benzene                                   | ND          | 0.0227             | mg/kg dry | 20       | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Toluene                                   | ND          | 0.0227             | mg/kg dry | 20       | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Ethylbenzene                              | ND          | 0.0227             | mg/kg dry | 20       | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (p/m)                              | ND          | 0.0455             | mg/kg dry | 20       | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (o)                                | ND          | 0.0227             | mg/kg dry | 20       | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene           |             | 90.2 %             | 75-1      | 25       | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene            |             | 103 %              | 75-1      | 25       | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Sta | ndard Metho | ds                 |           |          |         |          |          |            |       |
| % Moisture                                | 12.0        | 0.1                | %         | 1        | P9E1602 | 05/16/19 | 05/16/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by E  | PA Method 8 | 8015M              |           |          |         |          |          |            |       |
| C6-C12                                    | ND          | 28.4               | mg/kg dry | 1        | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C12-C28                                  | ND          | 28.4               | mg/kg dry | 1        | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C28-C35                                  | ND          | 28.4               | mg/kg dry | 1        | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                 |             | 92.1 %             | 70-1      | 30       | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                    |             | 103 %              | 70-1      | 30       | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35        | ND          | 28.4               | mg/kg dry | 1        | [CALC]  | 05/18/19 | 05/18/19 | calc       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: TNM Monument 18

Project Number: tnm Monument 18 Project Manager: Curt Stanley

## 2019 SP-39 9E15013-04 (Soil)

| Analyte                                   | Result      | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method     | Notes |
|---|-------------|--------------------|-----------|-------------|---------|----------|----------|------------|-------|
|   | Peri        | nian Basin E       | nvironmer | ıtal Lab, I | L.P.    | •        |          |            |       |
| Organics by GC                            |             |                    |           |             |         |          |          |            |       |
| Benzene                                   | ND          | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Toluene                                   | ND          | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Ethylbenzene                              | ND          | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (p/m)                              | ND          | 0.0417             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (o)                                | ND          | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene           |             | 87.3 %             | 75-1      | 25          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene            |             | 103 %              | 75-1      | 25          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Sta | ndard Metho | ds                 |           |             |         |          |          |            |       |
| % Moisture                                | 4.0         | 0.1                | %         | 1           | P9E1602 | 05/16/19 | 05/16/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by E  | PA Method 8 | 015M               |           |             |         |          |          |            |       |
| C6-C12                                    | ND          | 26.0               | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C12-C28                                  | ND          | 26.0               | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C28-C35                                  | ND          | 26.0               | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                 |             | 96.4 %             | 70-1      | 30          | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                    |             | 110 %              | 70-1      | 30          | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35        | ND          | 26.0               | mg/kg dry | 1           | [CALC]  | 05/18/19 | 05/18/19 | calc       |       |

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E

Project: TNM Monument 18 Project Number: tnm Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

## 2019 SP-40 9E15013-05 (Soil)

| Analyte   | Result       | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method     | Notes |
|---|--------------|--------------------|-----------|-------------|---------|----------|----------|------------|-------|
|   | Peri         | nian Basin E       | nvironmer | ıtal Lab, I | P.      |          |          |            |       |
| Organics by GC                                  |              |                    |           |             |         |          |          |            |       |
| Benzene   | ND           | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Toluene   | ND           | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Ethylbenzene                                    | ND           | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (p/m)                                    | ND           | 0.0417             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (o)                                      | ND           | 0.0208             | mg/kg dry | 20          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene                  |              | 95.1 %             | 75-1      | 25          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene                 |              | 84.3 %             | 75-1      | 25          | P9E2403 | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| <b>General Chemistry Parameters by EPA / St</b> | andard Metho | ds                 |           |             |         |          |          |            |       |
| % Moisture                                      | 4.0          | 0.1                | %         | 1           | P9E1602 | 05/16/19 | 05/16/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by          | EPA Method 8 | 015M               |           |             |         |          |          |            |       |
| C6-C12  | ND           | 26.0               | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C12-C28  | ND           | 26.0               | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| >C28-C35  | ND           | 26.0               | mg/kg dry | 1           | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                       |              | 84.9 %             | 70-1      | 30          | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                          |              | 95.8 %             | 70-1      | 30          | P9E1802 | 05/18/19 | 05/18/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35              | ND           | 26.0               | mg/kg dry | 1           | [CALC]  | 05/18/19 | 05/18/19 | calc       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: TNM Monument 18

Project Number: tnm Monument 18 Project Manager: Curt Stanley

## 2019 SP-41 9E15013-06 (Soil)

| Analyte                                    | Result      | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per         | mian Basin E       | nvironmen | ıtal Lab, I | Ĺ. <b>P.</b> |          |          |            |       |
| Organics by GC                             |             |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND          | 0.0222             | mg/kg dry | 20          | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Toluene                                    | ND          | 0.0222             | mg/kg dry | 20          | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND          | 0.0222             | mg/kg dry | 20          | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND          | 0.0444             | mg/kg dry | 20          | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND          | 0.0222             | mg/kg dry | 20          | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |             | 84.6 %             | 75-1      | 25          | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |             | 106 %              | 75-1      | 25          | P9E2403      | 05/24/19 | 05/26/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Star | ndard Metho | ds                 |           |             |              |          |          |            |       |
| % Moisture                                 | 10.0        | 0.1                | %         | 1           | P9E1602      | 05/16/19 | 05/16/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by El  | PA Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND          | 27.8               | mg/kg dry | 1           | P9E1802      | 05/18/19 | 05/19/19 | TPH 8015M  |       |
| >C12-C28                                   | ND          | 27.8               | mg/kg dry | 1           | P9E1802      | 05/18/19 | 05/19/19 | TPH 8015M  |       |
| >C28-C35                                   | ND          | 27.8               | mg/kg dry | 1           | P9E1802      | 05/18/19 | 05/19/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |             | 113 %              | 70-1      | 30          | P9E1802      | 05/18/19 | 05/19/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |             | 124 %              | 70-1      | 30          | P9E1802      | 05/18/19 | 05/19/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND          | 27.8               | mg/kg dry | 1           | [CALC]       | 05/18/19 | 05/19/19 | calc       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: TNM Monument 18

Project Number: tnm Monument 18 Project Manager: Curt Stanley

# Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|--|--------|--------------------|-----------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Batch P9E2403 - General Preparation (C | GC)    |                    |           |                |                  |             |                |       |              |       |
| Blank (P9E2403-BLK1)                   |        |                    |           | Prepared: 0    | )5/24/19 Aı      | nalyzed: 05 | /25/19         |       |              |       |
| Benzene                                | ND     | 0.00100            | mg/kg wet |                |                  |             |                |       |              |       |
| Toluene                                | ND     | 0.00100            | "         |                |                  |             |                |       |              |       |
| Ethylbenzene                           | ND     | 0.00100            | "         |                |                  |             |                |       |              |       |
| Xylene (p/m)                           | ND     | 0.00200            | "         |                |                  |             |                |       |              |       |
| Xylene (o)                             | ND     | 0.00100            | "         |                |                  |             |                |       |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0608 |                    | "         | 0.0600         |                  | 101         | 75-125         |       |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.0570 |                    | "         | 0.0600         |                  | 95.1        | 75-125         |       |              |       |
| LCS (P9E2403-BS1)                      |        |                    |           | Prepared: 0    | )5/24/19 Aı      | nalyzed: 05 | /25/19         |       |              |       |
| Benzene                                | 0.0933 | 0.00100            | mg/kg wet | 0.100          |                  | 93.3        | 70-130         |       |              |       |
| Toluene                                | 0.0978 | 0.00100            | "         | 0.100          |                  | 97.8        | 70-130         |       |              |       |
| Ethylbenzene                           | 0.106  | 0.00100            | "         | 0.100          |                  | 106         | 70-130         |       |              |       |
| Xylene (p/m)                           | 0.168  | 0.00200            | "         | 0.200          |                  | 83.9        | 70-130         |       |              |       |
| Xylene (o)                             | 0.0895 | 0.00100            | "         | 0.100          |                  | 89.5        | 70-130         |       |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0587 |                    | "         | 0.0600         |                  | 97.8        | 75-125         |       |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.0620 |                    | "         | 0.0600         |                  | 103         | 75-125         |       |              |       |
| LCS Dup (P9E2403-BSD1)                 |        |                    |           | Prepared: 0    | )5/24/19 Aı      | nalyzed: 05 | /25/19         |       |              |       |
| Benzene                                | 0.0955 | 0.00100            | mg/kg wet | 0.100          |                  | 95.5        | 70-130         | 2.26  | 20           |       |
| Γoluene                                | 0.0981 | 0.00100            | "         | 0.100          |                  | 98.1        | 70-130         | 0.296 | 20           |       |
| Ethylbenzene                           | 0.107  | 0.00100            | "         | 0.100          |                  | 107         | 70-130         | 0.948 | 20           |       |
| Xylene (p/m)                           | 0.166  | 0.00200            | "         | 0.200          |                  | 83.0        | 70-130         | 1.10  | 20           |       |
| Xylene (o)                             | 0.0913 | 0.00100            | "         | 0.100          |                  | 91.3        | 70-130         | 2.02  | 20           |       |
| Surrogate: 4-Bromofluorobenzene        | 0.0628 |                    | "         | 0.0600         |                  | 105         | 75-125         |       |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0637 |                    | "         | 0.0600         |                  | 106         | 75-125         |       |              |       |
| Calibration Blank (P9E2403-CCB1)       |        |                    |           | Prepared: 0    | )5/24/19 Aı      | nalyzed: 05 | /25/19         |       |              |       |
| Benzene                                | 0.00   |                    | mg/kg wet |                |                  |             |                |       |              |       |
| Γoluene                                | 0.00   |                    | "         |                |                  |             |                |       |              |       |
| Ethylbenzene                           | 0.00   |                    | "         |                |                  |             |                |       |              |       |
| Xylene (p/m)                           | 0.00   |                    | "         |                |                  |             |                |       |              |       |
| Xylene (o)                             | 0.00   |                    | "         |                |                  |             |                |       |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0592 |                    | "         | 0.0600         |                  | 98.6        | 75-125         |       |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.0509 |                    | "         | 0.0600         |                  | 84.9        | 75-125         |       |              |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E

Midland TX, 79705

Project: TNM Monument 18
Project Number: tnm Monument 18
Project Manager: Curt Stanley

Fax: (432) 520-7701

# Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|--|--------|--------------------|-----------|----------------|------------------|-------------|----------------|-----|--------------|-------|
| -                                      |        | 2                  |           |                | resure           | , , , ,     | 2              | 102 | - Billit     | 11000 |
| Batch P9E2403 - General Preparation (G | SC)    |                    |           |                |                  |             |                |     |              |       |
| Calibration Blank (P9E2403-CCB2)       |        |                    |           | Prepared: (    | 05/24/19 A       | nalyzed: 05 | /26/19         |     |              |       |
| Benzene                                | 0.00   |                    | mg/kg wet |                |                  |             |                |     |              |       |
| Toluene                                | 0.00   |                    | "         |                |                  |             |                |     |              |       |
| Ethylbenzene                           | 0.00   |                    | "         |                |                  |             |                |     |              |       |
| Xylene (p/m)                           | 0.00   |                    | "         |                |                  |             |                |     |              |       |
| Xylene (o)                             | 0.00   |                    | "         |                |                  |             |                |     |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.0679 |                    | "         | 0.0600         |                  | 113         | 75-125         |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0702 |                    | "         | 0.0600         |                  | 117         | 75-125         |     |              |       |
| Calibration Check (P9E2403-CCV1)       |        |                    |           | Prepared: (    | )5/24/19 A       | nalyzed: 05 | /25/19         |     |              |       |
| Benzene                                | 0.0961 | 0.00100            | mg/kg wet | 0.100          |                  | 96.1        | 80-120         |     |              |       |
| Toluene                                | 0.0944 | 0.00100            | "         | 0.100          |                  | 94.4        | 80-120         |     |              |       |
| Ethylbenzene                           | 0.0936 | 0.00100            | "         | 0.100          |                  | 93.6        | 80-120         |     |              |       |
| Xylene (p/m)                           | 0.161  | 0.00200            | "         | 0.200          |                  | 80.4        | 80-120         |     |              |       |
| Xylene (o)                             | 0.0922 | 0.00100            | "         | 0.100          |                  | 92.2        | 80-120         |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0647 |                    | "         | 0.0600         |                  | 108         | 75-125         |     |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.0627 |                    | "         | 0.0600         |                  | 104         | 75-125         |     |              |       |
| Calibration Check (P9E2403-CCV2)       |        |                    |           | Prepared: (    | 05/24/19 A       | nalyzed: 05 | /26/19         |     |              |       |
| Benzene                                | 0.102  | 0.00100            | mg/kg wet | 0.100          |                  | 102         | 80-120         |     |              |       |
| Toluene                                | 0.107  | 0.00100            | "         | 0.100          |                  | 107         | 80-120         |     |              |       |
| Ethylbenzene                           | 0.101  | 0.00100            | "         | 0.100          |                  | 101         | 80-120         |     |              |       |
| Xylene (p/m)                           | 0.182  | 0.00200            | "         | 0.200          |                  | 90.8        | 80-120         |     |              |       |
| Xylene (o)                             | 0.0991 | 0.00100            | "         | 0.100          |                  | 99.1        | 80-120         |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0904 |                    | "         | 0.0600         |                  | 151         | 75-125         |     |              | S-G   |
| Surrogate: 4-Bromofluorobenzene        | 0.0655 |                    | "         | 0.0600         |                  | 109         | 75-125         |     |              |       |
| Calibration Check (P9E2403-CCV3)       |        |                    |           | Prepared: (    | )5/24/19 A       | nalyzed: 05 | /26/19         |     |              |       |
| Benzene                                | 0.0955 | 0.00100            | mg/kg wet | 0.100          |                  | 95.5        | 80-120         |     |              |       |
| Toluene                                | 0.0981 | 0.00100            | "         | 0.100          |                  | 98.1        | 80-120         |     |              |       |
| Ethylbenzene                           | 0.0943 | 0.00100            | "         | 0.100          |                  | 94.3        | 80-120         |     |              |       |
| Xylene (p/m)                           | 0.162  | 0.00200            | "         | 0.200          |                  | 81.1        | 80-120         |     |              |       |
| Xylene (o)                             | 0.0920 | 0.00100            | "         | 0.100          |                  | 92.0        | 80-120         |     |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.0646 |                    | "         | 0.0600         |                  | 108         | 75-125         |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.0880 |                    | "         | 0.0600         |                  | 147         | 75-125         |     |              | S-G   |

Permian Basin Environmental Lab, L.P.

S-GC

Fax: (432) 520-7701

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705

Surrogate: 1,4-Difluorobenzene

Surrogate: 4-Bromofluorobenzene

Project: TNM Monument 18

Project Number: tnm Monument 18 Project Manager: Curt Stanley

# Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch P9E2403 - General Preparation (G | C | ) |
|--|---|---|
|--|---|---|

| Matrix Spike (P9E2403-MS1)      | Sourc  | e: 9E17005 | -01       | Prepared: 0 | 5/24/19 A | nalyzed: 05 | 5/26/19 |      |    |  |
|---------------------------------|--------|------------|-----------|-------------|-----------|-------------|---------|------|----|--|
| Benzene                         | 1.98   | 0.0208     | mg/kg dry | 2.08        | ND        | 95.2        | 80-120  |      |    |  |
| Toluene                         | 2.06   | 0.0208     | "         | 2.08        | ND        | 98.9        | 80-120  |      |    |  |
| Ethylbenzene                    | 2.28   | 0.0208     | "         | 2.08        | ND        | 109         | 80-120  |      |    |  |
| Xylene (p/m)                    | 3.57   | 0.0417     | "         | 4.17        | ND        | 85.6        | 80-120  |      |    |  |
| Xylene (o)                      | 1.89   | 0.0208     | "         | 2.08        | ND        | 90.7        | 80-120  |      |    |  |
| Surrogate: 4-Bromofluorobenzene | 0.0626 |            | "         | 0.0625      |           | 100         | 75-125  |      |    |  |
| Surrogate: 1,4-Difluorobenzene  | 0.0674 |            | "         | 0.0625      |           | 108         | 75-125  |      |    |  |
| Matrix Spike Dup (P9E2403-MSD1) | Sourc  | e: 9E17005 | -01       | Prepared: 0 | 5/24/19 A | nalyzed: 05 | 5/26/19 |      |    |  |
| Benzene                         | 2.04   | 0.0208     | mg/kg dry | 2.08        | ND        | 98.1        | 80-120  | 3.00 | 20 |  |
| Toluene                         | 2.12   | 0.0208     | "         | 2.08        | ND        | 102         | 80-120  | 3.01 | 20 |  |
| Ethylbenzene                    | 2.42   | 0.0208     | "         | 2.08        | ND        | 116         | 80-120  | 6.28 | 20 |  |
| Xylene (p/m)                    | 3.71   | 0.0417     | "         | 4.17        | ND        | 89.1        | 80-120  | 4.02 | 20 |  |
| Xylene (o)                      | 2.01   | 0.0208     | "         | 2.08        | ND        | 96.7        | 80-120  | 6.35 | 20 |  |

0.0625

0.0625

150

103

75-125

75-125

0.0939

0.0645

TRC Solutions- Midland, Texas

Project: TNM Monument 18 10 Desta Dr STE 150E Project Number: tnm Monument 18 Midland TX, 79705 Project Manager: Curt Stanley

Fax: (432) 520-7701

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |        | Reporting    |       | Spike      | Source    |            | %REC   |      | RPD   |       |
|--------------------------------------|--------|--------------|-------|------------|-----------|------------|--------|------|-------|-------|
| Analyte                              | Result | Limit        | Units | Level      | Result    | %REC       | Limits | RPD  | Limit | Notes |
| Batch P9E1602 - *** DEFAULT PREP *** |        |              |       |            |           |            |        |      |       |       |
| Blank (P9E1602-BLK1)                 |        |              |       | Prepared & | Analyzed  | : 05/16/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1          | %     |            |           |            |        |      |       |       |
| Duplicate (P9E1602-DUP1)             | Sour   | ce: 9E15008- | 01    | Prepared & | Analyzed: | : 05/16/19 |        |      |       |       |
| % Moisture                           | 13.0   | 0.1          | %     |            | 14.0      |            |        | 7.41 | 20    |       |
| Duplicate (P9E1602-DUP2)             | Sour   | ce: 9E15009- | 45    | Prepared & | Analyzed: | : 05/16/19 |        |      |       |       |
| % Moisture                           | 21.0   | 0.1          | %     |            | 20.0      |            |        | 4.88 | 20    |       |
| Duplicate (P9E1602-DUP3)             | Sour   | ce: 9E15011- | 01    | Prepared & | Analyzed: | : 05/16/19 |        |      |       |       |
| % Moisture                           | 11.0   | 0.1          | %     |            | 11.0      |            |        | 0.00 | 20    |       |

TRC Solutions- Midland, Texas

Project: TNM Monument 18
Project Number: tnm Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting |           | Spike      | Source    |          | %REC   |      | RPD   |       |
|----------------------------------|--------|-----------|-----------|------------|-----------|----------|--------|------|-------|-------|
| Analyte                          | Result | Limit     | Units     | Level      | Result    | %REC     | Limits | RPD  | Limit | Notes |
| Batch P9E1802 - TX 1005          |        |           |           |            |           |          |        |      |       |       |
| Blank (P9E1802-BLK1)             |        |           |           | Prepared & | Analyzed: | 05/18/19 |        |      |       |       |
| C6-C12                           | ND     | 25.0      | mg/kg wet |            |           |          |        |      |       |       |
| >C12-C28                         | ND     | 25.0      | "         |            |           |          |        |      |       |       |
| >C28-C35                         | ND     | 25.0      | "         |            |           |          |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 95.7   |           | "         | 100        |           | 95.7     | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 52.2   |           | "         | 50.0       |           | 104      | 70-130 |      |       |       |
| LCS (P9E1802-BS1)                |        |           |           | Prepared & | Analyzed: | 05/18/19 |        |      |       |       |
| C6-C12                           | 1080   | 25.0      | mg/kg wet | 1000       |           | 108      | 75-125 |      |       |       |
| >C12-C28                         | 1070   | 25.0      | "         | 1000       |           | 107      | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane        | 123    |           | "         | 100        |           | 123      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 46.0   |           | "         | 50.0       |           | 91.9     | 70-130 |      |       |       |
| LCS Dup (P9E1802-BSD1)           |        |           |           | Prepared & | Analyzed: | 05/18/19 |        |      |       |       |
| C6-C12                           | 1190   | 25.0      | mg/kg wet | 1000       |           | 119      | 75-125 | 9.90 | 20    |       |
| >C12-C28                         | 1120   | 25.0      | "         | 1000       |           | 112      | 75-125 | 4.78 | 20    |       |
| Surrogate: 1-Chlorooctane        | 108    |           | "         | 100        |           | 108      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 51.0   |           | "         | 50.0       |           | 102      | 70-130 |      |       |       |
| Calibration Blank (P9E1802-CCB1) |        |           |           | Prepared & | Analyzed: | 05/18/19 |        |      |       |       |
| C6-C12                           | 10.7   |           | mg/kg wet |            |           |          |        |      |       |       |
| >C12-C28                         | 7.98   |           | "         |            |           |          |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 95.8   |           | "         | 100        |           | 95.8     | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 52.2   |           | "         | 50.0       |           | 104      | 70-130 |      |       |       |
| Calibration Blank (P9E1802-CCB2) |        |           |           | Prepared & | Analyzed: | 05/18/19 |        |      |       |       |
| C6-C12                           | 10.6   |           | mg/kg wet |            |           |          |        |      |       |       |
| >C12-C28                         | 14.8   |           | "         |            |           |          |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 100    |           | "         | 100        |           | 100      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 54.5   |           | "         | 50.0       |           | 109      | 70-130 |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: TNM Monument 18
Project Number: tnm Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting    |           | Spike       | Source     |             | %REC   |      | RPD   |       |
|----------------------------------|--------|--------------|-----------|-------------|------------|-------------|--------|------|-------|-------|
| Analyte                          | Result | Limit        | Units     | Level       | Result     | %REC        | Limits | RPD  | Limit | Notes |
| Batch P9E1802 - TX 1005          |        |              |           |             |            |             |        |      |       |       |
| Calibration Check (P9E1802-CCV1) |        |              |           | Prepared &  | Analyzed:  | 05/18/19    |        |      |       |       |
| C6-C12                           | 498    | 25.0         | mg/kg wet | 500         |            | 99.6        | 85-115 |      |       |       |
| >C12-C28                         | 529    | 25.0         | "         | 500         |            | 106         | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 110    |              | "         | 100         |            | 110         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 49.1   |              | "         | 50.0        |            | 98.3        | 70-130 |      |       |       |
| Calibration Check (P9E1802-CCV2) |        |              |           | Prepared &  | Analyzed:  | 05/18/19    |        |      |       |       |
| C6-C12                           | 561    | 25.0         | mg/kg wet | 500         |            | 112         | 85-115 |      |       |       |
| >C12-C28                         | 554    | 25.0         | "         | 500         |            | 111         | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 115    |              | "         | 100         |            | 115         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 51.5   |              | "         | 50.0        |            | 103         | 70-130 |      |       |       |
| Calibration Check (P9E1802-CCV3) |        |              |           | Prepared: ( | 05/18/19 A | nalyzed: 05 | /19/19 |      |       |       |
| C6-C12                           | 503    | 25.0         | mg/kg wet | 500         |            | 101         | 85-115 |      |       |       |
| >C12-C28                         | 503    | 25.0         | "         | 500         |            | 101         | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 97.0   |              | "         | 100         |            | 97.0        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 43.7   |              | "         | 50.0        |            | 87.5        | 70-130 |      |       |       |
| Duplicate (P9E1802-DUP1)         | Sou    | rce: 9E16007 | -01       | Prepared: ( | 05/18/19 A | nalyzed: 05 | /19/19 |      |       |       |
| C6-C12                           | ND     | 29.1         | mg/kg dry |             | 13.8       |             |        |      | 20    |       |
| >C12-C28                         | 15.1   | 29.1         | "         |             | 17.1       |             |        | 12.6 | 20    |       |
| Surrogate: 1-Chlorooctane        | 102    |              | "         | 116         |            | 87.5        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 57.5   |              | "         | 58.1        |            | 98.9        | 70-130 |      |       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E

Midland TX, 79705

Project Manager: Curt Stanley

**Notes and Definitions** 

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Dien | Devol C |       |           |
|---------------------|------|---------|-------|-----------|
| Report Approved By: |      |         | Date: | 5/30/2019 |

P AR MAN

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

|                              | Page             | 490 of 613  |
|------------------------------|------------------|-------------|
| Company Name                 | Project Manager: | VIMESC      |
| TRC Environmental Corporatio | Curt Stanley     | CHAIN OF CU |

| Receipt elinquished by:  | ed by   | QCD:  | 6/8/202<br>g   |            | 2:21:           | 29 /     | 2M       |              |               | Ø. 1         |  | li i       |              |   | 9                 |              | (lab           |                    |                |                  |                           |                               | Pag              | e 490 a  |
|--|---|---|--|------------|-----------------|----------|----------|--------------|---------------|--------------|--|------------|--------------|---|-------------------|--------------|----------------|--------------------|----------------|------------------|---------------------------|-------------------------------|------------------|--|
| nquish   | celinquisned by:  | celinquished by:  | Bill to Plai   |            |                 |          |          | \$           | VΙ            | 4            | (O)  | 7          |              | LAB # (lab use only)  | ORDER#:           |              | (lab use only) |                    |                |                  |                           |                               |                  |  |
| ed by:   | od by:  |   | Bill to Plains   | ·          |                 |          |          | 2019 SP-41   | 2019 SP-40    | 2019 SP-39   | 2019   | 2019 SP-37 | 2019 SP-36   |   |                   |              | ₹              | Sampler Signature: | Telephone No:  | City/State/Zip:  | Company Address:          | Company Name                  | Project Manager: |  |
|  | ,   |   | Ple  |            |                 |          |          | SP           | ş             | SP.          | SP-38  | SP         | SP           | '   | <u>د</u><br>آ     | )<br>        |                | pier               | phor           | State            | pany                      | pan                           | Z                |  |
|  |   | $\mathbb{K}$  | ins  |            |                 |          |          | 4            | 6             | 39           | 33   | 37         | 36           |   | Ū                 | i            |                | Sigr               | ē<br>Z         | a/Zip            | Αd                        | y Na                          | ]ane             |  |
|  | \   | V   | ŀ  |            |                 |          |          |              |               |              |  |            |              | <u></u>   | 500 IS            |              |                | natui              | ö              | *                | dres                      | me                            | Ģer.             |  |
|  |   | M   |  |            |                 |          |          |              |               |              |  |            |              | FIELD CODE  |                   |              |                |                    | <b>_</b>       | مو- ا            | _                         |                               |                  |  |
|  |   | 1   | V  |            |                 |          | İ        | Ì            |               |              |  |            |              | CO  | ۳                 |              |                | 1                  | (432)5207720   | Midland/TX/79705 | 10 Desta Drive Suite 150E | 공                             | Curt Stanley     |  |
|  |   |   |  |            |                 |          |          |              |               |              |  |            |              | Œ   |                   |              |                | a                  | 5207           | nd/T             | sta                       | Envi                          | Stani            | Direction  |
|  | ļ   | 07  | -  |            |                 |          |          |              |               |              |  |            |              |   | 1.                |              |                | $ \chi $           | 720            | X79              | Drive                     | onm                           | ଞ                |  |
| <u></u>  | , ,   | <b></b>   | ,  |            |                 |          |          |              |               |              |  |            |              |   |                   |              |                | 10                 | $\setminus$    | 705              | Suit                      | ental                         |                  |  |
| Date   | ā   | 5   | 1  |            |                 |          | ı        | ĺ            |               |              |  |            |              |   | Liberton Control  |              | 433            | 1                  |                |                  | e 15                      | δ                             |                  |  |
|  |   | 2   | -  | -          | <del> </del>    |          |          | _            |               | _            | ├  | ļ          | -            |   | 7                 |              |                | 13                 | 2              |                  | m                         | TRC Environmental Corporation |                  |  |
| =  | -   | 15:57   | -  |            |                 |          |          |              |               |              |  |            |              | Beginning Depth   |                   |              |                | 19                 |                |                  |                           | g                             |                  |  |
| ime  | ā   |   |  |            |                 |          |          |              |               |              | <del>                                     </del> | T-         | 1            | Ending Depth  |                   |              |                |                    | /              |                  |                           |                               |                  |  |
| - E-20   | ( )   |   |  |            | <u> </u>        |          |          | _            |               |              | <del> </del>                                     | <u> </u>   | -            |   | 4                 |              |                |                    |                |                  |                           |                               |                  |  |
| Regeived by PBE  | TUX   | Received by:  |  |            |                 |          |          | 2            | 5/14/2019     | 5/1          | 2,7  | 5/1        | 5/1,         |   |                   |              |                | <b>Y</b>           |                |                  |                           |                               |                  |  |
| ed b   |   | r d   |  |            |                 |          | 1        | 5/14/2019    | 4/20          | 5/14/2019    | 5/14/2019  | 5/14/2019  | 5/14/2019    | Date Sampled  |                   |              |                |                    |                |                  |                           |                               |                  |  |
| y PB   | Lase  | : ×   |  |            |                 |          |          | 0            | 60            | 19           | 19   | 100        | 19           |   |                   |              |                |                    |                |                  |                           |                               |                  |  |
| H H  | 10  |   |  |            |                 |          |          |              |               |              |  |            |              |   | 7                 |              |                | •                  | •              |                  |                           |                               |                  |  |
| 2.00   | 6   |   |  |            |                 |          |          | 10.50        | 10:40         | 10:30        | 10:20  | 10:10      | 10:00        | Time Sampled  |                   |              |                | ф                  | H              |                  |                           | İ                             |                  |  |
|  | 8   |   |  |            |                 |          |          | 5  <br>5     | 5             | ŏ            | ď  | 0          | ŏ            | ·   |                   |              |                | e-mail:            | Fax No:        |                  |                           |                               |                  |  |
| 3 6 K  | lose  |   |  | -          |                 |          | +        | $\dashv$     |               | <del> </del> | -  | $\vdash$   |              | Field Filtered  | 1                 |              |                | <del></del>        | ١              |                  |                           |                               |                  | <br>S ⇒ ¥  |
|  | /   |   |  |            |                 |          |          | $\top$       |               | -            | l  |            | <del> </del> | Total #. of Containers  | 1                 | ١            | ő              | 8                  |                |                  |                           |                               |                  | Permian Basin Environmental Lab, LP<br>10014 S. County Road 1213<br>Midland, Texas 79706 |
|  |   |   |  |            |                 |          | >        | × ;          | ×             | ×            | ×  | ×          | ×            | łcə   | П                 |              | 쯦              | cdstanley@trc      |                |                  |                           |                               | ٠                | ğ, T   |
|  |   |   |  |            |                 |          |          |              |               |              |  |            |              | HNO <sub>3</sub>  | Prese             |              | ē   5          |                    |                |                  |                           |                               |                  | asin<br>oun<br>exas  |
|  |   |   |  | <u> </u>   |                 |          | _        |              |               |              |  | <u> </u>   | ļ            | HCI   | Preservation      |              |                | 9                  |                |                  |                           |                               |                  | Env<br>fy R<br>5 79  |
| 35,4d, 12  |   |   |  | <u> </u>   |                 |          |          | $\dashv$     |               |              | _  | -          | <u> </u>     | H <sub>2</sub> SO <sub>4</sub><br>NaOH                        |                   |              | SS             | S                  |                |                  |                           |                               |                  | nvirons<br>Road<br>79706   |
|  |   |   |  | <u> </u>   | <del>   </del>  | $\dashv$ |          | $\dashv$     |               |              |  |            |              | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>                 | & # of Containers |              | Solutions.com  | csolutions.com     |                |                  |                           |                               |                  | nent<br>1213   |
|  | 01  |   |  | <b></b>    |                 | 十        |          | $\top$       | _             |              |  |            |              | None  | stainer           |              |                | jon                |                |                  |                           |                               |                  | <u> </u>   |
| Date   | Date<br>157   | Date  |  |            |                 |          |          |              |               |              |  |            |              | Other ( Specify)  | ర                 |              |                | S.C                |                |                  |                           |                               |                  | , j  |
| e e  | 2   | ា គ   |  |            |                 |          | T        |              |               |              |  |            |              | DW≖Drinking Water SL=Sludge                                   | Z                 | 1            | 3              | B                  | <u>,</u>       | •                | •                         | I                             | '                | ס  |
| 100  | 72  |   |  |            |                 |          |          |              |               |              |  |            |              | GW = Groundwater S=Soil/Solid<br>NP=Non-Potable Specify Other | Matrix            |              |                |                    | <u>epo</u>     |                  |                           |                               | סיי              |  |
| Time   | 15:57/<br>15:57/  | Time  |  |            |                 | $\dashv$ | <b>-</b> | <del>,</del> | $\overline{}$ | ×            | ×  | ×          | ×            | TPH: 418.1 8015M 8015   |                   | Т            | T              | 1                  | Ť              | •                | Proj                      | פר                            | <del>roj</del> e |  |
|  | The same of the same of   |   |  |            |                 |          | 上        |              |               |              |  |            |              | TPH: TX 1005 TX 1006  | $\exists$         |              |                |                    | Report Format: | פ                | Project Loc:              | Project #:                    | Project Name:    |  |
| Tem<br>Rece  | Sample Hand Delivered<br>by Sampler/Client Rep<br>by Courier? UPS | Cust  | Lab<br>Sam   |            |                 |          |          | $\perp$      | $\Box$        |              |  |            |              | Cations (Ca, Mg, Na, K)                                       |                   |              |                |                    |                | PO #:            | .00                       | 9<br>#                        | me:              |  |
| Temperature Upon Receipt: Received: $\mathcal{FG}$ °C Received: $\mathcal{AG}$ °C Received: $\mathcal{AG}$ | mple Hand Delivered<br>by Sampler/Client Rep<br>by Courier? UPS   | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? |            | $\square$       |          | _        | _            | _             |              |  |            |              | Anions (Cl, SO4, Alkalinity)                                  |                   | TOTAL        | ₃┃             |                    | ×              |                  |                           |                               |                  |  |
| Temperature Upor Received: 49  | Hand<br>Imple   | Seals   | 8 5 5 C  | ļ          | $\vdash \vdash$ |          | $\perp$  | +            | _             |              |  |            |              | SAR/ESP/CEC   |                   | <u>}</u>   ! | D<br>D         |                    | Standard       |                  |                           |                               |                  | ***  |
| ة<br>قريمة   | ?<br>₽<br>₽   |   |  | _          | $\vdash$        | $\dashv$ | $\dashv$ |              | $\dashv$      |              |  |            |              | Metals: As Ag Ba Cd Cr Pb Hg So<br>Volatiles                  | е                 | +            | ⊢la            |                    | dard           |                  |                           |                               |                  | 'non   |
| 1 Receipt: でんわ   | vered<br>ent Rep.<br>UPS  | Plood<br>Students<br>(S) Ja   | nen<br>Sint<br>dspa  |            | $\vdash$        |          | $\dashv$ | +            | $\dashv$      |              |  |            |              | Semivolatiles   | $\dashv$          | +            | Analyze For:   |                    |                |                  |                           | Į                             |                  | Phone: 432-661-4184  |
| က်ကိမ္   |   | aline<br>Parine   | Ect?   |            |                 | $\dashv$ |          | ╮┼           | 7             | ×            | ×  | ×          | ×            | BTEX 8021B/5030 or BTEX 8280                                  | , x               | +            | - [공           |                    |                |                  | Lea                       | TNM Monument 18               | Mor              | 32-6   |
| acto   | 물.  | Ø   |  |            |                 |          | 丁        | 丁            |               |              |  |            |              | RCI   | <u></u>           |              | 1              |                    |                |                  | Lea County, NM            | /onι                          | Monument 18      | 61<br>4  |
| 2  |   |   |  |            |                 |          |          |              |               |              |  |            |              | N.O.R.M.  |                   |              |                |                    | TRRP           |                  | Ť,                        | ıme                           | ent              | 184  |
| 07-1<br>1-10   |   | <del>ر</del> ر  |  |            |                 | $\bot$   |          |              |               |              |  |            |              | Chlorides E 300   |                   |              |                |                    |                |                  | Ž                         | <u>a</u> 1                    | 8                |  |
| DF 242746  | $\sim$  |   | المرزوف  |            |                 | $\dashv$ |          | +            | _             |              |  | _          |              | Paint Filter  | ·-····            |              | 4              |                    |                |                  |                           | 000                           |                  |  |
| **************************************   | N<br>N<br>One Star  | <b>z</b> zz   | 22   |            | $\vdash \vdash$ | $\dashv$ |          | +            |               |              | _  |            |              | TCLP Benzene RUSH TAT (Pre-Schedule) 24,                      | 49 TC             | ) have       | L              | Ī                  | NPDES          |                  |                           |                               |                  |  |
| ana<br>Angles  | <b>ğ</b>  |   |  |            |                 | -        |          | #            | =             |              |  |            |              | Standard TAT  | -0, /2            | . 1115       |                | I                  | S              |                  | [                         | Pad                           | <br>ge 10        | of 16  |
| THE WARRANG  | ALC: NAME OF STREET   | SAME STATES   | 55年,河南南州南。   | ـــــــــا |                 |          |          | 1            |               | 1            |  |            |              | T-DIMENS FAI  | I                 |              |                |                    |                | 1                | 1 L                       | <u>~;</u>                     | <i>,</i> `       |  |

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

# **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 9F11036



NELAP/TCEQ # T104704516-18-9

Report Date: 06/19/19

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E Project: Monument 18
Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2019 SP-42 | 9F11036-01    | Soil   | 06/10/19 14:55 | 06-11-2019 15:13 |
| 2019 SP-43 | 9F11036-02    | Soil   | 06/10/19 15:05 | 06-11-2019 15:13 |

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

## 2019 SP-42 9F11036-01 (Soil)

| Analyte                                      | Result    | Reporting<br>Limit | Units     | Dilution    | Batch       | Prepared | Analyzed | Method     | Notes |
|--|-----------|--------------------|-----------|-------------|-------------|----------|----------|------------|-------|
|  | Perm      | nian Basin E       | nvironmen | ıtal Lab, I | <b>L.P.</b> |          |          |            |       |
| Organics by GC                               |           |                    |           |             |             |          |          |            |       |
| Benzene                                      | ND        | 0.00101            | mg/kg dry | 1           | P9F1701     | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Toluene                                      | ND        | 0.00101            | mg/kg dry | 1           | P9F1701     | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Ethylbenzene                                 | ND        | 0.00101            | mg/kg dry | 1           | P9F1701     | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Xylene (p/m)                                 | ND        | 0.00202            | mg/kg dry | 1           | P9F1701     | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Xylene (o)                                   | ND        | 0.00101            | mg/kg dry | 1           | P9F1701     | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene              |           | 89.4 %             | 75-1      | 25          | P9F1701     | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene               |           | 81.5 %             | 75-1      | 25          | P9F1701     | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Standa | rd Method | ls                 |           |             |             |          |          |            |       |
| % Moisture                                   | 1.0       | 0.1                | %         | 1           | P9F1308     | 06/13/19 | 06/13/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EPA   | Method 80 | 015M               |           |             |             |          |          |            |       |
| C6-C12                                       | ND        | 25.3               | mg/kg dry | 1           | P9F1405     | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| >C12-C28                                     | ND        | 25.3               | mg/kg dry | 1           | P9F1405     | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| >C28-C35                                     | ND        | 25.3               | mg/kg dry | 1           | P9F1405     | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                    |           | 128 %              | 70-1      | 30          | P9F1405     | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                       |           | 140 %              | 70-1      | 30          | P9F1405     | 06/14/19 | 06/15/19 | TPH 8015M  | S-GC  |
| Total Petroleum Hydrocarbon C6-C35           | ND        | 25.3               | mg/kg dry | 1           | [CALC]      | 06/14/19 | 06/15/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

2019 SP-43 9F11036-02 (Soil)

| Analyte                                   | Result      | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method     | Notes |
|---|-------------|--------------------|-----------|-------------|---------|----------|----------|------------|-------|
|   | Per         | mian Basin E       | nvironmer | ıtal Lab, I | P.      |          |          |            |       |
| Organics by GC                            |             |                    |           |             |         |          |          |            |       |
| Benzene                                   | ND          | 0.00114            | mg/kg dry | 1           | P9F1701 | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Toluene                                   | ND          | 0.00114            | mg/kg dry | 1           | P9F1701 | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Ethylbenzene                              | ND          | 0.00114            | mg/kg dry | 1           | P9F1701 | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Xylene (p/m)                              | ND          | 0.00227            | mg/kg dry | 1           | P9F1701 | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Xylene (o)                                | ND          | 0.00114            | mg/kg dry | 1           | P9F1701 | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene           |             | 95.3 %             | 75-1      | 25          | P9F1701 | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene            |             | 85.9 %             | 75-1      | 25          | P9F1701 | 06/17/19 | 06/17/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Sta | ndard Metho | ods                |           |             |         |          |          |            |       |
| % Moisture                                | 12.0        | 0.1                | %         | 1           | P9F1308 | 06/13/19 | 06/13/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by E  | PA Method 8 | 8015M              |           |             |         |          |          |            |       |
| C6-C12                                    | ND          | 28.4               | mg/kg dry | 1           | P9F1405 | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| >C12-C28                                  | ND          | 28.4               | mg/kg dry | 1           | P9F1405 | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| >C28-C35                                  | ND          | 28.4               | mg/kg dry | 1           | P9F1405 | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                 |             | 129 %              | 70-1      | 30          | P9F1405 | 06/14/19 | 06/15/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                    |             | 145 %              | 70-1      | 30          | P9F1405 | 06/14/19 | 06/15/19 | TPH 8015M  | S-GC  |
| Total Petroleum Hydrocarbon C6-C35        | ND          | 28.4               | mg/kg dry | 1           | [CALC]  | 06/14/19 | 06/15/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                  | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|--|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
| Batch P9F1701 - General Preparation (GC) |        |                    |       |                |                  |      |                |     |              |       |

| Blank (P9F1701-BLK1)             |        |         |           | Prepared & Anal | yzed: 06/17/19 |        |      |    |  |
|----------------------------------|--------|---------|-----------|-----------------|----------------|--------|------|----|--|
| Benzene                          | ND     | 0.00100 | mg/kg wet |                 |                |        |      |    |  |
| Toluene                          | ND     | 0.00100 | "         |                 |                |        |      |    |  |
| Ethylbenzene                     | ND     | 0.00100 | "         |                 |                |        |      |    |  |
| Xylene (p/m)                     | ND     | 0.00200 | "         |                 |                |        |      |    |  |
| Xylene (o)                       | ND     | 0.00100 | "         |                 |                |        |      |    |  |
| Surrogate: 1,4-Difluorobenzene   | 0.0557 |         | "         | 0.0600          | 92.8           | 75-125 |      |    |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0712 |         | "         | 0.0600          | 119            | 75-125 |      |    |  |
| LCS (P9F1701-BS1)                |        |         |           | Prepared & Anal | yzed: 06/17/19 |        |      |    |  |
| Benzene                          | 0.119  | 0.00100 | mg/kg wet | 0.100           | 119            | 70-130 |      |    |  |
| Toluene                          | 0.117  | 0.00100 | "         | 0.100           | 117            | 70-130 |      |    |  |
| Ethylbenzene                     | 0.117  | 0.00100 | "         | 0.100           | 117            | 70-130 |      |    |  |
| Xylene (p/m)                     | 0.226  | 0.00200 | "         | 0.200           | 113            | 70-130 |      |    |  |
| Xylene (o)                       | 0.116  | 0.00100 | "         | 0.100           | 116            | 70-130 |      |    |  |
| Surrogate: 1,4-Difluorobenzene   | 0.0675 |         | "         | 0.0600          | 112            | 75-125 |      |    |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0661 |         | "         | 0.0600          | 110            | 75-125 |      |    |  |
| LCS Dup (P9F1701-BSD1)           |        |         |           | Prepared & Anal | yzed: 06/17/19 |        |      |    |  |
| Benzene                          | 0.0972 | 0.00100 | mg/kg wet | 0.100           | 97.2           | 70-130 | 19.9 | 20 |  |
| Toluene                          | 0.0943 | 0.00100 | "         | 0.100           | 94.3           | 70-130 | 21.4 | 20 |  |
| Ethylbenzene                     | 0.111  | 0.00100 | "         | 0.100           | 111            | 70-130 | 5.89 | 20 |  |
| Xylene (p/m)                     | 0.191  | 0.00200 | "         | 0.200           | 95.5           | 70-130 | 16.9 | 20 |  |
| Xylene (o)                       | 0.0989 | 0.00100 | "         | 0.100           | 98.9           | 70-130 | 16.0 | 20 |  |
| Surrogate: 1,4-Difluorobenzene   | 0.0518 |         | "         | 0.0600          | 86.3           | 75-125 |      |    |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0503 |         | "         | 0.0600          | 83.8           | 75-125 |      |    |  |
| Calibration Blank (P9F1701-CCB1) |        |         |           | Prepared & Anal | yzed: 06/17/19 |        |      |    |  |
| Benzene                          | 0.00   |         | mg/kg wet |                 |                |        |      |    |  |
| Toluene                          | 0.00   |         | "         |                 |                |        |      |    |  |
| Ethylbenzene                     | 0.00   |         | "         |                 |                |        |      |    |  |
| Xylene (p/m)                     | 0.00   |         | "         |                 |                |        |      |    |  |
| Xylene (o)                       | 0.00   |         | "         |                 |                |        |      |    |  |
| Surrogate: 1,4-Difluorobenzene   | 0.0572 |         | "         | 0.0600          | 95.4           | 75-125 |      |    |  |
| Surrogate: 4-Bromofluorobenzene  | 0.0586 |         | "         | 0.0600          | 97.6           | 75-125 |      |    |  |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|  | D 1:   | Reporting    | TT        | Spike      | Source      | A/DEC    | %REC   | DDD | RPD   | N     |
|--|--------|--------------|-----------|------------|-------------|----------|--------|-----|-------|-------|
| Analyte                                  | Result | Limit        | Units     | Level      | Result      | %REC     | Limits | RPD | Limit | Notes |
| Batch P9F1701 - General Preparation (GC) |        |              |           |            |             |          |        |     |       |       |
| Calibration Blank (P9F1701-CCB2)         |        |              |           | Prepared & | Analyzed:   | 06/17/19 |        |     |       |       |
| Benzene                                  | 0.00   |              | mg/kg wet |            |             |          |        |     |       |       |
| Toluene                                  | 0.00   |              | "         |            |             |          |        |     |       |       |
| Ethylbenzene                             | 0.00   |              | "         |            |             |          |        |     |       |       |
| Xylene (p/m)                             | 0.00   |              | "         |            |             |          |        |     |       |       |
| Xylene (o)                               | 0.00   |              | "         |            |             |          |        |     |       |       |
| Surrogate: 1,4-Difluorobenzene           | 0.0497 |              | "         | 0.0600     |             | 82.8     | 75-125 |     |       |       |
| Surrogate: 4-Bromofluorobenzene          | 0.0625 |              | "         | 0.0600     |             | 104      | 75-125 |     |       |       |
| Calibration Check (P9F1701-CCV1)         |        |              |           | Prepared & | Analyzed:   | 06/17/19 |        |     |       |       |
| Benzene                                  | 0.0999 | 0.00100      | mg/kg wet | 0.100      |             | 99.9     | 80-120 |     |       |       |
| Toluene                                  | 0.0875 | 0.00100      | "         | 0.100      |             | 87.5     | 80-120 |     |       |       |
| Ethylbenzene                             | 0.0864 | 0.00100      | "         | 0.100      |             | 86.4     | 80-120 |     |       |       |
| Xylene (p/m)                             | 0.196  | 0.00200      | "         | 0.200      |             | 98.0     | 80-120 |     |       |       |
| Xylene (o)                               | 0.0970 | 0.00100      | "         | 0.100      |             | 97.0     | 80-120 |     |       |       |
| Surrogate: 4-Bromofluorobenzene          | 0.0542 |              | "         | 0.0600     |             | 90.2     | 75-125 |     |       |       |
| Surrogate: 1,4-Difluorobenzene           | 0.0586 |              | "         | 0.0600     |             | 97.6     | 75-125 |     |       |       |
| Calibration Check (P9F1701-CCV2)         |        |              |           | Prepared & | : Analyzed: | 06/17/19 |        |     |       |       |
| Benzene                                  | 0.0982 | 0.00100      | mg/kg wet | 0.100      |             | 98.2     | 80-120 |     |       |       |
| Toluene                                  | 0.0948 | 0.00100      | "         | 0.100      |             | 94.8     | 80-120 |     |       |       |
| Ethylbenzene                             | 0.0934 | 0.00100      | "         | 0.100      |             | 93.4     | 80-120 |     |       |       |
| Xylene (p/m)                             | 0.179  | 0.00200      | "         | 0.200      |             | 89.7     | 80-120 |     |       |       |
| Xylene (o)                               | 0.100  | 0.00100      | "         | 0.100      |             | 100      | 80-120 |     |       |       |
| Surrogate: 1,4-Difluorobenzene           | 0.0525 |              | "         | 0.0600     |             | 87.5     | 75-125 |     |       |       |
| Surrogate: 4-Bromofluorobenzene          | 0.0595 |              | "         | 0.0600     |             | 99.2     | 75-125 |     |       |       |
| Matrix Spike (P9F1701-MS1)               | Sou    | rce: 9F11036 | -01       | Prepared & | Analyzed:   | 06/17/19 |        |     |       |       |
| Benzene                                  | 0.111  | 0.00101      | mg/kg dry | 0.101      | ND          | 109      | 80-120 |     |       |       |
| Toluene                                  | 0.0765 | 0.00101      | "         | 0.101      | ND          | 75.7     | 80-120 |     |       | QM-0  |
| Ethylbenzene                             | 0.0898 | 0.00101      | "         | 0.101      | ND          | 88.9     | 80-120 |     |       |       |
| Xylene (p/m)                             | 0.188  | 0.00202      | "         | 0.202      | ND          | 93.1     | 80-120 |     |       |       |

0.116

0.0843

0.0759

0.00101

Permian Basin Environmental Lab, L.P.

Xylene (o)

Surrogate: 1,4-Difluorobenzene

Surrogate: 4-Bromofluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

80-120

75-125

75-125

115

139

125

0.101

0.0606

0.0606

ND

S-GC

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

## **Batch P9F1701 - General Preparation (GC)**

| Matrix Spike Dup (P9F1701-MSD1) | Sour   | Source: 9F11036-01 |           |        |    | 06/17/19 |        |      |    |       |
|---------------------------------|--------|--------------------|-----------|--------|----|----------|--------|------|----|-------|
| Benzene                         | 0.0775 | 0.00101            | mg/kg dry | 0.101  | ND | 76.7     | 80-120 | 35.1 | 20 | QM-05 |
| Toluene                         | 0.0463 | 0.00101            | "         | 0.101  | ND | 45.8     | 80-120 | 49.1 | 20 | QM-05 |
| Ethylbenzene                    | 0.0636 | 0.00101            | "         | 0.101  | ND | 62.9     | 80-120 | 34.3 | 20 | QM-05 |
| Xylene (p/m)                    | 0.135  | 0.00202            | "         | 0.202  | ND | 67.0     | 80-120 | 32.6 | 20 | QM-05 |
| Xylene (o)                      | 0.0878 | 0.00101            | "         | 0.101  | ND | 86.9     | 80-120 | 28.1 | 20 | QM-05 |
| Surrogate: 1,4-Difluorobenzene  | 0.0712 |                    | "         | 0.0606 |    | 118      | 75-125 |      |    |       |
| Surrogate: 4-Bromofluorobenzene | 0.0730 |                    | "         | 0.0606 |    | 120      | 75-125 |      |    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

K, 79705 Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |        | Reporting    |       | Spike      | Source      |          | %REC   |      | RPD   |       |
|--------------------------------------|--------|--------------|-------|------------|-------------|----------|--------|------|-------|-------|
| Analyte                              | Result | Limit        | Units | Level      | Result      | %REC     | Limits | RPD  | Limit | Notes |
| Batch P9F1308 - *** DEFAULT PREP *** |        |              |       |            |             |          |        |      |       |       |
| Blank (P9F1308-BLK1)                 |        |              |       | Prepared & | Analyzed:   | 06/13/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1          | %     |            |             |          |        |      |       |       |
| Duplicate (P9F1308-DUP1)             | Sour   | ce: 9F11033- | 05    | Prepared & | : Analyzed: | 06/13/19 |        |      |       |       |
| % Moisture                           | 10.0   | 0.1          | %     |            | 15.0        |          |        | 40.0 | 20    |       |
| Duplicate (P9F1308-DUP2)             | Sour   | ce: 9F11036- | 01    | Prepared & | Analyzed:   | 06/13/19 |        |      |       |       |
| % Moisture                           | 9.0    | 0.1          | %     |            | 1.0         |          |        | 160  | 20    |       |
| Duplicate (P9F1308-DUP3)             | Sour   | ce: 9F12003- | 10    | Prepared & | Analyzed:   | 06/13/19 |        |      |       |       |
| % Moisture                           | 4.0    | 0.1          | %     |            | 4.0         |          |        | 0.00 | 20    |       |
| Duplicate (P9F1308-DUP4)             | Sour   | ce: 9F12011- | 05    | Prepared & | : Analyzed: | 06/13/19 |        |      |       |       |
| % Moisture                           | 3.0    | 0.1          | %     |            | 3.0         |          |        | 0.00 | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting                             |           | Spike       | Source     |             | %REC    |      | RPD   |       |  |  |  |  |
|----------------------------------|--------|---------------------------------------|-----------|-------------|------------|-------------|---------|------|-------|-------|--|--|--|--|
| Analyte                          | Result | Limit                                 | Units     | Level       | Result     | %REC        | Limits  | RPD  | Limit | Notes |  |  |  |  |
| Batch P9F1405 - TX 1005          |        |                                       |           |             |            |             |         |      |       |       |  |  |  |  |
| Blank (P9F1405-BLK1)             |        |                                       |           | Prepared: ( | 06/14/19 A | nalyzed: 06 | 5/15/19 |      |       |       |  |  |  |  |
| C6-C12                           | ND     | 25.0                                  | mg/kg wet |             |            |             |         |      |       |       |  |  |  |  |
| >C12-C28                         | ND     | 25.0                                  | "         |             |            |             |         |      |       |       |  |  |  |  |
| >C28-C35                         | ND     | 25.0                                  | "         |             |            |             |         |      |       |       |  |  |  |  |
| Surrogate: 1-Chlorooctane        | 91.8   |                                       | "         | 100         |            | 91.8        | 70-130  |      |       |       |  |  |  |  |
| Surrogate: o-Terphenyl           | 49.8   |                                       | "         | 50.0        |            | 99.7        | 70-130  |      |       |       |  |  |  |  |
| LCS (P9F1405-BS1)                |        | Prepared: 06/14/19 Analyzed: 06/15/19 |           |             |            |             |         |      |       |       |  |  |  |  |
| C6-C12                           | 959    | 25.0                                  | mg/kg wet | 1000        |            | 95.9        | 75-125  |      |       |       |  |  |  |  |
| >C12-C28                         | 1020   | 25.0                                  | "         | 1000        |            | 102         | 75-125  |      |       |       |  |  |  |  |
| Surrogate: 1-Chlorooctane        | 110    |                                       | "         | 100         |            | 110         | 70-130  |      |       |       |  |  |  |  |
| Surrogate: o-Terphenyl           | 48.6   |                                       | "         | 50.0        |            | 97.3        | 70-130  |      |       |       |  |  |  |  |
| LCS Dup (P9F1405-BSD1)           |        | Prepared: 06/14/19 Analyzed: 06/15/19 |           |             |            |             |         |      |       |       |  |  |  |  |
| C6-C12                           | 934    | 25.0                                  | mg/kg wet | 1000        |            | 93.4        | 75-125  | 2.70 | 20    |       |  |  |  |  |
| >C12-C28                         | 1000   | 25.0                                  | "         | 1000        |            | 100         | 75-125  | 1.41 | 20    |       |  |  |  |  |
| Surrogate: 1-Chlorooctane        | 118    |                                       | "         | 100         |            | 118         | 70-130  |      |       |       |  |  |  |  |
| Surrogate: o-Terphenyl           | 47.4   |                                       | "         | 50.0        |            | 94.9        | 70-130  |      |       |       |  |  |  |  |
| Calibration Blank (P9F1405-CCB1) |        |                                       |           | Prepared: ( | 06/14/19 A | nalyzed: 06 | 5/15/19 |      |       |       |  |  |  |  |
| C6-C12                           | 7.39   |                                       | mg/kg wet |             |            |             |         |      |       |       |  |  |  |  |
| >C12-C28                         | 14.0   |                                       | "         |             |            |             |         |      |       |       |  |  |  |  |
| Surrogate: 1-Chlorooctane        | 99.0   |                                       | "         | 100         |            | 99.0        | 70-130  |      |       |       |  |  |  |  |
| Surrogate: o-Terphenyl           | 53.3   |                                       | "         | 50.0        |            | 107         | 70-130  |      |       |       |  |  |  |  |
| Calibration Blank (P9F1405-CCB2) |        |                                       |           | Prepared: ( | 06/14/19 A | nalyzed: 06 | 5/15/19 |      |       |       |  |  |  |  |
| C6-C12                           | 6.18   |                                       | mg/kg wet | -           |            | -           |         |      |       |       |  |  |  |  |
| >C12-C28                         | 17.2   |                                       | "         |             |            |             |         |      |       |       |  |  |  |  |
| Surrogate: 1-Chlorooctane        | 98.4   |                                       | "         | 100         |            | 98.4        | 70-130  |      |       |       |  |  |  |  |
| Surrogate: o-Terphenyl           | 51.8   |                                       | "         | 50.0        |            | 104         | 70-130  |      |       |       |  |  |  |  |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting    |           | Spike                                 | Source     |             | %REC    |      | RPD   |       |
|----------------------------------|--------|--------------|-----------|---------------------------------------|------------|-------------|---------|------|-------|-------|
| Analyte                          | Result | Limit        | Units     | Level                                 | Result     | %REC        | Limits  | RPD  | Limit | Notes |
| Batch P9F1405 - TX 1005          |        |              |           |                                       |            |             |         |      |       |       |
| Calibration Check (P9F1405-CCV1) |        |              |           | Prepared: (                           | 06/14/19 A | nalyzed: 06 | 5/15/19 |      |       |       |
| C6-C12                           | 531    | 25.0         | mg/kg wet | 500                                   |            | 106         | 85-115  |      |       |       |
| >C12-C28                         | 525    | 25.0         | "         | 500                                   |            | 105         | 85-115  |      |       |       |
| Surrogate: 1-Chlorooctane        | 113    |              | "         | 100                                   |            | 113         | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 52.2   |              | "         | 50.0                                  |            | 104         | 70-130  |      |       |       |
| Calibration Check (P9F1405-CCV2) |        |              |           | Prepared: (                           | 06/14/19 A | nalyzed: 06 | 5/15/19 |      |       |       |
| C6-C12                           | 523    | 25.0         | mg/kg wet | 500                                   |            | 105         | 85-115  |      |       |       |
| >C12-C28                         | 523    | 25.0         | "         | 500                                   |            | 105         | 85-115  |      |       |       |
| Surrogate: 1-Chlorooctane        | 112    |              | "         | 100                                   |            | 112         | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 51.0   |              | "         | 50.0                                  |            | 102         | 70-130  |      |       |       |
| Calibration Check (P9F1405-CCV3) |        |              |           | Prepared: (                           | 06/14/19 A | nalyzed: 06 | 5/16/19 |      |       |       |
| C6-C12                           | 545    | 25.0         | mg/kg wet | 500                                   |            | 109         | 85-115  |      |       |       |
| >C12-C28                         | 513    | 25.0         | "         | 500                                   |            | 103         | 85-115  |      |       |       |
| Surrogate: 1-Chlorooctane        | 126    |              | "         | 100                                   |            | 126         | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 57.4   |              | "         | 50.0                                  |            | 115         | 70-130  |      |       |       |
| Duplicate (P9F1405-DUP1)         | Sou    | rce: 9F13004 | l-07      | Prepared: 06/14/19 Analyzed: 06/15/19 |            |             |         |      |       |       |
| C6-C12                           | 21.1   | 26.3         | mg/kg dry |                                       | 20.2       |             |         | 4.39 | 20    |       |
| >C12-C28                         | 143    | 26.3         | "         |                                       | 119        |             |         | 17.9 | 20    |       |
| Surrogate: 1-Chlorooctane        | 93.1   |              | "         | 105                                   |            | 88.4        | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 49.9   |              | "         | 52.6                                  |            | 94.8        | 70-130  |      |       |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were

within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Dien | Darlor |       |           |  |
|---------------------|------|--------|-------|-----------|--|
| Report Approved By: |      |        | Date: | 6/19/2019 |  |

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM-Monument 18
Midland TX 79705
Project Manager: Curt Stanlay

Midland TX, 79705 Project Manager: Curt Stanley

Permian Basin Environmental Lab, L.P.

| Receiv  | ed by   | CD:   | 6/4  | 8/202   | II         | 2:21           | :29      | PM       | <del></del>  | ,  | -               |          |  |              | The second secon |                    | $\overline{}$           |  |                |                  |                           |                               | Pa               | ige 503 o   |
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| shec  | shec  | الم<br>ق  |  | I Instructions:<br>Bill to Plains                 | 10.39      | 1,19           |          | *        | + 41.5       | 4.0  |                 | <u> </u> | 2  | 2            |  | 77<br>#            | 3                       | ပ္ပ  |                | C                | C                         | O                             | U                |   |
| by:   | l by:   |   |  | iii truc  |            |                |          |          |              |  |                 |          | 2019 SP-43                                       | 2019 SP-42   |  |                    | ঙ                       | Sampler Signature:   | Telephone No:  | City/State/Zip:  | Company Address:          | Company Name                  | Project Manager: | 153010  |
|   |   | M   |  | Pen   |            |                |          |          |              |  |                 |          | Sp   | မှ           |  | 9F11036            |                         | bler   | hor            | State            | oan                       | oan                           | ₹                | 13  |
|   |   | U   |  | ains<br>Is:                                       |            |                |          |          |              |  |                 |          | 43   | 42           | 1.   |                    |                         | Sig  |                | e/Zi             | Ą                         | Ž                             | fan:             |   |
|   |   |   |  | •   |            |                |          |          |              |  |                 |          |  |              |  | Ö                  |                         | nati   | <u>ē</u>       | 9                | dre                       | ame                           | age              | N   |
|   |   |   |  |   |            |                |          |          |              |  |                 |          |  |              | [골   | 1%                 |                         | Jre:   |                |                  | SS                        | 10                            |                  |   |
|   |   | In  | ĺ  |   |            |                |          |          |              |  |                 |          |  |              | FIELD CODE   | "                  |                         | 1  | £3             | <u>≅</u>         | 10 Desta Drive Suite 150E | Į∄                            | ₽                | 7   |
|   |   | V 1/  |  |   |            |                |          |          |              |  |                 |          |  |              | Ö  |                    |                         | 4  | (432)5207720   | Midland/TX/79705 | Des                       | E C                           | Curt Stanley     | (14) Miles  |
|   |   | И   |  |   |            |                |          |          |              |  |                 |          |  |              | 10   |                    |                         | 9  | 077            | Ž                | ta D                      | Viro                          | anle             |   |
|   |   |   | ┨  |   |            |                |          |          |              |  |                 |          |  |              |  |                    |                         | ΚŊ   | 28             | 797              | rive                      | Ì                             |                  | c   |
| و ا   | 9   | ₩ Pate  | ,  |   |            |                |          |          |              |  |                 |          |  |              |  |                    |                         | 1/   |                | 8                | Suit                      | intal                         |                  | 3   |
| Date  | ate   | Uate //2  |  |   |            |                |          |          |              |  |                 |          |  |              |  |                    |                         | $q_{l,1}$  |                |                  | e 15                      | δ                             |                  | 3   |
|   |   |   | 4  |   | _          |                |          |          | ·            |  |                 |          |  |              |  | ,                  |                         | W  | •              |                  | Œ.                        | Pog.                          |                  | 9   |
|   |   | 15:13   |  |   |            |                |          |          |              |  |                 |          | NA   | N.           | Beginning Depth  |                    |                         | (6)  | ١l             |                  |                           | TRC Environmental Corporation |                  | Ş   |
| Time  | I ime   | 7.7.3.  |  |   |            | -              |          | <u> </u> | <u> </u>     |  |                 |          | ├  | <del>-</del> |  | -                  |                         | 1/2  | }              |                  |                           | -                             |                  | č   |
|   |   | W -   |  |   |            |                |          |          |              |  |                 |          | N/A  | N/A          | Ending Depth   |                    |                         | 1)   | /              |                  |                           |                               |                  | Š   |
| R Q   | () 8  | 7.<br>9   | 7  |   |            |                |          |          |              |  |                 |          | စ  | 6            |  | 1                  |                         |  |                |                  |                           |                               |                  | 7   |
| ceive   | Received by:  | Received by:  |  |   |            |                |          |          |              |  |                 |          | 6/10/2019  | 6/10/2019    | Date Sampled   | 1                  |                         | X  |                | 1                |                           | 1                             | 1                | Š   |
| ă by  | 2 5   | ğ   |  |   |            |                |          |          |              |  |                 |          | 201  | 120          | Date Sampled   |                    |                         | 1  |                | 1.               |                           |                               |                  | Ę   |
| Received by PBEL.   | ved by:   | .7  |  |   |            |                |          |          |              |  |                 |          | 9  | <u></u>      |  | <u> </u>           |                         |  |                |                  |                           |                               |                  | Š   |
|   | <i>y</i> e_   |   |  |   |            |                |          |          |              |  |                 |          | 1  | ļ            |  |                    |                         |  |                |                  |                           |                               |                  | Ĉ   |
|   | 8   |   |  | •   |            |                |          | ŀ        |              |  |                 |          | 15:05  | 14:55        | Time Sampled   |                    | ;                       | Ф  | Π              |                  |                           |                               |                  |   |
|   | 2   |   |  |   |            |                |          |          |              |  |                 |          | 8  | 띬            |  |                    |                         | e-mail:  | Fax No:        | 1                |                           |                               |                  | Ť   |
|   | Bledone   |   |  |   |            | <u> </u>       | _        |          |              |  |                 |          | <b> </b>   | ـــ          |  | -                  |                         | <del>=</del> :   |                |                  |                           |                               |                  | 6   |
|   | /   |   |  |   |            |                |          |          |              |  |                 |          |  | $\vdash$     | Field Fittered   | _                  | 160                     | IC   |                |                  |                           |                               |                  | Permian Basin Environmental Lab, LP 10014 S. County Road 1213  Midland, Texas 79706 |
|   |   |   |  |   |            |                | -        | -        |              |  |                 |          | <u> </u>   | 1            | Total #. of Containers   | ╆┑╵                | sstanley@trcsolutions.c | cdstanley@trc  |                |                  |                           |                               |                  | nian<br>4 S<br>and  |
| -   |   |   |  |   | -          |                |          |          |              |  | _               |          | ×  | ×            | Ice<br>HNO <sub>3</sub>  | - T                | )<br>ME                 | an   |                |                  |                           |                               |                  | Bas<br>Bas<br>. Co  |
| 10  |   |   |  |   | -          |                |          | $\vdash$ |              | <u> </u>   | _               |          | <del> </del>                                     | ├            | HCI  | Sel                | )<br>Ve                 | ey(  |                |                  |                           |                               |                  | in E  |
|   |   |   |  |   | -          | <del>}</del> — | -        | <b> </b> |              | <del> </del>                                     |                 | _        |  | ┢            | H <sub>2</sub> SO <sub>4</sub>   | Preservation &     | Dtro                    | 36   |                |                  |                           |                               |                  | 79 Z  |
|   |   |   |  |   | $\vdash$   |                | $\vdash$ |          |              | $\vdash$   |                 |          | <del>                                     </del> | ├            | NaOH   | #<br>#             | OSC                     | SS<br>SS<br>SS<br>SS<br>SS<br>SS<br>SS<br>SS<br>SS<br>SS<br>SS<br>SS<br>SS |                |                  |                           |                               |                  | nvironn<br>Road<br>79706  |
|   |   |   |  |   | H          |                |          |          |              | <u> </u>   |                 |          |  | H            | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>  | # of Containers    | luti                    |  |                |                  |                           |                               |                  | nemt<br>121   |
|   | 6   |   | 1  |   |            |                |          |          |              |  |                 |          |  | $\vdash$     | None   | 重                  | on                      |  | i              |                  |                           | ľ                             |                  | ယ <u>ங</u><br>⊏   |
| D   |   |   | ,  |   |            |                | -        | -        |              |  |                 |          |  |              | Other ( Specify)   | ١٥                 | olutions.com            | solutions.com<br>baalp.com   |                |                  |                           |                               |                  | <u>a</u><br>-   |
| ate   | Date<br>i/) q   | Date  |  |   |            | <u> </u>       |          |          |              |  |                 |          |  |              | DW≃Drinking Water SL=Sludge  | ┧                  | B                       | Ö  | 1              | ı                | 1                         | 1                             | ı                | 5   |
|   |   |   |  |   |            |                |          |          |              |  |                 |          |  | ĺ            | GW = Groundweter S=Soil/Solid  | Matrix             |                         | ,_   | Rep            |                  |                           |                               |                  |   |
| 1   | 15  | · _   |  |   |            | <u> </u>       | <u> </u> |          | <u> </u>     |  |                 |          |  | L            | NP=Non-Potable Spacify Other   | ľ                  |                         | _  | ğ              |                  | P                         |                               | P <sub>O</sub>   |   |
| Time  | Time<br>15713   | lime  |  |   | <b> </b> - | ļ              | <u> </u> | _        |              |  |                 |          | ×  | ×            |  | 15B                |                         |  | Report Format: |                  | Project Loc:              | Б                             | Project Name:    |   |
| <b>D</b> T -  |   |   |  | iini  | <u> </u>   |                | <u> </u> | ļ        |              | igwdown  |                 |          |  |              | TPH: TX 1005 TX 1006   | _  ;               |                         |  | nat            | PD#:             | <del>بر</del> ا           | Project #:                    | Narr             |   |
| Temperature Upon Receipt: Received: 5.4 °C Adjusted: 6.4 °C Fac | Sample Hand Delivered<br>by Sampler/Client Rep<br>by Courier? UPS | Tabels on container(s) ** Custody seals on container(s) Custody seals on container(s) | VOCs Free of Headspace?  | Laboratory Comments:<br>Sample Containers Intact? | <u> </u>   | <u> </u>       | <u> </u> |          |              | $\vdash$   | $\vdash \vdash$ |          |  | _            | Cations (Ca, Mg, Na, K)  | ┥.                 |                         |  |                | .#<br>           | ı<br>X                    | ;#:<br>                       | ı<br>E           |   |
| ived<br>ted   | nple Hand Delivered by Sampler/Client Rep. ? by Courier? UPS DHL  | Q V   | STITE  | yrato<br>Vielo                                    | $\vdash$   | <u> </u>       | $\vdash$ | <b>—</b> |              | <b></b>  | $\vdash$        |          |  | _            | Anions (CI, SO4, Alkalinity)   | TOTAL:             | TCLP:                   |  | ⊠<br>S         |                  |                           |                               |                  |   |
|   | tand<br>mple<br>uner  | seal<br>seal  | é  | 9 3   | _          |                |          | ļ        | <b> </b>     |  |                 |          |  | -            | SAR / ESP / CEC  | _                  | Ģ                       |  | itan           |                  |                           |                               |                  | <b></b>   |
| 200 E   | ., <u>Ç</u> <u>Ö</u>  | s on  | ᇎ  | in on   |            | $\vdash$       |          |          | $\vdash$     | $\vdash$   | $\vdash$        |          |  | -            | Metals: As Ag Ba Cd Cr Pb Hg<br>Volatiles  | <b>38</b>          | $\dashv$                | Ana  | Standard       |                  | _                         |                               |                  | Phone: 432-661-4184   |
| ⊃<br>Z  | ent F   | con   | adsr   |   |            |                |          |          |              |  | <u> </u>        |          | ·  | ⊢            | Semivolatiles  |                    | H                       | lyze   |                |                  | ea                        | Į≢                            |                  | .9.<br>.4   |
| eceipt: Of  | လူမျှိုင်<br>မြောင်   | tain.   | )<br>A<br>C<br>C   | हें हैं   | $\vdash$   |                | $\vdash$ | $\vdash$ | <b></b>      | -  | <del> </del>    |          | ×  | ×            | BTEX 8021B/5030 or BTEX 82   | 60 X               | Н                       | Analyze For:   |                |                  | Lea County, New Mexico    | TNM Monument 18               | Mo               | 32-(  |
| F P   | ₽ >   | )<br>(s)  | ٠ <b>٠</b>   |   |            | 一              | $\vdash$ | $\vdash$ | <u> </u>     |  | <del> </del>    |          | <del>                                     </del> | f            | RCI  | <del>~~  ^</del> , | Ц                       |  |                |                  | nty,                      | lon<br>On                     | Monument 18      | 61 <u>-</u>   |
| \$ P  | Ė   |   | STATE OF THE PARTY |   |            | -              |          |          | -            | <del>                                     </del> | <b> </b>        |          |  |              | N.O.R.M.   |                    | $\dashv$                |  | TRRP           |                  | New                       | E                             | ıeni             | 418   |
| 22  | <del>1</del>  |   |  |   |            | 一              |          |          | -            |  |                 |          | $\vdash$   |              | Chlorides E 300  |                    | $\dashv$                |  | -              |                  | Me                        | ent.                          | 18               | 4   |
| "   | FedEx<br>€¥   | <b>K</b> < <b>E</b>   | <  |   | 5          |                |          | $\vdash$ | <del> </del> |  |                 |          |  |              | Paint Filter   |                    | $\dashv$                |  | <u> </u>       |                  | Xico                      | 18                            |                  | . 7   |
| 2.46  |   | N N P   |  |   |            | T              |          |          |              |  |                 |          | 1  |              | TCLP Benzene   |                    | $\dashv$                | 1  | <u></u>        |                  |                           |                               |                  | raye z orz  |
|   | Lone Star   | ZZ  | z  | Z   |            | 1              |          |          |              |  | <del> </del>    |          | <b> </b>   |              | RUSH TAT (Pre-Schedule) 24,  | 48, 72             | hrs                     | 7  | NPDES          |                  |                           |                               |                  | 5   |
| TA:   | <u>®</u>  |   |  |   |            | $\vdash$       |          |          |              |  |                 | $\vdash$ |  | 1            | Standard TAT   | 1                  |                         |  | S              |                  | 1 1                       | - Do                          | 1                | 3 of 13   |

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

# **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 9F28009



NELAP/TCEQ # T104704516-18-9

Report Date: 07/08/19

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2019 SP-44 | 9F28009-01    | Soil   | 06/24/19 14:40 | 06-27-2019 16:47 |
| 2019 SP-45 | 9F28009-02    | Soil   | 06/24/19 15:15 | 06-27-2019 16:47 |

TRC Solutions- Midland, Texas

Project: Monument 18 10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

> 2019 SP-44 9F28009-01 (Soil)

| Analyte                                      | Result    | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-----------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per       | mian Basin E       | nvironmei | ıtal Lab, I | L <b>.P.</b> |          |          |            |       |
| Organics by GC                               |           |                    |           |             |              |          |          |            |       |
| Benzene                                      | ND        | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Toluene                                      | ND        | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Ethylbenzene                                 | ND        | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (p/m)                                 | ND        | 0.00200            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (o)                                   | ND        | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene              |           | 111 %              | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene               |           | 106 %              | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Standa | ard Metho | ds                 |           |             |              |          |          |            |       |
| % Moisture                                   | 7.0       | 0.1                | %         | 1           | P9G0101      | 07/01/19 | 07/01/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EPA   | Method 8  | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                       | ND        | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C12-C28                                     | ND        | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C28-C35                                     | ND        | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                    |           | 71.5 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  | ·     |
| Surrogate: o-Terphenyl                       |           | 78.1 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35           | ND        | 26.9               | mg/kg dry | 1           | [CALC]       | 06/29/19 | 07/01/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

 $10\;Desta\;Dr\;STE\;150E$ 

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### 2019 SP-45 9F28009-02 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per        | mian Basin E       | nvironme  | ntal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |            |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND         | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Toluene                                    | ND         | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND         | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND         | 0.00200            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND         | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |            | 109 %              | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |            | 87.2 %             | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 7.0        | 0.1                | %         | 1           | P9G0101      | 07/01/19 | 07/01/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND         | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C12-C28                                   | ND         | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C28-C35                                   | ND         | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |            | 73.7 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |            | 81.1 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 26.9               | mg/kg dry | 1           | [CALC]       | 06/29/19 | 07/01/19 | calc       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                               | Result        | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|---------------------------------------|---------------|--------------------|-------|----------------|------------------|----------|----------------|------|--------------|-------|
| Batch P9G0206 - General Preparation ( | CC)           |                    |       |                |                  |          |                |      |              |       |
| Blank (P9G0206-BLK1)                  | <del>((</del> |                    |       | Prepared &     | Analyzed:        | 07/02/19 |                |      |              |       |
| Benzene                               | ND            | 0.00100            | mg/L  | 1 repared &    | 7 maryzea.       | 07/02/17 |                |      |              |       |
| Toluene                               | ND            | 0.00100            | mg/L  |                |                  |          |                |      |              |       |
| Ethylbenzene                          | ND            | 0.00100            | "     |                |                  |          |                |      |              |       |
| Xylene (p/m)                          | ND            | 0.00200            | "     |                |                  |          |                |      |              |       |
| Xylene (o)                            | ND            | 0.00100            | "     |                |                  |          |                |      |              |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0679        |                    | "     | 0.0600         |                  | 113      | 80-120         |      |              |       |
| Surrogate: 1,4-Difluorobenzene        | 0.0593        |                    | "     | 0.0600         |                  | 98.8     | 80-120         |      |              |       |
| LCS (P9G0206-BS1)                     |               |                    |       | Prepared &     | : Analyzed:      | 07/02/19 |                |      |              |       |
| Benzene                               | 0.105         | 0.00100            | mg/L  | 0.100          |                  | 105      | 80-120         |      |              |       |
| Toluene                               | 0.0901        | 0.00100            | "     | 0.100          |                  | 90.1     | 80-120         |      |              |       |
| Ethylbenzene                          | 0.111         | 0.00100            | "     | 0.100          |                  | 111      | 80-120         |      |              |       |
| Xylene (p/m)                          | 0.198         | 0.00200            | "     | 0.200          |                  | 98.9     | 80-120         |      |              |       |
| Xylene (o)                            | 0.114         | 0.00100            | "     | 0.100          |                  | 114      | 80-120         |      |              |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0497        |                    | "     | 0.0600         |                  | 82.8     | 80-120         |      |              |       |
| Surrogate: 1,4-Difluorobenzene        | 0.0482        |                    | "     | 0.0600         |                  | 80.3     | 80-120         |      |              |       |
| LCS Dup (P9G0206-BSD1)                |               |                    |       | Prepared &     | Analyzed:        | 07/02/19 |                |      |              |       |
| Benzene                               | 0.111         | 0.00100            | mg/L  | 0.100          |                  | 111      | 80-120         | 5.03 | 20           |       |
| Toluene                               | 0.0971        | 0.00100            | "     | 0.100          |                  | 97.1     | 80-120         | 7.46 | 20           |       |
| Ethylbenzene                          | 0.107         | 0.00100            | "     | 0.100          |                  | 107      | 80-120         | 3.59 | 20           |       |
| Xylene (p/m)                          | 0.209         | 0.00200            | "     | 0.200          |                  | 104      | 80-120         | 5.28 | 20           |       |
| Xylene (o)                            | 0.118         | 0.00100            | "     | 0.100          |                  | 118      | 80-120         | 3.70 | 20           |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0584        |                    | "     | 0.0600         |                  | 97.3     | 80-120         |      |              | -     |
| Surrogate: 1,4-Difluorobenzene        | 0.0532        |                    | "     | 0.0600         |                  | 88.7     | 80-120         |      |              |       |
| Calibration Blank (P9G0206-CCB1)      |               |                    |       | Prepared &     | : Analyzed:      | 07/02/19 |                |      |              |       |
| Benzene                               | 0.00          | <u> </u>           | mg/L  |                |                  |          |                |      |              |       |
| Γoluene                               | 0.00          |                    | "     |                |                  |          |                |      |              |       |
| Ethylbenzene                          | 0.00          |                    | "     |                |                  |          |                |      |              |       |
| Xylene (p/m)                          | 0.00          |                    | "     |                |                  |          |                |      |              |       |
| Xylene (o)                            | 0.00          |                    | "     |                |                  |          |                |      |              |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0545        |                    | "     | 0.0600         |                  | 90.8     | 80-120         |      |              |       |

Permian Basin Environmental Lab, L.P.

Surrogate: 1,4-Difluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

95.6

80-120

0.0600

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18
Project Manager: Curt Stanley

Fax: (432) 520-7701

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Result   Climit   Units   Level   Result   %RESUL   Survey   Servey   REPO   Calibration Blank (P9G0206-CCR2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Blank (P9G0206-CCR2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Blank (P9G0206-CCR2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Blank (P9G0206-CCR2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Blank (P9G0206-CCR2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Survey   Calibration Check (P9G0206-CCV1)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV1)   Survey   Calibration Check (P9G0206-CCV2)   Survey   Calibration Check (P9G0206-CCV2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV2)   Prepared & Analyzed: 07/02/19   Survey   Calibration Check (P9G0206-CCV2)   Prepared & Calibration Check (P9G0206-CCV2)   Prepared & Calibration Check (P9G0206-CCV2)   Prepared & Calibration Check (P9G0206-CCV2)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Survey   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepared & Calibration Check (P9G0206-CCV3)   Prepare   | RPD<br>Limit  | Notes  |
|--|---------------|--------|
| Prepared & Analyzed: 07/02/19   Prepared & Analyzed: 07/02/1   |               | 1,0103 |
| Benzene         0.00         mg/L           Toluene         0.00         "           Elshylbenzene         0.00         "           Xylene (ρ/m)         0.00         "           Xylene (o)         0.00         "           Surrogate: +Bromofluorobenzene         0.0592         "         0.0600         98.6         80-120           Surrogate: 1,4-Difluorobenzene         0.0582         "         0.0600         98.6         80-120           Calibration Check (PG0206-CCV1)         "         Prepared & Analyzed: 07/02/19*           Benzene         0.104         0.00100         mg/L         0.100         90.1         80-120           Toluene         0.9091         0.00100         "         0.100         90.1         80-120           Elhylbenzene         0.0888         0.00100         "         0.100         86.8         80-120           Sylene (p/m)         0.186         0.00200         "         0.0600         101         80-120           Surrogate: 4-Bromofluorobenzene         0.0667         "         0.0600         101         80-120           Calibration Check (PG0206-CCV2)         "         "         0.0600         101         80-120   |               |        |
| Toluene  |               |        |
| Part      |               |        |
| Xylene (p/m)         0.00         "         "         "         "         "         "         "         "         "         "         "         "         "         "         0.0600         98.6         80-120         \$0-120         "         0.0600         98.6         80-120         \$0-120 <td></td> <td></td>  |               |        |
| Name   |               |        |
| Name      |               |        |
| Calibration Check (P9G0206-CCV1)   |               |        |
| Prepared & Analyzed: 07/02/19  | <del></del> , |        |
| Benzene   0.104   0.00100   mg/L   0.100   104   80-120  |               |        |
| Toluene 0.0901 0.00100 " 0.1000 90.1 80-120 Ethylbenzene 0.0868 0.00100 " 0.100 86.8 80-120 Xylene (p/m) 0.186 0.00200 " 0.200 92.9 80-120 Xylene (o) 0.108 0.00100 " 0.100 108 80-120 Surrogate: 4-Bromofluorobenzene 0.0607 " 0.0600 101 80-120 Surrogate: 1,4-Difluorobenzene 0.0672 " 0.0600 112 80-120  Calibration Check (P9G0206-CCV2) " 0.0600 110 80-120  Toluene 0.0951 0.00100 mg/L 0.100 110 80-120 Ethylbenzene 0.0868 0.00100 " 0.100 95.1 80-120  Xylene (p/m) 0.192 0.00200 " 0.200 96.1 80-120  Xylene (p/m) 0.192 0.00200 " 0.100 109 80-120  Surrogate: 4-Bromofluorobenzene 0.0556 " 0.0600 107 80-120  Surrogate: 1,4-Difluorobenzene 0.0644 " 0.0600 107 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 " 0.100 109 80-120  Surrogate: 1,4-Difluorobenzene 0.0556 " 0.0600 107 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 100 109 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 100 100 100 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 100 100 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 100 100 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 100 100 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 100 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 100 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-120  Calibration Check (P9G0206-CCV3) " 0.0000 118 80-1 |               |        |
| Ethylbenzene 0.0868 0.00100 " 0.100 86.8 80-120 Xylene (p/m) 0.186 0.00200 " 0.200 92.9 80-120 Xylene (p/m) 0.188 0.00100 " 0.100 108 80-120 Xylene (p/m) 0.108 0.00100 " 0.100 108 80-120 Xylene (p/m) 0.0600 101 80-120 Xylene (p/m) 0.0600 101 80-120 Xylene (p/m) 0.0600 101 80-120 Xylene (p/m) 0.0600 112 80-120 Xylene (p/m) 0.0000 mg/L 0.100 110 80-120 Xylene (p/m) 0.0000 mg/L 0.100 110 80-120 Xylene (p/m) 0.0951 0.00100 " 0.100 95.1 80-120 Xylene (p/m) 0.192 0.00200 " 0.100 86.8 80-120 Xylene (p/m) 0.192 0.00200 " 0.200 96.1 80-120 Xylene (p/m) 0.100 0.00100 " 0.100 109 80-120 Xylene (p/m) 0.0000 0 " 0.0000 0 " 0.0000 109 80-120 Xylene (p/m) 0.0000 0 " 0.0000 0 " 0.0000 0 92.6 80-120 Xylene (p/m) 0.0000 0 " 0.0000 0 0 92.6 80-120 Xylene (p/m) 0.0000 0 0.00000 0 0.0000 0 0.0000 0 0.0000 0 0.0000 0 0.00000 0 0.0000 0 0.00000 0 0.0000 0 0.0000 0 0.00000 0 0.0000 0 0.00000 0 0.00000 0 0 |               |        |
| Note   |               |        |
| Xylene (o)   0.108   0.00100   " 0.100   108   80-120  |               |        |
| Surrogate: 4-Bromofluorobenzene   0.0607   " 0.0600   101 80-120   |               |        |
| Surrogate: 1,4-Diffuorobenzene         0.0007         " 0.0600         112         80-120           Calibration Check (P9G0206-CCV2)         Prepared & Analyzed: 07/02/19           Benzene         0.110         0.00100         mg/L         0.100         110         80-120           Toluene         0.0951         0.00100         " 0.100         95.1         80-120           Ethylbenzene         0.0868         0.00100         " 0.100         86.8         80-120           Xylene (p/m)         0.192         0.00200         " 0.200         96.1         80-120           Xylene (o)         0.109         0.00100         " 0.100         109         80-120           Surrogate: 4-Bromofluorobenzene         0.0556         " 0.0600         92.6         80-120           Surrogate: 1,4-Difluorobenzene         0.0644         " 0.0600         107         80-120           Calibration Check (P9G0206-CCV3)         Prepared & Analyzed: 07/02/19           Benzene         0.119         0.00100         mg/L         0.100         119         80-120           Toluene         0.102         0.00100         " 0.100         192         80-120           Ethylbenzene         0.0890         0.00100         " 0.100<  |               |        |
| Calibration Check (P9G0206-CCV2)         Prepared & Analyzed: 07/02/19           Benzene         0.110         0.00100         mg/L         0.100         110         80-120           Toluene         0.0951         0.00100         "         0.100         95.1         80-120           Ethylbenzene         0.0868         0.00100         "         0.100         86.8         80-120           Xylene (p/m)         0.192         0.00200         "         0.200         96.1         80-120           Xylene (o)         0.109         0.00100         "         0.100         109         80-120           Surrogate: 4-Bromofluorobenzene         0.0556         "         0.0600         92.6         80-120           Surrogate: 1,4-Difluorobenzene         0.0644         "         0.0600         107         80-120           Calibration Check (P9G0206-CCV3)         Prepared & Analyzed: 07/02/19           Benzene         0.119         0.00100         mg/L         0.100         119         80-120           Toluene         0.102         0.00100         "         0.100         102         80-120           Ethylbenzene         0.0890         0.00100         "         0.200         <   |               |        |
| Benzene   0.110   0.00100   mg/L   0.100   110   80-120  |               |        |
| Toluene 0.0951 0.00100 " 0.100 95.1 80-120  Ethylbenzene 0.0868 0.00100 " 0.100 86.8 80-120  Xylene (p/m) 0.192 0.00200 " 0.200 96.1 80-120  Xylene (o) 0.109 0.00100 " 0.100 109 80-120  Surrogate: 4-Bromofluorobenzene 0.0556 " 0.0600 92.6 80-120  Surrogate: 1,4-Difluorobenzene 0.0644 " 0.0600 107 80-120  Calibration Check (P9G0206-CCV3) Prepared & Analyzed: 07/02/19  Benzene 0.119 0.00100 mg/L 0.100 119 80-120  Toluene 0.0890 0.00100 " 0.100 102 80-120  Ethylbenzene 0.0890 0.00100 " 0.100 89.0 80-120  Xylene (p/m) 0.199 0.00200 " 0.200 99.6 80-120  Xylene (o) 0.118 0.00100 " 0.100 118 80-120   |               |        |
| Ethylbenzene 0.0868 0.00100 " 0.100 86.8 80-120 Xylene (p/m) 0.192 0.00200 " 0.200 96.1 80-120 Xylene (o) 0.109 0.00100 " 0.100 109 80-120 Surrogate: 4-Bromofluorobenzene 0.0556 " 0.0600 92.6 80-120 Surrogate: 1,4-Difluorobenzene 0.0644 " 0.0600 107 80-120 Surrogate: 1,4-Difluorobenzene 0.0644 " 0.0600 107 80-120 Surrogate: 1,4-Difluorobenzene 0.0644 " 0.0600 107 80-120 Surrogate: 1,4-Difluorobenzene 0.0119 0.00100 mg/L 0.100 119 80-120 Surrogate: 0.102 0.00100 " 0.100 102 80-120 Surrogate: 0.102 0.00100 " 0.100 102 80-120 Surrogate: 0.0890 0.00100 " 0.100 89.0 80-120 Surrogate: 0.0890 0.00100 " 0.100 89.0 80-120 Surrogate: 0.0890 0.00100 " 0.100 89.0 80-120 Surrogate: 0.0890 0.00100 " 0.100 118 80-120 Surrogate: 0.0890 0.0118 0.00100 " 0.100 118 80-120 Surrogate: 0.0890 0.0118 0.00100 " 0.100 118 80-120 Surrogate: 0.0118 0.00100 " 0.100 118 80-120 Surrogate: 0.0100 0.0100 " 0.100 118 80-120 Surrogate: 0.0100 0.0100 " 0.100 118 80-120 Surrogate: 0.0100 0.0100 " 0.100 0.0100 0.0100 Surrogate: 0.0100 Surrog |               |        |
| Xylene (p/m)   0.192   0.00200   "   0.200   96.1   80-120   |               |        |
| Xylene (o)         0.109         0.00100         "         0.100         109         80-120           Surrogate: 4-Bromofluorobenzene         0.0556         "         0.0600         92.6         80-120           Surrogate: 1,4-Difluorobenzene         0.0644         "         0.0600         107         80-120           Calibration Check (P9G0206-CCV3)           Benzene         0.119         0.00100         mg/L         0.100         119         80-120           Toluene         0.102         0.00100         "         0.100         102         80-120           Ethylbenzene         0.0890         0.00100         "         0.100         89.0         80-120           Xylene (p/m)         0.199         0.00200         "         0.200         99.6         80-120           Xylene (o)         0.118         0.00100         "         0.100         118         80-120   |               |        |
| Surrogate: 4-Bromofluorobenzene   0.0556   " 0.0600   92.6   80-120  |               |        |
| Surrogate: 1,4-Difluorobenzene         0.0644         " 0.0600         107         80-120           Calibration Check (P9G0206-CCV3)         Prepared & Analyzed: 07/02/19           Benzene         0.119         0.00100         mg/L         0.100         119         80-120           Toluene         0.102         0.00100         " 0.100         102         80-120           Ethylbenzene         0.0890         0.00100         " 0.100         89.0         80-120           Xylene (p/m)         0.199         0.00200         " 0.200         99.6         80-120           Xylene (o)         0.118         0.00100         " 0.100         118         80-120   |               |        |
| Calibration Check (P9G0206-CCV3)         Prepared & Analyzed: 07/02/19           Benzene         0.119         0.00100         mg/L         0.100         119         80-120           Toluene         0.102         0.00100         "         0.100         102         80-120           Ethylbenzene         0.0890         0.00100         "         0.100         89.0         80-120           Xylene (p/m)         0.199         0.00200         "         0.200         99.6         80-120           Xylene (o)         0.118         0.00100         "         0.100         118         80-120   |               |        |
| Benzene         0.119         0.00100         mg/L         0.100         119         80-120           Toluene         0.102         0.00100         "         0.100         102         80-120           Ethylbenzene         0.0890         0.00100         "         0.100         89.0         80-120           Xylene (p/m)         0.199         0.00200         "         0.200         99.6         80-120           Xylene (o)         0.118         0.00100         "         0.100         118         80-120  |               |        |
| Toluene 0.102 0.00100 " 0.100 102 80-120 Ethylbenzene 0.0890 0.00100 " 0.100 89.0 80-120 Xylene (p/m) 0.199 0.00200 " 0.200 99.6 80-120 Xylene (o) 0.118 0.00100 " 0.100 118 80-120  |               |        |
| Ethylbenzene       0.0890       0.00100       "       0.100       89.0       80-120         Xylene (p/m)       0.199       0.00200       "       0.200       99.6       80-120         Xylene (o)       0.118       0.00100       "       0.100       118       80-120   |               |        |
| Xylene (p/m)     0.199     0.00200     "     0.200     99.6     80-120       Xylene (o)     0.118     0.00100     "     0.100     118     80-120   |               |        |
| Xylene (o) 0.118 0.00100 " 0.100 118 80-120  |               |        |
| · ···  |               |        |
| Surrogate: 4.Rromofluorobenzene 0.0555 " 0.0600 92.5 80.120  |               |        |
| 56110 Gate. 1 Di omojimo i occidente 0.0000 92.3 00=120  |               |        |

Permian Basin Environmental Lab, L.P.

Surrogate: 1,4-Difluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

80-120

0.0600

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Surrogate: 1,4-Difluorobenzene

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch P9G0206 - General Preparation (C | $\mathbf{GC}$ | ) |
|--|---------------|---|
|--|---------------|---|

| Matrix Spike (P9G0206-MS1)      | Sour   | ce: 9F28010- | 03   | Prepared & | Analyzed: | : 07/02/19 |        |      |    |           |
|---------------------------------|--------|--------------|------|------------|-----------|------------|--------|------|----|-----------|
| Benzene                         | 0.0912 | 0.00100      | mg/L | 0.100      | ND        | 91.2       | 80-120 |      |    |           |
| Toluene                         | 0.0708 | 0.00100      | "    | 0.100      | ND        | 70.8       | 80-120 |      |    | QM-07     |
| Ethylbenzene                    | 0.0601 | 0.00100      | "    | 0.100      | ND        | 60.1       | 80-120 |      |    | QM-07     |
| Xylene (p/m)                    | 0.144  | 0.00200      | "    | 0.200      | ND        | 72.1       | 80-120 |      |    | QM-07     |
| Xylene (o)                      | 0.0840 | 0.00100      | "    | 0.100      | ND        | 84.0       | 80-120 |      |    |           |
| Surrogate: 4-Bromofluorobenzene | 0.0574 |              | "    | 0.0600     |           | 95.6       | 80-120 |      |    |           |
| Surrogate: 1,4-Difluorobenzene  | 0.0622 |              | "    | 0.0600     |           | 104        | 80-120 |      |    |           |
| Matrix Spike Dup (P9G0206-MSD1) | Sour   | ce: 9F28010- | 03   | Prepared & | Analyzed: | : 07/02/19 |        |      |    |           |
| Benzene                         | 0.103  | 0.00100      | mg/L | 0.100      | ND        | 103        | 80-120 | 12.1 | 20 |           |
| Toluene                         | 0.0825 | 0.00100      | "    | 0.100      | ND        | 82.5       | 80-120 | 15.3 | 20 |           |
| Ethylbenzene                    | 0.0769 | 0.00100      | "    | 0.100      | ND        | 76.9       | 80-120 | 24.6 | 20 | QM-07, R2 |
| Xylene (p/m)                    | 0.175  | 0.00200      | "    | 0.200      | ND        | 87.6       | 80-120 | 19.5 | 20 |           |
| Xylene (o)                      | 0.103  | 0.00100      | "    | 0.100      | ND        | 103        | 80-120 | 20.8 | 20 | R2        |
| Surrogate: 4-Bromofluorobenzene | 0.0624 |              | "    | 0.0600     |           | 104        | 80-120 |      |    |           |

0.0600

117

80-120

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                              | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--------------------------------------|--------|--------------------|-------|----------------|------------------|----------|----------------|------|--------------|-------|
| Batch P9G0101 - *** DEFAULT PREP *** |        |                    |       |                |                  |          |                |      |              |       |
| Blank (P9G0101-BLK1)                 |        |                    |       | Prepared &     | Analyzed:        | 07/01/19 |                |      |              |       |
| % Moisture                           | ND     | 0.1                | %     |                |                  |          |                |      |              |       |
| Duplicate (P9G0101-DUP1)             | Sou    | rce: 9F28014-      | 05    | Prepared &     | Analyzed         | 07/01/19 |                |      |              |       |
| % Moisture                           | 2.0    | 0.1                | %     |                | 1.0              |          |                | 66.7 | 20           |       |
| Duplicate (P9G0101-DUP2)             | Sour   | rce: 9F28019-      | 05    | Prepared &     | Analyzed         | 07/01/19 |                |      |              |       |
| % Moisture                           | 17.0   | 0.1                | %     |                | 18.0             |          |                | 5.71 | 20           |       |
| Duplicate (P9G0101-DUP3)             | Sour   | rce: 9F28021-      | 01    | Prepared &     | Analyzed         | 07/01/19 |                |      |              |       |
| % Moisture                           | 3.0    | 0.1                | %     |                | 3.0              |          |                | 0.00 | 20           |       |
| Duplicate (P9G0101-DUP4)             | Sour   | rce: 9F28024-      | 01    | Prepared &     | Analyzed:        | 07/01/19 |                |      |              |       |
| % Moisture                           | 3.0    | 0.1                | %     |                | 2.0              |          |                | 40.0 | 20           |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18
Project Manager: Curt Stanley

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  | <b>.</b> | Reporting | ** **     | Spike       | Source     | N/DD5       | %REC    | 222  | RPD   |       |
|----------------------------------|----------|-----------|-----------|-------------|------------|-------------|---------|------|-------|-------|
| Analyte                          | Result   | Limit     | Units     | Level       | Result     | %REC        | Limits  | RPD  | Limit | Notes |
| Batch P9F2905 - TX 1005          |          |           |           |             |            |             |         |      |       |       |
| Blank (P9F2905-BLK1)             |          |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | ND       | 25.0      | mg/kg wet |             |            |             |         |      |       |       |
| >C12-C28                         | ND       | 25.0      | "         |             |            |             |         |      |       |       |
| >C28-C35                         | ND       | 25.0      | "         |             |            |             |         |      |       |       |
| Surrogate: 1-Chlorooctane        | 79.5     |           | "         | 100         |            | 79.5        | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 41.5     |           | "         | 50.0        |            | 83.0        | 70-130  |      |       |       |
| LCS (P9F2905-BS1)                |          |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 908      | 25.0      | mg/kg wet | 1000        |            | 90.8        | 75-125  |      |       |       |
| >C12-C28                         | 839      | 25.0      | "         | 1000        |            | 83.9        | 75-125  |      |       |       |
| Surrogate: 1-Chlorooctane        | 97.5     |           | "         | 100         |            | 97.5        | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 37.7     |           | "         | 50.0        |            | 75.3        | 70-130  |      |       |       |
| LCS Dup (P9F2905-BSD1)           |          |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 856      | 25.0      | mg/kg wet | 1000        |            | 85.6        | 75-125  | 5.84 | 20    |       |
| >C12-C28                         | 821      | 25.0      | "         | 1000        |            | 82.1        | 75-125  | 2.17 | 20    |       |
| Surrogate: 1-Chlorooctane        | 92.4     |           | "         | 100         |            | 92.4        | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 36.2     |           | "         | 50.0        |            | 72.4        | 70-130  |      |       |       |
| Calibration Blank (P9F2905-CCB1) |          |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 5.92     |           | mg/kg wet |             |            |             |         |      |       |       |
| >C12-C28                         | 12.8     |           | "         |             |            |             |         |      |       |       |
| Surrogate: 1-Chlorooctane        | 68.8     |           | "         | 100         |            | 68.8        | 70-130  |      |       | S-GC  |
| Surrogate: o-Terphenyl           | 36.4     |           | "         | 50.0        |            | 72.7        | 70-130  |      |       |       |
| Calibration Blank (P9F2905-CCB2) |          |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 7.37     |           | mg/kg wet |             |            |             |         |      |       |       |
| >C12-C28                         | 14.7     |           | "         |             |            |             |         |      |       |       |
| Surrogate: 1-Chlorooctane        | 66.3     |           | "         | 100         |            | 66.3        | 70-130  |      |       | S-GC  |
| Surrogate: o-Terphenyl           | 36.2     |           | "         | 50.0        |            | 72.4        | 70-130  |      |       |       |
|                                  |          |           |           |             |            |             |         |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting    |           | Spike     | Source     | •            | %REC    |      | RPD   |          |
|----------------------------------|--------|--------------|-----------|-----------|------------|--------------|---------|------|-------|----------|
| Analyte                          | Result | Limit        | Units     | Level     | Result     | %REC         | Limits  | RPD  | Limit | Notes    |
| Batch P9F2905 - TX 1005          |        |              |           |           |            |              |         |      |       |          |
| Calibration Check (P9F2905-CCV1) |        |              |           | Prepared: | 06/29/19 A | analyzed: 07 | 7/01/19 |      |       |          |
| C6-C12                           | 441    | 25.0         | mg/kg wet | 500       |            | 88.2         | 85-115  |      |       |          |
| >C12-C28                         | 461    | 25.0         | "         | 500       |            | 92.2         | 85-115  |      |       |          |
| Surrogate: 1-Chlorooctane        | 94.0   |              | "         | 100       |            | 94.0         | 70-130  |      |       |          |
| Surrogate: o-Terphenyl           | 42.8   |              | "         | 50.0      |            | 85.5         | 70-130  |      |       |          |
| Calibration Check (P9F2905-CCV2) |        |              |           | Prepared: | 06/29/19 A | analyzed: 07 | 7/01/19 |      |       |          |
| C6-C12                           | 485    | 25.0         | mg/kg wet | 500       |            | 96.9         | 85-115  |      |       |          |
| >C12-C28                         | 522    | 25.0         | "         | 500       |            | 104          | 85-115  |      |       |          |
| Surrogate: 1-Chlorooctane        | 102    |              | "         | 100       |            | 102          | 70-130  |      |       |          |
| Surrogate: o-Terphenyl           | 47.4   |              | "         | 50.0      |            | 94.8         | 70-130  |      |       |          |
| Duplicate (P9F2905-DUP1)         | Sou    | rce: 9F28013 | 3-03      | Prepared: | 06/29/19 A | analyzed: 07 | 7/02/19 |      |       |          |
| C6-C12                           | ND     | 25.5         | mg/kg dry |           | 9.86       |              |         | ·    | 20    | <u> </u> |
| >C12-C28                         | 21.0   | 25.5         | "         |           | 15.2       |              |         | 32.2 | 20    |          |
| Surrogate: 1-Chlorooctane        | 80.2   |              | "         | 102       |            | 78.6         | 70-130  |      |       |          |
| Surrogate: o-Terphenyl           | 44.6   |              | "         | 51.0      |            | 87.5         | 70-130  |      |       |          |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

R2 The RPD exceeded the acceptance limit.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: Date: 7/8/2019

Brent Barron, Laboratory Director/Technical Director

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150EProject Number: TNM-Monument 18Midland TX, 79705Project Manager: Curt Stanley

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

| R <del>ecei</del> i | ed.              | by O  | <i>CD:</i> _(   | <del>/8/202</del>   | 1 12         | :21:         | 29 1   | PM.  | į. ·   | . 1  | . • 1    |  |                 | 100          |  | 1~              |         | ≂              |  |                |                  |  |                               | Pag              | ge 516 of  |
|---------------------|------------------|---|---|---|--------------|--------------|--|--|--|------|----------|--|-----------------|--------------|--|-----------------|---------|----------------|--|----------------|------------------|--|-------------------------------|------------------|--|
|                     | Relinquished by: | elinquished by:                                   | elinquished by  | Special   |              |              |  |  |  |      |          |  | 2               | _            | LAB # (lab use only)   | ORDER #:        |         | (lab use only) |  |                |                  |  |                               | 3                |  |
|                     | hed by:          | hed by:   | shed by:  | Special Instructions: Bill to Plains                                      |              |              |  |  |  |      |          |  | 2019 SP-45      | 2019 SP-44   | <u> </u>   | R#: 47 /5007    |         | only)          | Sampler Signature:   | Telephone No:  | City/State/Zip:  | Company Address: 10 Desta Drive Suite 150E | Company Name                  | Project Manager: | 18 3 3 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2   |
|                     |                  | 6   | Pan (   |   |              |              |  |  |  |      |          |  |                 |              | FIELD CODE   | )7              | 9       |                | e hote   | (432)5207720   | Midland/TX/79705 | s: 10 Desta Drive                          | TRC Environmental Corporation | Curt Stanley     |  |
|                     | Date             | / Date'   | Date<br>0/27/19   |   |              |              |  |  |  |      |          |  |                 |              |  |                 | -       |                | The state of the s | -              | 705              | Suite 150E                                 | nental Corpo                  |                  |  |
|                     | 1                | _   | Time<br>16:49   |   |              |              |  |  |  |      |          |  | N/A             | N/A          | Beginning Depth  |                 |         |                | $\mathcal{N}$  |                |                  |  | ration                        |                  |  |
|                     | Time             | Time  | ime<br>49   |   |              |              |  | <u> </u>   |  |      |          | ļ <u>.</u>                                       | NA              | N/A          | Ending Depth   | 1               |         |                |  |                |                  |  |                               |                  | ;  |
|                     | Received by PBEI | Received by:                                      | Received by:  |   |              |              |  |  |  |      |          |  | ↑ 6/24/2019     | A 6/24/2019  | Date Sampled   |                 |         | Ţ              |  |                |                  |  | Ç                             |                  | Permian Basi<br>10014 S. Cou<br>Midland, Tex   |
|                     | ''](`            | Rodrin  |   |   |              |              |  |  |  | •••• |          |  | 15:15           | 14:40        | Time Sampled   |                 |         |                | e-mail:  | Fax No:        |                  |  |                               |                  |  |
|                     | . \              | ľ   |   |   | H            | ļ            |  | -  |  |      | <u> </u> |  | _               |              | Field Filtered   | 4               |         | ico.           | ю  |                |                  |  |                               |                  | Permian Basin Environmental Lab, LP<br>10014 S. County Road 1213<br>Midland, Texas 79706 |
|                     |                  | 1   |   |   | ┝            | +            |  | -  |  |      | <u> </u> |  | ×               | ×            | Total #. of Containers   | +               | 1       | ste            | cdstanley@trcsolutions.com   |                |                  |  |                               |                  | nian<br>14 S<br>14 S   |
|                     |                  |   |   |   | $\vdash$     |              |  |  | -  |      |          |  | <del> ^</del> - | <del> </del> | HNO <sub>3</sub>   | Pre             |         | 100            |  |                |                  |  |                               |                  | Bas<br>Co<br>Teg   |
|                     |                  |   |   |   | $\vdash$     | T            | <del> </del>                                     | <del>                                     </del> |  |      | $\vdash$ |  | l -             |              | HCI  | Preservation &  |         | ya.            | \$ [8]   |                |                  |  |                               |                  | as μπ<br>Ε   |
|                     |                  |   |   |   | ļ            | 1            | 1  |  |  | -    |          |  |                 |              | H <sub>2</sub> SO <sub>4</sub>   | ntion ?         |         |                |  |                |                  |  |                               |                  | 797<br>797   |
|                     |                  |   |   |   |              |              |  | <b></b>  |  |      |          | <del>                                     </del> | <u> </u>        |              | NaOH   |                 |         | SO             | SO   |                |                  |  |                               |                  | of ad  |
|                     |                  |   |   |   |              |              |  |  |  |      |          |  |                 |              | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>  | # of Containers |         | 딡              | solutions.com  |                |                  |  |                               |                  | lent:  |
|                     | 10               | $\overline{}$                                     |   |   |              |              |  |  |  |      |          |  |                 |              | None   | tainer          |         | วทร            | 3 3  |                |                  |  |                               |                  | ~ <u>F</u>   |
|                     | <u> </u>         |   | Date  |   |              | <u> </u>     |  |  |  |      |          |  |                 |              | Other ( Specify)   | Ś               |         | င္ပါ           | 3 0  |                |                  |  |                               |                  | ē  |
|                     | e //4 //         | 7// A   | र्क   |   |              |              | -  |  |  |      |          |  | كر              | ۷            | DW=Drinking Water SL=Studge GW = Groundweter S=Soll/Solid NP=Non-Potable Specify Other | Matrix          |         | 3              | ΙΞ   | Report Format: |                  | _  |                               | ·                | Ū  |
|                     |                  | Time  | Time  |   |              |              |  |  |  |      |          |  | ×               | ×            |  | 015B            | П       | Т              | 7  | t Fo           |                  | Project Loc:                               | Ţ                             | Project Name:    |  |
| L                   |                  | <u>î</u>  | 5014 - 1000   | E-195-Mil   |              |              |  |  |  |      |          |  |                 |              | TPH: TX 1005 TX 1006   |                 |         |                |  | rmat           | P                | ξ  | Project #:                    | ŧNa              |  |
| Received: 45 °C Fa  | Tem              | San   | Cus   | VOC Sale  | _            | <u> </u>     |  | $\bigsqcup_{i=1}^{n}$                            |  |      |          |  |                 |              | Cations (Ca, Mg, Na, K)  |                 |         |                |  | iT.            | PO #             | 0  | #                             | me:              |  |
| sted                | by Courier?      | کر <b>اور</b><br>کری                              | <u>abels.ou.container(s).</u><br>Custody seals on contai<br>Sustody seals on cooler | Laboratory Comments:<br>Sample Containers lintag<br>VOCs Free of Headspac | <u></u>      |              |  | <u> </u>   | Ш  |      |          |  |                 |              | Anions (Cl. SO4, Alkalinity)   |                 | TOTAL:  | 7              |  | ×              |                  |  |                               |                  |  |
| 12.4                | e Curie          | Han   | Sea Sea   | ee c  | <u> </u>     | <u> </u>     |  | Ŀ  | Ш  |      |          |  |                 |              | SAR / ESP / CEC  |                 | A.      | TCLP:          | 1  | Star           |                  | [  |                               |                  | 711  |
| 1/10                | چ۶               | eg/Q  | IS OF   | ¥<br>S<br>S   | <u> </u>     |              |  |  |  |      |          |  |                 |              | Metals: As Ag Ba Cd Cr Pb Hg   | j Se            | Ц       | 2              | 3  | Standard       |                  |  |                               |                  | ήοι  |
|                     | 3<br>70 €        | ent #   |   | ame<br>ads  | <u> </u>     | <del> </del> |  | <u> </u>   | Ш  |      |          |  |                 | <u> </u>     | Volatiles  |                 | Ц       |                | Í  | ㅁ              |                  | Leg  |                               |                  | ne:  |
| ا ؞                 | Rece<br>Rece     | Sample Hand Delivered<br>by Sampler/Client Rep. ? | tain  | Laboratory Comments: Sample Containers Infactor VOCs Free of Headspace?   | $\vdash$     | _            | <u> </u>   | <u> </u>   | Ш  |      |          |  |                 | <u> </u>     | Semivolatites  |                 | Ц       | Tildiyze i Oi. | ř.   |                |                  | ပ္ပြင္                                     | M                             | ≥                | 432  |
| °C Factor           | 혍                | ٠.  | Labels on container(s). Custody seals on container(s) Custody seals on container(s) | "   | <u> </u>     | $\vdash$     | <u> </u>   | <u> </u>   | $\vdash \vdash$                                  |      |          |  | ×               | ×            | BTEX 8021B/5030 or BTEX 82   | 260             | Х       | <b>⊣</b> ⁵     | 1  |                |                  | un <sub>t</sub>                            | TNM Monument 18               | Monument 18      | Phone: 432-661-4184  |
| g €                 | <u>`</u> ₽       |   |   |   | $\vdash$     | $\vdash$     | <del>                                     </del> | <u> </u>   | $\vdash \vdash$                                  |      |          |  |                 | ļ <u>.</u>   | RCI  |                 |         | 4              |  | TRRP           |                  | N <sub>e</sub>                             | nu<br>nu                      | mer              | 4  |
| 1                   | ·                |   |   |   | -            | <del> </del> |  |  | <del>                                     </del> |      |          |  |                 |              | N.O.R.M.   |                 |         | 4              |  | ש              |                  | \$<br> \$                                  | nen                           | # 1×             | <b>8</b>   |
| 137                 | <b>E</b>         | $ \leftarrow $                                    | A \   | $\Rightarrow$   | -            | <del> </del> | H  |  |  |      |          | $\vdash$   |                 | <u> </u>     | Chiondes E 300 Paint Filter  |                 |         | -              |  | ,              |                  | Lea County, New Mexico                     | 18                            | J                |  |
| \                   | 5                |   |   |   | <del> </del> |              |  | <u> </u>   |  |      | $\dashv$ |  |                 | -            | TCLP Benzene   |                 |         | $\dashv$       |  | IJ<br>N        |                  | ľ  |                               |                  | 9  |
|                     | Lone Star        | zz  | 2 2 2   | ZZ  |              |              |  |  | $\vdash$   |      |          |  |                 |              | RUSH TAT (Pre-Schedule) 24,  | 48.             | 72 h    | <br>rs         | 1  | NPDES          |                  |  |                               |                  | -  |
|                     |                  |   |   |   | -            | -            | $\vdash$   |  | -  | _    |          |  |                 |              | Standard TAT   | , 70,           | · 4 115 | 3              | L  | S              |                  | Ι'n  | ┸_                            | 1                | 2 of 12  |

### PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



## Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 9F28010



NELAP/TCEQ # T104704516-18-9

Report Date: 07/08/19

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E

xas Project: Monument 18
Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2019 SP-46 | 9F28010-01    | Soil   | 06/27/19 10:30 | 06-27-2019 16:47 |
| 2019 SP-47 | 9F28010-02    | Soil   | 06/27/19 10:40 | 06-27-2019 16:47 |
| 2019 SP-48 | 9F28010-03    | Soil   | 06/27/19 10:50 | 06-27-2019 16:47 |

TRC Solutions- Midland, Texas

Project: Monument 18 10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

> 2019 SP-46 9F28010-01 (Soil)

| Analyte                                      | Result   | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|----------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Peri     | mian Basin E       | nvironmei | ıtal Lab, I | L <b>.P.</b> |          |          |            |       |
| Organics by GC                               |          |                    |           |             |              |          |          |            |       |
| Benzene                                      | ND       | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Toluene                                      | ND       | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Ethylbenzene                                 | ND       | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (p/m)                                 | ND       | 0.00200            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (o)                                   | ND       | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene              |          | 99.2 %             | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene               |          | 88.0 %             | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Standa | rd Metho | ds                 |           |             |              |          |          |            |       |
| % Moisture                                   | 7.0      | 0.1                | %         | 1           | P9G0101      | 07/01/19 | 07/01/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EPA   | Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                       | ND       | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C12-C28                                     | ND       | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C28-C35                                     | ND       | 26.9               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                    |          | 76.3 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                       |          | 83.4 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35           | ND       | 26.9               | mg/kg dry | 1           | [CALC]       | 06/29/19 | 07/01/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

 $10\;Desta\;Dr\;STE\;150E$ 

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### 2019 SP-47 9F28010-02 (Soil)

| Analyte                             | Result            | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method     | Notes |
|-------------------------------------|-------------------|--------------------|-----------|-------------|---------|----------|----------|------------|-------|
|                                     | Pern              | nian Basin E       | Environme | ntal Lab, l | L.P.    |          |          |            |       |
| Organics by GC                      |                   |                    |           |             |         |          |          |            |       |
| Benzene                             | ND                | 0.00100            | mg/L      | 1           | P9G0206 | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Toluene                             | ND                | 0.00100            | mg/L      | 1           | P9G0206 | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Ethylbenzene                        | ND                | 0.00100            | mg/L      | 1           | P9G0206 | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (p/m)                        | ND                | 0.00200            | mg/L      | 1           | P9G0206 | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (o)                          | ND                | 0.00100            | mg/L      | 1           | P9G0206 | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene     |                   | 108 %              | 80-       | 120         | P9G0206 | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene      |                   | 98.0 %             | 80-       | 120         | P9G0206 | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA | / Standard Method | ls                 |           |             |         |          |          |            |       |
| % Moisture                          | 4.0               | 0.1                | %         | 1           | P9G0101 | 07/01/19 | 07/01/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 | by EPA Method 80  | )15M               |           |             |         |          |          |            |       |
| C6-C12                              | ND                | 26.0               | mg/kg dry | 1           | P9F2905 | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C12-C28                            | ND                | 26.0               | mg/kg dry | 1           | P9F2905 | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C28-C35                            | ND                | 26.0               | mg/kg dry | 1           | P9F2905 | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane           |                   | 69.0 %             | 70-1      | 130         | P9F2905 | 06/29/19 | 07/01/19 | TPH 8015M  | S-GC  |
| Surrogate: o-Terphenyl              |                   | 75.6 %             | 70-1      | 130         | P9F2905 | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35  | ND                | 26.0               | mg/kg dry | 1           | [CALC]  | 06/29/19 | 07/01/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### 2019 SP-48 9F28010-03 (Soil)

| Analyte                                    | Result      | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per         | mian Basin E       | Environme | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |             |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND          | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Toluene                                    | ND          | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND          | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND          | 0.00200            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND          | 0.00100            | mg/L      | 1           | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |             | 108 %              | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |             | 97.8 %             | 80-1      | 20          | P9G0206      | 07/02/19 | 07/02/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Star | ndard Metho | ds                 |           |             |              |          |          |            |       |
| % Moisture                                 | 10.0        | 0.1                | %         | 1           | P9G0101      | 07/01/19 | 07/01/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by El  | PA Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND          | 27.8               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C12-C28                                   | ND          | 27.8               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| >C28-C35                                   | ND          | 27.8               | mg/kg dry | 1           | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |             | 72.0 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |             | 79.4 %             | 70-1      | 30          | P9F2905      | 06/29/19 | 07/01/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND          | 27.8               | mg/kg dry | 1           | [CALC]       | 06/29/19 | 07/01/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|                                       |        | Reporting |       | Spike      | Source      |          | %REC   |      | RPD   |       |
|---------------------------------------|--------|-----------|-------|------------|-------------|----------|--------|------|-------|-------|
| Analyte                               | Result | Limit     | Units | Level      | Result      | %REC     | Limits | RPD  | Limit | Notes |
| Batch P9G0206 - General Preparation ( | GC)    |           |       |            |             |          |        |      |       |       |
| Blank (P9G0206-BLK1)                  | ,      |           |       | Prepared & | : Analyzed: | 07/02/19 |        |      |       |       |
| Benzene                               | ND     | 0.00100   | mg/L  |            |             |          |        |      |       |       |
| Гoluene                               | ND     | 0.00100   | "     |            |             |          |        |      |       |       |
| Ethylbenzene                          | ND     | 0.00100   | "     |            |             |          |        |      |       |       |
| Xylene (p/m)                          | ND     | 0.00200   | "     |            |             |          |        |      |       |       |
| Xylene (o)                            | ND     | 0.00100   | "     |            |             |          |        |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0679 |           | "     | 0.0600     |             | 113      | 80-120 |      |       |       |
| Surrogate: 1,4-Difluorobenzene        | 0.0593 |           | "     | 0.0600     |             | 98.8     | 80-120 |      |       |       |
| LCS (P9G0206-BS1)                     |        |           |       | Prepared & | : Analyzed: | 07/02/19 |        |      |       |       |
| Benzene                               | 0.105  | 0.00100   | mg/L  | 0.100      |             | 105      | 80-120 |      |       |       |
| Toluene                               | 0.0901 | 0.00100   | "     | 0.100      |             | 90.1     | 80-120 |      |       |       |
| Ethylbenzene                          | 0.111  | 0.00100   | "     | 0.100      |             | 111      | 80-120 |      |       |       |
| Xylene (p/m)                          | 0.198  | 0.00200   | "     | 0.200      |             | 98.9     | 80-120 |      |       |       |
| Xylene (o)                            | 0.114  | 0.00100   | "     | 0.100      |             | 114      | 80-120 |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0497 |           | "     | 0.0600     |             | 82.8     | 80-120 |      |       |       |
| Surrogate: 1,4-Difluorobenzene        | 0.0482 |           | "     | 0.0600     |             | 80.3     | 80-120 |      |       |       |
| LCS Dup (P9G0206-BSD1)                |        |           |       | Prepared & | : Analyzed: | 07/02/19 |        |      |       |       |
| Benzene                               | 0.111  | 0.00100   | mg/L  | 0.100      |             | 111      | 80-120 | 5.03 | 20    |       |
| Toluene                               | 0.0971 | 0.00100   | "     | 0.100      |             | 97.1     | 80-120 | 7.46 | 20    |       |
| Ethylbenzene                          | 0.107  | 0.00100   | "     | 0.100      |             | 107      | 80-120 | 3.59 | 20    |       |
| Xylene (p/m)                          | 0.209  | 0.00200   | "     | 0.200      |             | 104      | 80-120 | 5.28 | 20    |       |
| Xylene (o)                            | 0.118  | 0.00100   | "     | 0.100      |             | 118      | 80-120 | 3.70 | 20    |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0584 |           | "     | 0.0600     |             | 97.3     | 80-120 |      |       |       |
| Surrogate: 1,4-Difluorobenzene        | 0.0532 |           | "     | 0.0600     |             | 88.7     | 80-120 |      |       |       |
| Calibration Blank (P9G0206-CCB1)      |        |           |       | Prepared & | : Analyzed: | 07/02/19 |        |      |       |       |
| Benzene                               | 0.00   |           | mg/L  |            |             |          |        |      |       |       |
| Toluene                               | 0.00   |           | "     |            |             |          |        |      |       |       |
| Ethylbenzene                          | 0.00   |           | "     |            |             |          |        |      |       |       |
| Xylene (p/m)                          | 0.00   |           | "     |            |             |          |        |      |       |       |
| Xylene (o)                            | 0.00   |           | "     |            |             |          |        |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.0545 |           | "     | 0.0600     |             | 90.8     | 80-120 |      |       |       |

Permian Basin Environmental Lab, L.P.

Surrogate: 1,4-Difluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

95.6

80-120

0.0600

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

Fax: (432) 520-7701

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD | RPD<br>Limit | Notes  |
|--|--------|--------------------|-------|----------------|------------------|----------|----------------|-----|--------------|--------|
| ,                                      | ACSUIT | Limit              | Omts  | Level          | Result           | /0KEC    | Lillito        | МЪ  | Lillit       | 110105 |
| Batch P9G0206 - General Preparation (G | (C)    |                    |       |                |                  |          |                |     |              |        |
| Calibration Blank (P9G0206-CCB2)       |        |                    |       | Prepared &     | Analyzed:        | 07/02/19 |                |     |              |        |
| Benzene                                | 0.00   |                    | mg/L  |                |                  |          |                |     |              |        |
| Toluene                                | 0.00   |                    | "     |                |                  |          |                |     |              |        |
| Ethylbenzene                           | 0.00   |                    | "     |                |                  |          |                |     |              |        |
| Xylene (p/m)                           | 0.00   |                    | "     |                |                  |          |                |     |              |        |
| Xylene (o)                             | 0.00   |                    | "     |                |                  |          |                |     |              |        |
| Surrogate: 4-Bromofluorobenzene        | 0.0592 |                    | "     | 0.0600         |                  | 98.6     | 80-120         |     |              |        |
| Surrogate: 1,4-Difluorobenzene         | 0.0582 |                    | "     | 0.0600         |                  | 96.9     | 80-120         |     |              |        |
| Calibration Check (P9G0206-CCV1)       |        |                    |       | Prepared &     | : Analyzed:      | 07/02/19 |                |     |              |        |
| Benzene                                | 0.104  | 0.00100            | mg/L  | 0.100          |                  | 104      | 80-120         |     |              |        |
| Toluene                                | 0.0901 | 0.00100            | "     | 0.100          |                  | 90.1     | 80-120         |     |              |        |
| Ethylbenzene                           | 0.0868 | 0.00100            | "     | 0.100          |                  | 86.8     | 80-120         |     |              |        |
| Xylene (p/m)                           | 0.186  | 0.00200            | "     | 0.200          |                  | 92.9     | 80-120         |     |              |        |
| Xylene (o)                             | 0.108  | 0.00100            | "     | 0.100          |                  | 108      | 80-120         |     |              |        |
| Surrogate: 4-Bromofluorobenzene        | 0.0607 |                    | "     | 0.0600         |                  | 101      | 80-120         |     |              |        |
| Surrogate: 1,4-Difluorobenzene         | 0.0672 |                    | "     | 0.0600         |                  | 112      | 80-120         |     |              |        |
| Calibration Check (P9G0206-CCV2)       |        |                    |       | Prepared &     | : Analyzed:      | 07/02/19 |                |     |              |        |
| Benzene                                | 0.110  | 0.00100            | mg/L  | 0.100          |                  | 110      | 80-120         |     |              |        |
| Гoluene                                | 0.0951 | 0.00100            | "     | 0.100          |                  | 95.1     | 80-120         |     |              |        |
| Ethylbenzene                           | 0.0868 | 0.00100            | "     | 0.100          |                  | 86.8     | 80-120         |     |              |        |
| Xylene (p/m)                           | 0.192  | 0.00200            | "     | 0.200          |                  | 96.1     | 80-120         |     |              |        |
| Xylene (o)                             | 0.109  | 0.00100            | "     | 0.100          |                  | 109      | 80-120         |     |              |        |
| Surrogate: 4-Bromofluorobenzene        | 0.0556 |                    | "     | 0.0600         |                  | 92.6     | 80-120         |     |              |        |
| Surrogate: 1,4-Difluorobenzene         | 0.0644 |                    | "     | 0.0600         |                  | 107      | 80-120         |     |              |        |
| Calibration Check (P9G0206-CCV3)       |        |                    |       | Prepared &     | : Analyzed:      | 07/02/19 |                |     |              |        |
| Benzene                                | 0.119  | 0.00100            | mg/L  | 0.100          |                  | 119      | 80-120         |     |              |        |
| Γoluene                                | 0.102  | 0.00100            | "     | 0.100          |                  | 102      | 80-120         |     |              |        |
| Ethylbenzene                           | 0.0890 | 0.00100            | "     | 0.100          |                  | 89.0     | 80-120         |     |              |        |
| Xylene (p/m)                           | 0.199  | 0.00200            | "     | 0.200          |                  | 99.6     | 80-120         |     |              |        |
| Xylene (o)                             | 0.118  | 0.00100            | "     | 0.100          |                  | 118      | 80-120         |     |              |        |
| Surrogate: 4-Bromofluorobenzene        | 0.0555 |                    | "     | 0.0600         |                  | 92.5     | 80-120         |     |              |        |

Permian Basin Environmental Lab, L.P.

Surrogate: 1,4-Difluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

80-120

0.0600

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Surrogate: 1,4-Difluorobenzene

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

| Batch P9G0206 - General Preparation ( | $\mathbf{GC}$ | ) |
|---------------------------------------|---------------|---|
|---------------------------------------|---------------|---|

| Matrix Spike (P9G0206-MS1)      | Sour   | ce: 9F28010- | 03   | Prepared & | Analyzed: | 07/02/19 |        |      |    |           |
|---------------------------------|--------|--------------|------|------------|-----------|----------|--------|------|----|-----------|
| Benzene                         | 0.0912 | 0.00100      | mg/L | 0.100      | ND        | 91.2     | 80-120 |      |    |           |
| Toluene                         | 0.0708 | 0.00100      | "    | 0.100      | ND        | 70.8     | 80-120 |      |    | QM-07     |
| Ethylbenzene                    | 0.0601 | 0.00100      | "    | 0.100      | ND        | 60.1     | 80-120 |      |    | QM-07     |
| Xylene (p/m)                    | 0.144  | 0.00200      | "    | 0.200      | ND        | 72.1     | 80-120 |      |    | QM-07     |
| Xylene (o)                      | 0.0840 | 0.00100      | "    | 0.100      | ND        | 84.0     | 80-120 |      |    |           |
| Surrogate: 4-Bromofluorobenzene | 0.0574 |              | "    | 0.0600     |           | 95.6     | 80-120 |      |    |           |
| Surrogate: 1,4-Difluorobenzene  | 0.0622 |              | "    | 0.0600     |           | 104      | 80-120 |      |    |           |
| Matrix Spike Dup (P9G0206-MSD1) | Sour   | ce: 9F28010- | 03   | Prepared & | Analyzed  | 07/02/19 |        |      |    |           |
| Benzene                         | 0.103  | 0.00100      | mg/L | 0.100      | ND        | 103      | 80-120 | 12.1 | 20 |           |
| Toluene                         | 0.0825 | 0.00100      | "    | 0.100      | ND        | 82.5     | 80-120 | 15.3 | 20 |           |
| Ethylbenzene                    | 0.0769 | 0.00100      | "    | 0.100      | ND        | 76.9     | 80-120 | 24.6 | 20 | QM-07, R2 |
| Xylene (p/m)                    | 0.175  | 0.00200      | "    | 0.200      | ND        | 87.6     | 80-120 | 19.5 | 20 |           |
| Xylene (o)                      | 0.103  | 0.00100      | "    | 0.100      | ND        | 103      | 80-120 | 20.8 | 20 | R2        |
| Surrogate: 4-Bromofluorobenzene | 0.0624 |              | "    | 0.0600     |           | 104      | 80-120 |      |    |           |

0.0600

117

80-120

0.0701

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |        | Reporting    |       | Spike      | Source      |          | %REC   |      | RPD   |       |
|--------------------------------------|--------|--------------|-------|------------|-------------|----------|--------|------|-------|-------|
| Analyte                              | Result | Limit        | Units | Level      | Result      | %REC     | Limits | RPD  | Limit | Notes |
| Batch P9G0101 - *** DEFAULT PREP *** |        |              |       |            |             |          |        |      |       |       |
| Blank (P9G0101-BLK1)                 |        |              |       | Prepared & | Analyzed:   | 07/01/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1          | %     |            |             |          |        |      |       |       |
| Duplicate (P9G0101-DUP1)             | Sour   | ce: 9F28014- | 05    | Prepared & | Analyzed:   | 07/01/19 |        |      |       |       |
| % Moisture                           | 2.0    | 0.1          | %     |            | 1.0         |          |        | 66.7 | 20    |       |
| Duplicate (P9G0101-DUP2)             | Sour   | ce: 9F28019- | 05    | Prepared & | : Analyzed: | 07/01/19 |        |      |       |       |
| % Moisture                           | 17.0   | 0.1          | %     |            | 18.0        |          |        | 5.71 | 20    |       |
| Duplicate (P9G0101-DUP3)             | Sour   | ce: 9F28021- | 01    | Prepared & | Analyzed:   | 07/01/19 |        |      |       |       |
| % Moisture                           | 3.0    | 0.1          | %     |            | 3.0         |          |        | 0.00 | 20    |       |
| Duplicate (P9G0101-DUP4)             | Sou    | ce: 9F28024- | 01    | Prepared & | : Analyzed: | 07/01/19 |        |      |       |       |
| % Moisture                           | 3.0    | 0.1          | %     |            | 2.0         |          |        | 40.0 | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting |           | Spike       | Source     |             | %REC    |      | RPD   |       |
|----------------------------------|--------|-----------|-----------|-------------|------------|-------------|---------|------|-------|-------|
| Analyte                          | Result | Limit     | Units     | Level       | Result     | %REC        | Limits  | RPD  | Limit | Notes |
| Batch P9F2905 - TX 1005          |        |           |           |             |            |             |         |      |       |       |
| Blank (P9F2905-BLK1)             |        |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | ND     | 25.0      | mg/kg wet |             |            |             |         |      |       |       |
| >C12-C28                         | ND     | 25.0      | "         |             |            |             |         |      |       |       |
| >C28-C35                         | ND     | 25.0      | "         |             |            |             |         |      |       |       |
| Surrogate: 1-Chlorooctane        | 79.5   |           | "         | 100         |            | 79.5        | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 41.5   |           | "         | 50.0        |            | 83.0        | 70-130  |      |       |       |
| LCS (P9F2905-BS1)                |        |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 908    | 25.0      | mg/kg wet | 1000        |            | 90.8        | 75-125  |      |       |       |
| >C12-C28                         | 839    | 25.0      | "         | 1000        |            | 83.9        | 75-125  |      |       |       |
| Surrogate: 1-Chlorooctane        | 97.5   |           | "         | 100         |            | 97.5        | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 37.7   |           | "         | 50.0        |            | 75.3        | 70-130  |      |       |       |
| LCS Dup (P9F2905-BSD1)           |        |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 856    | 25.0      | mg/kg wet | 1000        |            | 85.6        | 75-125  | 5.84 | 20    |       |
| >C12-C28                         | 821    | 25.0      | "         | 1000        |            | 82.1        | 75-125  | 2.17 | 20    |       |
| Surrogate: 1-Chlorooctane        | 92.4   |           | "         | 100         |            | 92.4        | 70-130  |      |       |       |
| Surrogate: o-Terphenyl           | 36.2   |           | "         | 50.0        |            | 72.4        | 70-130  |      |       |       |
| Calibration Blank (P9F2905-CCB1) |        |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 5.92   |           | mg/kg wet |             |            |             |         |      |       |       |
| >C12-C28                         | 12.8   |           | "         |             |            |             |         |      |       |       |
| Surrogate: 1-Chlorooctane        | 68.8   |           | "         | 100         |            | 68.8        | 70-130  |      |       | S-GO  |
| Surrogate: o-Terphenyl           | 36.4   |           | "         | 50.0        |            | 72.7        | 70-130  |      |       |       |
| Calibration Blank (P9F2905-CCB2) |        |           |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | 7/01/19 |      |       |       |
| C6-C12                           | 7.37   |           | mg/kg wet |             |            |             |         |      |       |       |
| >C12-C28                         | 14.7   |           | "         |             |            |             |         |      |       |       |
| Surrogate: 1-Chlorooctane        | 66.3   |           | "         | 100         |            | 66.3        | 70-130  |      |       | S-GO  |
| Surrogate: o-Terphenyl           | 36.2   |           | "         | 50.0        |            | 72.4        | 70-130  |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting    |           | Spike       | Source     |             | %REC   |      | RPD   |       |
|----------------------------------|--------|--------------|-----------|-------------|------------|-------------|--------|------|-------|-------|
| Analyte                          | Result | Limit        | Units     | Level       | Result     | %REC        | Limits | RPD  | Limit | Notes |
| Batch P9F2905 - TX 1005          |        |              |           |             |            |             |        |      |       |       |
| Calibration Check (P9F2905-CCV1) |        |              |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | /01/19 |      |       |       |
| C6-C12                           | 441    | 25.0         | mg/kg wet | 500         |            | 88.2        | 85-115 |      |       |       |
| >C12-C28                         | 461    | 25.0         | "         | 500         |            | 92.2        | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 94.0   |              | "         | 100         |            | 94.0        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 42.8   |              | "         | 50.0        |            | 85.5        | 70-130 |      |       |       |
| Calibration Check (P9F2905-CCV2) |        |              |           | Prepared: ( | 06/29/19 A | nalyzed: 07 | /01/19 |      |       |       |
| C6-C12                           | 485    | 25.0         | mg/kg wet | 500         |            | 96.9        | 85-115 |      |       |       |
| >C12-C28                         | 522    | 25.0         | "         | 500         |            | 104         | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 102    |              | "         | 100         |            | 102         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 47.4   |              | "         | 50.0        |            | 94.8        | 70-130 |      |       |       |
| Duplicate (P9F2905-DUP1)         | Sour   | rce: 9F28013 | -03       | Prepared: ( | 06/29/19 A | nalyzed: 07 | /02/19 |      |       |       |
| C6-C12                           | ND     | 25.5         | mg/kg dry |             | 9.86       |             |        |      | 20    |       |
| >C12-C28                         | 21.0   | 25.5         | "         |             | 15.2       |             |        | 32.2 | 20    |       |
| Surrogate: 1-Chlorooctane        | 80.2   |              | "         | 102         |            | 78.6        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 44.6   |              | "         | 51.0        |            | 87.5        | 70-130 |      |       |       |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

R2 The RPD exceeded the acceptance limit.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: Date: 7/8/2019

Brent Barron, Laboratory Director/Technical Director

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150EProject Number: TNM-Monument 18Midland TX, 79705Project Manager: Curt Stanley

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

| Recei <sub>l</sub> y  | d by C   | QCD:   | 5/8/2  | 921                  | 12.      | :21:      | 29       | PM.       | <del></del> ! | <del>,</del> |   |            |               |  |   | 1~                 |                | 3                  |                     |                |                  |                           |                               | Pa               | ge <b>530 of</b>   |
|---|--|--|--|----------------------|----------|-----------|----------|-----------|---------------|--------------|---|------------|---------------|--|---|--------------------|----------------|--------------------|---------------------|----------------|------------------|---------------------------|-------------------------------|------------------|--|
| ecci.<br>elinquished by:  | Relinquished by:   | elinquished by:  | Bill to Plains                                   | pecia                |          |           |          |           |               |              |   | B          | က             |  | LAB # (lab use only)                          | ORDER #:           | (lab use only) | Ī                  |                     |                |                  |                           |                               |                  |  |
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| by:   | by:  | <b>√</b> ₹   | II to  | ruct                 |          |           |          |           |               |              |   | 2019 SP-48 | 2019 SP-47    | 2019 SP-46                                       | :   | 1                  |                |                    | Sampler Signature:  | Telephone No:  | City/State/Zip:  | Company Address:          | Company Name                  | Project Manager: | N. W.  |
|   |  | $\mathbb{N}$   | Plai   | ions                 |          | ١         | ١        |           |               |              |   | SP-4       | SP-4          | SP   |   | 01082 16           |                |                    | ट<br>ब              | TONE           | tate/            | any                       | any                           | ¥<br>Z           |  |
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|   |  | 1/1/2  |  |                      |          |           |          |           |               |              |   |            |               |  |   | 0                  |                |                    | atur.               | •"•            |                  | ress                      | ne                            | ē                | $\mathcal{L}$  |
|   | . !  | γV   |  |                      |          |           |          |           |               |              |   |            |               |  | FIELD CODE                                    |                    | ٠              | Ш                  | 7                   | <b>=</b>       | I <u>≤</u>       |                           | l≓                            | ပြ               |  |
|   |  | \1   |  |                      |          |           |          |           |               |              |   |            |               |  | မ္မ   |                    |                |                    | 7                   | 32)5           | idlan            | Deg                       | ις<br>Ε                       | ıt Si            |  |
|   |  | וע   | i  |                      |          |           |          |           |               | ļ            |   |            |               |  | m   |                    |                |                    | g.                  | (432)5207720   | χŢ               | ăi<br> ⊡                  | nviro                         | Curt Stanley     |  |
| <del></del>   |  | 6  |  |                      |          |           |          |           |               |              |   |            |               |  |   |                    |                |                    | $\langle l \rangle$ | 20             | Midland/TX/79705 | 10 Desta Drive Suite 150E | nme                           |                  | Ω  |
| Date  | Dat  | Dat<br>  [2]   |  |                      |          |           |          |           |               |              |   |            |               |  |   | L_                 |                | ]                  | Y                   |                | 55               | Suite                     | nta (                         |                  | HAII   |
| ) o   | (6)  | 19   |  |                      |          |           |          |           |               |              |   |            |               |  |   |                    |                |                    | B                   |                |                  | 150                       | ofp                           |                  | Q<br>Q   |
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| Time  | Time   | Time<br>Ng: YM   |  | -                    |          |           |          |           |               | _            |   | <u> </u>   | _             | _  | Joegining Jopan                               | -                  |                |                    | ١V                  |                |                  |                           | ă                             |                  | ST   |
| (   | °  | 9  |  | l                    |          |           |          |           |               |              |   | NA         | N/A           | N/A  | Ending Depth                                  |                    |                |                    | V                   |                |                  |                           |                               |                  | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian Basi 10014 S. Cot Midland, Tex        |
| Récéived by PBE   | 1  | Received by:   |  | ſ                    |          |           |          |           |               |              |   | 6/,        | 3/9           | 6/3  |   |                    |                |                    |                     |                |                  |                           |                               |                  | RE   |
| lived   | wed by:  | ived   |  |                      |          |           |          |           |               |              |   | 6/27/2019  | 6/27/2019     | 6/27/2019  | Date Sampled                                  |                    |                |                    |                     |                |                  |                           |                               |                  | S S S S S S S S S S S S S S S S S S S  |
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| BE  |  |  |  | ŀ                    |          |           |          |           |               |              |   |            |               |  |   | -                  |                | 1                  |                     | I              |                  |                           |                               |                  | Š  |
|   | Q'   |  |  | l                    |          |           |          |           |               |              |   | 10:50      | 10:40         | 10:30  | Time Sampled                                  |                    |                |                    | Φ.                  | <u>"</u> "     |                  |                           |                               |                  | AN.  |
|   | adroe  |  |  |                      |          |           |          |           |               |              |   | 50         | 40            | 30   | Time Gampied                                  |                    |                |                    | e-mail:             | Fax No:        |                  |                           |                               |                  | 7,   |
|   |  |  |  | ŀ                    |          | _         | _        |           |               |              |   |            |               |  | Field Filtered                                | 4                  |                |                    | <b>#</b>            | Ö.             |                  |                           |                               |                  | S/S<br>P   |
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|   |  |  |  | ŀ                    |          |           |          |           |               |              | _ |            |               |  | HNO <sub>3</sub>                              | Pres               | ā              | cibryant@paalp.com | nle                 |                |                  |                           |                               |                  | REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213 Midland, Texas 79706 |
|   |  |  | ļ  | t                    |          |           |          |           |               |              |   |            |               | <del>                                     </del> | нсі   | Preservation       | Y Co           |                    | y a                 |                | ļ                |                           |                               | ļ                | as interes   |
|   |  |  |  | Ĺ                    |          |           |          |           |               |              |   |            |               |  | H <sub>2</sub> SO <sub>4</sub>                |                    | 5              | 9                  | )trc                |                |                  |                           |                               |                  | nvironr<br>Road<br>79706   |
|   |  |  |  |                      |          |           |          |           |               |              |   |            |               |  | NaOH  | g<br>Of            | Š              | )<br>aa            | sol                 |                |                  |                           |                               |                  | 6 d 1  |
|   |  |  |  | ŀ                    | _        |           |          |           |               |              |   |            |               | <u> </u>   | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | & # of Containers  | 2              | 0                  | csolutions.com      |                | l                |                           | 1                             |                  | ntal<br>213  |
| 4.2   | 6/2  |  |  | -                    | _        |           |          |           |               |              |   |            |               | ļ  | None  | ners               | O.             |                    | ns.                 |                |                  |                           |                               |                  | Lab  |
| Date  | Date   | Date   |  | ŀ                    | _        |           |          |           | -             |              |   |            |               |  | Other ( Specify)  DW=Drinking Water SL=Studge | H                  | 2              | )<br>}<br>}        | 8                   |                |                  |                           |                               | 1                | <u>.</u>   |
|   | 9  |  | }  |                      | -        | ļ         |          |           |               | - {          | Ì | R.         | N.            | J.   | GW = Groundwater S=Soil/Solid                 | Matrix             | 1              | ,                  | l≾                  | ₽<br>e         |                  |                           |                               |                  |  |
|   | e,   |  |  | L                    |          |           |          |           |               |              |   |            |               |  | NP=Non-Potable Specify Other                  | ₹                  |                |                    |                     | Report Format: |                  | 70                        |                               | Pro              |  |
| Time  | 1 (4/)   | Time   |  |                      |          |           |          |           |               |              |   | ×          | ×             | ×  | TPH: 418.1 (8015M) 80                         | )15B               |                |                    |                     | For            |                  | Project Loc:              | P                             | Project Name:    |  |
| <u>&gt; 27 −</u>  | - (0   | 76 O B   | < 160°   | -                    |          | _         |          |           |               | _            |   |            |               |  | TPH: TX 1005 TX 1006                          | _                  |                |                    |                     | nat:           | PO #:            | Ë                         | Project #:                    | Nam              |  |
| emp   | iam<br>Junis   | albel<br>Justo   | OC.  | 황                    |          | _         |          |           | -             |              | ႕ |            | <del></del> - |  | Cations (Ca, Mg, Na, K)                       | _                  | _              |                    |                     |                | #:<br> -         | ı<br>I                    | 計                             | ۱                |  |
| ted ted   | Court  | sion<br>dys<br>dys   | Fre  | a                    |          | _         |          |           |               | $\dashv$     |   |            |               | <u> </u>   | Anions (CI, SO4, Alkalinity) SAR / ESP / CEC  |                    |                | 1                  |                     | S<br>S         |                  |                           |                               |                  |  |
| JE-   | and<br>npler<br>irier  | eals<br>eals   | e of   | 긼                    |          | _         | $\dashv$ |           |               |              |   |            |               |  | Metals: As Ag Ba Cd Cr Pb Hg                  |                    | 7              | 7. (               |                     | Standard       |                  |                           |                               | -                | 골  |
| $\lambda_{oldsymbol{eta}_{oldsymbol{eta}}}$   | )<br>Clie  |  | Head   | 좕                    | $\dashv$ | $\exists$ | _        | <b>- </b> | ヿ             |              |   |            |               |  | Votatiles                                     | +                  | +-             | \nal)              |                     | ard            |                  | _                         |                               |                  | ОПе  |
| Temperature Upon Receipt: Received: \$\frac{1}{2} \cdot | Sample Hand Delivered by Sampler/Client Rep. ? by Courier? UPS DHL | <u>labelsion container(s)</u> Custody seals on container(s) Custodyseals on container(s) | Sample Containers under? VOCs Free of Headspace? | Laboratory Comments: |          |           |          |           |               |              |   |            |               |  | Semivolatiles                                 |                    | $\top$         | Analyze For:       |                     |                |                  | ea C                      | N N                           | 7                | Phone: 432-661-4184  |
| eceipt<br>°C<br>Factor  | <u>₽</u>   | linen  | 8<br>2<br>3                                      | "[                   |          |           |          |           |               |              |   | ×          | X             | ×  | BTEX 8021B/5030 or BTEX 82                    | 260 X              |                | 95                 |                     |                |                  | ount                      | TNM Monument 18               | Monument 18      | 2-66   |
| acto  | 묻  | (S)  |  |                      | $\Box$   |           |          |           |               |              |   |            |               |  | RCI   |                    |                |                    |                     | TRRP           |                  | y,<br>Z                   | nuc<br>Tuc                    | ıme              | <u> </u>   |
| 17  | TII  |  |  |                      |          |           | _        |           |               |              |   |            |               |  | N.O.R.M.                                      |                    |                | ]                  |                     | õ              |                  | A WE                      | nen                           | nt 1             | <b>≅</b>   |
| 67  | B<br>C√<br>≪   | X \ X  | 7  | , F                  | _        |           |          |           |               |              |   |            |               | _  | Chlorides E 300                               |                    |                | ┫╢                 |                     | _              |                  | Lea County, New Mexico    | t 18                          | 8                | Ŧ  |
|   |  |  |  | <b>′</b>             |          | $\dashv$  | -        |           | $\dashv$      |              |   |            |               | _  | Paint Filter TCLP Benzene                     |                    |                | -                  |                     | Z              |                  | ľ                         |                               |                  | Page of  |
|   | Lone S   | 2 2 2  | zz   | +                    | $\dashv$ | $\dashv$  | _        |           | $\dashv$      | -            |   |            |               | -  | RUSH TAT (Pre-Schedule) 24,                   | . 48, 7:           | 2 hrs          | -                  |                     | NPDE           |                  |                           |                               |                  | **************************************   |

××× Standard TAT

Page 14 of 14

### PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



### Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 9G26017



NELAP/TCEQ # T104704516-18-9

Report Date: 07/29/19

TRC Solutions- Midland, Texas

Project: Monument 18 10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2019 SP-49 | 9G26017-01    | Soil   | 07/25/19 15:10 | 07-26-2019 13:35 |
| 2019 SP-50 | 9G26017-02    | Soil   | 07/25/19 15:15 | 07-26-2019 13:35 |
| 2019 SP-51 | 9G26017-03    | Soil   | 07/25/19 15:20 | 07-26-2019 13:35 |
| 2019 SP-52 | 9G26017-04    | Soil   | 07/25/19 15:25 | 07-26-2019 13:35 |
| 2019 SP-53 | 9G26017-05    | Soil   | 07/25/19 15:30 | 07-26-2019 13:35 |
| 2019 SP-54 | 9G26017-06    | Soil   | 07/25/19 15:35 | 07-26-2019 13:35 |
| 2019 SP-55 | 9G26017-07    | Soil   | 07/25/19 15:40 | 07-26-2019 13:35 |
| 2019 SP-56 | 9G26017-08    | Soil   | 07/25/19 15:45 | 07-26-2019 13:35 |

TRC Solutions- Midland, Texas

Project: Monument 18 10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

> 2019 SP-49 9G26017-01 (Soil)

| Analyte                               | Result          | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|-----------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|                                       | Pern            | nian Basin E       | invironme | ntal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                        |                 |                    |           |             |              |          |          |            |       |
| Benzene                               | ND              | 0.00114            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Toluene                               | ND              | 0.00114            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Ethylbenzene                          | ND              | 0.00114            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (p/m)                          | ND              | 0.00227            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (o)                            | ND              | 0.00114            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                 | 105 %              | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                 | 92.2 %             | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA   | Standard Method | ds                 |           |             |              |          |          |            |       |
| % Moisture                            | 12.0            | 0.1                | %         | 1           | P9G2901      | 07/29/19 | 07/29/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 l | oy EPA Method 8 | 015M               |           |             |              |          |          |            |       |
| C6-C12                                | ND              | 28.4               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C12-C28                              | ND              | 28.4               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C28-C35                              | ND              | 28.4               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                 | 76.3 %             | 70-1      | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                 | 78.9 %             | 70-1      | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35    | ND              | 28.4               | mg/kg dry | 1           | [CALC]       | 07/26/19 | 07/28/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### 2019 SP-50 9G26017-02 (Soil)

| Analyte                                    | Result      | Reporting<br>Limit | Units     | Dilution | Batch   | Prepared | Analyzed | Method     | Notes |
|--|-------------|--------------------|-----------|----------|---------|----------|----------|------------|-------|
|  |             | mian Basin E       |           |          |         | 17       |          |            |       |
| Organics by GC                             |             |                    |           |          |         |          |          |            |       |
| Benzene                                    | ND          | 0.00108            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Toluene                                    | ND          | 0.00108            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND          | 0.00108            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND          | 0.00215            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND          | 0.00108            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |             | 95.9 %             | 75-1      | 25       | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |             | 119 %              | 75-1      | 25       | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Star | ndard Metho | ods                |           |          |         |          |          |            |       |
| % Moisture                                 | 7.0         | 0.1                | %         | 1        | P9G2901 | 07/29/19 | 07/29/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by El  | PA Method 8 | 8015M              |           |          |         |          |          |            |       |
| C6-C12                                     | ND          | 26.9               | mg/kg dry | 1        | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C12-C28                                   | ND          | 26.9               | mg/kg dry | 1        | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C28-C35                                   | ND          | 26.9               | mg/kg dry | 1        | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |             | 70.3 %             | 70-1      | 30       | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |             | 72.9 %             | 70-1      | 30       | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND          | 26.9               | mg/kg dry | 1        | [CALC]  | 07/26/19 | 07/28/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### 2019 SP-51 9G26017-03 (Soil)

| Analyte                               | Result           | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|------------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|                                       | Perm             | ian Basin E        | Environmen | ıtal Lab, I | Ĺ. <b>P.</b> |          |          |            |       |
| Organics by GC                        |                  |                    |            |             |              |          |          |            |       |
| Benzene                               | ND               | 0.00108            | mg/kg dry  | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Toluene                               | ND               | 0.00108            | mg/kg dry  | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Ethylbenzene                          | ND               | 0.00108            | mg/kg dry  | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (p/m)                          | ND               | 0.00215            | mg/kg dry  | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (o)                            | ND               | 0.00108            | mg/kg dry  | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                  | 94.4 %             | 75-1       | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                  | 118 %              | 75-1       | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA   | Standard Method  | s                  |            |             |              |          |          |            |       |
| % Moisture                            | 7.0              | 0.1                | %          | 1           | P9G2901      | 07/29/19 | 07/29/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 l | by EPA Method 80 | 15M                |            |             |              |          |          |            |       |
| C6-C12                                | ND               | 26.9               | mg/kg dry  | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C12-C28                              | ND               | 26.9               | mg/kg dry  | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C28-C35                              | ND               | 26.9               | mg/kg dry  | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                  | 84.1 %             | 70-1       | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                  | 86.6 %             | 70-1       | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35    | ND               | 26.9               | mg/kg dry  | 1           | [CALC]       | 07/26/19 | 07/28/19 | calc       |       |
|                                       |                  |                    |            |             |              |          |          |            |       |

TRC Solutions- Midland, Texas

Project: Monument 18

 $10\;Desta\;Dr\;STE\;150E$ 

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### 2019 SP-52 9G26017-04 (Soil)

| Analyte                                  | Result       | Reporting<br>Limit | Units     | Dilution    | Batch   | Prepared | Analyzed | Method     | Notes |
|--|--------------|--------------------|-----------|-------------|---------|----------|----------|------------|-------|
|  | Per          | mian Basin E       | nvironmer | ıtal Lab, l | P.      |          |          |            |       |
| Organics by GC                           |              |                    |           |             |         |          |          |            |       |
| Benzene                                  | ND           | 0.00108            | mg/kg dry | 1           | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Toluene                                  | ND           | 0.00108            | mg/kg dry | 1           | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Ethylbenzene                             | ND           | 0.00108            | mg/kg dry | 1           | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (p/m)                             | ND           | 0.00215            | mg/kg dry | 1           | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (o)                               | ND           | 0.00108            | mg/kg dry | 1           | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene           |              | 94.9 %             | 75-1      | 25          | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene          |              | 117 %              | 75-1      | 25          | P9G2608 | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / St | andard Metho | ds                 |           |             |         |          |          |            |       |
| % Moisture                               | 7.0          | 0.1                | %         | 1           | P9G2901 | 07/29/19 | 07/29/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by 1 | EPA Method 8 | 8015M              |           |             |         |          |          |            |       |
| C6-C12                                   | ND           | 26.9               | mg/kg dry | 1           | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C12-C28                                 | ND           | 26.9               | mg/kg dry | 1           | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C28-C35                                 | ND           | 26.9               | mg/kg dry | 1           | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                |              | 69.7 %             | 70-1      | 30          | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  | S-GC  |
| Surrogate: o-Terphenyl                   |              | 73.4 %             | 70-1      | 30          | P9G2606 | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35       | ND           | 26.9               | mg/kg dry | 1           | [CALC]  | 07/26/19 | 07/28/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

### 2019 SP-53 9G26017-05 (Soil)

| Analyte                                    | Result      | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per         | mian Basin E       | nvironmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |             |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND          | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Toluene                                    | ND          | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND          | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND          | 0.00217            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND          | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |             | 119 %              | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |             | 96.1 %             | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Star | dard Metho  | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 8.0         | 0.1                | %         | 1           | P9G2901      | 07/29/19 | 07/29/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EI  | PA Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND          | 27.2               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C12-C28                                   | ND          | 27.2               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C28-C35                                   | ND          | 27.2               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |             | 83.1 %             | 70-1      | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |             | 86.6 %             | 70-1      | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND          | 27.2               | mg/kg dry | 1           | [CALC]       | 07/26/19 | 07/28/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### 2019 SP-54 9G26017-06 (Soil)

| Analyte                                    | Result      | Reporting<br>Limit | Units     | Dilution | Batch   | Prepared | Analyzed     | Method     | Notes |
|--|-------------|--------------------|-----------|----------|---------|----------|--------------|------------|-------|
|  |             | mian Basin E       |           |          |         | Tropulou | - Timary 200 | - Include  |       |
| Organics by GC                             |             |                    |           |          |         |          |              |            |       |
| Benzene                                    | ND          | 0.00110            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19     | EPA 8021B  |       |
| Toluene                                    | ND          | 0.00110            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19     | EPA 8021B  |       |
| Ethylbenzene                               | ND          | 0.00110            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19     | EPA 8021B  |       |
| Xylene (p/m)                               | ND          | 0.00220            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19     | EPA 8021B  |       |
| Xylene (o)                                 | ND          | 0.00110            | mg/kg dry | 1        | P9G2608 | 07/26/19 | 07/28/19     | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |             | 91.9 %             | 75-1      | 25       | P9G2608 | 07/26/19 | 07/28/19     | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |             | 114 %              | 75-1      | 25       | P9G2608 | 07/26/19 | 07/28/19     | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Star | dard Metho  | ods                |           |          |         |          |              |            |       |
| % Moisture                                 | 9.0         | 0.1                | %         | 1        | P9G2901 | 07/29/19 | 07/29/19     | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EI  | PA Method 8 | 8015M              |           |          |         |          |              |            |       |
| C6-C12                                     | ND          | 27.5               | mg/kg dry | 1        | P9G2606 | 07/26/19 | 07/28/19     | TPH 8015M  |       |
| >C12-C28                                   | ND          | 27.5               | mg/kg dry | 1        | P9G2606 | 07/26/19 | 07/28/19     | TPH 8015M  |       |
| >C28-C35                                   | ND          | 27.5               | mg/kg dry | 1        | P9G2606 | 07/26/19 | 07/28/19     | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |             | 72.0 %             | 70-1      | 30       | P9G2606 | 07/26/19 | 07/28/19     | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |             | 75.6 %             | 70-1      | 30       | P9G2606 | 07/26/19 | 07/28/19     | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND          | 27.5               | mg/kg dry | 1        | [CALC]  | 07/26/19 | 07/28/19     | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

 $10\;Desta\;Dr\;STE\;150E$ 

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### 2019 SP-55 9G26017-07 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per        | mian Basin E       | nvironmer | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |            |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND         | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Toluene                                    | ND         | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND         | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND         | 0.00217            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND         | 0.00109            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |            | 113 %              | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |            | 106 %              | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 8.0        | 0.1                | %         | 1           | P9G2901      | 07/29/19 | 07/29/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND         | 27.2               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C12-C28                                   | ND         | 27.2               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| >C28-C35                                   | ND         | 27.2               | mg/kg dry | 1           | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |            | 74.4 %             | 70-1      | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |            | 78.2 %             | 70-1      | 30          | P9G2606      | 07/26/19 | 07/28/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 27.2               | mg/kg dry | 1           | [CALC]       | 07/26/19 | 07/28/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### 2019 SP-56 9G26017-08 (Soil)

| Analyte                                    | Result     | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per        | mian Basin E       | nvironmen | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |            |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND         | 0.00106            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Toluene                                    | ND         | 0.00106            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND         | 0.00106            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND         | 0.00213            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND         | 0.00106            | mg/kg dry | 1           | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |            | 93.1 %             | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |            | 119 %              | 75-1      | 25          | P9G2608      | 07/26/19 | 07/28/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Stan | dard Metho | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 6.0        | 0.1                | %         | 1           | P9G2901      | 07/29/19 | 07/29/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EP  | A Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND         | 26.6               | mg/kg dry | 1           | P9G2605      | 07/26/19 | 07/29/19 | TPH 8015M  |       |
| >C12-C28                                   | ND         | 26.6               | mg/kg dry | 1           | P9G2605      | 07/26/19 | 07/29/19 | TPH 8015M  |       |
| >C28-C35                                   | ND         | 26.6               | mg/kg dry | 1           | P9G2605      | 07/26/19 | 07/29/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |            | 71.2 %             | 70-1      | 30          | P9G2605      | 07/26/19 | 07/29/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |            | 74.6 %             | 70-1      | 30          | P9G2605      | 07/26/19 | 07/29/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 26.6               | mg/kg dry | 1           | [CALC]       | 07/26/19 | 07/29/19 | calc       |       |

TRC Solutions- Midland, Texas

exas Project: Monument 18
Project Number: TNM-Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

Fax: (432) 520-7701

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                               | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes  |
|---------------------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|-------|--------------|--------|
| , xiiai y to                          | Kesuit | Limit              | Omts      | LCVCI          | Result           | /UNLEC      | Lillits        | KLD   | Lillit       | ivotes |
| Batch P9G2608 - General Preparation ( | GC)    |                    |           |                |                  |             |                |       |              |        |
| Blank (P9G2608-BLK1)                  |        |                    |           | Prepared: (    | 07/26/19 Aı      | nalyzed: 07 | 7/28/19        |       |              |        |
| Benzene                               | ND     | 0.00100            | mg/kg wet |                |                  |             |                |       |              |        |
| Toluene                               | ND     | 0.00100            | "         |                |                  |             |                |       |              |        |
| Ethylbenzene                          | ND     | 0.00100            | "         |                |                  |             |                |       |              |        |
| Xylene (p/m)                          | ND     | 0.00200            | "         |                |                  |             |                |       |              |        |
| Xylene (o)                            | ND     | 0.00100            | "         |                |                  |             |                |       |              |        |
| Surrogate: 4-Bromofluorobenzene       | 0.132  |                    | "         | 0.120          |                  | 110         | 75-125         |       |              |        |
| Surrogate: 1,4-Difluorobenzene        | 0.117  |                    | "         | 0.120          |                  | 97.9        | 75-125         |       |              |        |
| LCS (P9G2608-BS1)                     |        |                    |           | Prepared: (    | )7/26/19 Aı      | nalyzed: 07 | 7/28/19        |       |              |        |
| Benzene                               | 0.0963 | 0.00100            | mg/kg wet | 0.100          |                  | 96.3        | 70-130         |       |              |        |
| Γoluene                               | 0.0899 | 0.00100            | "         | 0.100          |                  | 89.9        | 70-130         |       |              |        |
| Ethylbenzene                          | 0.104  | 0.00100            | "         | 0.100          |                  | 104         | 70-130         |       |              |        |
| Xylene (p/m)                          | 0.209  | 0.00200            | "         | 0.200          |                  | 104         | 70-130         |       |              |        |
| Xylene (o)                            | 0.107  | 0.00100            | "         | 0.100          |                  | 107         | 70-130         |       |              |        |
| Surrogate: 1,4-Difluorobenzene        | 0.115  |                    | "         | 0.120          |                  | 96.0        | 75-125         |       |              |        |
| Surrogate: 4-Bromofluorobenzene       | 0.123  |                    | "         | 0.120          |                  | 102         | 75-125         |       |              |        |
| LCS Dup (P9G2608-BSD1)                |        |                    |           | Prepared: (    | )7/26/19 Aı      | nalyzed: 07 | 7/28/19        |       |              |        |
| Benzene                               | 0.0848 | 0.00100            | mg/kg wet | 0.100          |                  | 84.8        | 70-130         | 12.6  | 20           |        |
| Γoluene                               | 0.0871 | 0.00100            | "         | 0.100          |                  | 87.1        | 70-130         | 3.13  | 20           |        |
| Ethylbenzene                          | 0.103  | 0.00100            | "         | 0.100          |                  | 103         | 70-130         | 0.804 | 20           |        |
| Xylene (p/m)                          | 0.196  | 0.00200            | "         | 0.200          |                  | 98.2        | 70-130         | 6.17  | 20           |        |
| Xylene (o)                            | 0.0981 | 0.00100            | "         | 0.100          |                  | 98.1        | 70-130         | 8.22  | 20           |        |
| Surrogate: 1,4-Difluorobenzene        | 0.129  |                    | "         | 0.120          |                  | 108         | 75-125         |       |              |        |
| Surrogate: 4-Bromofluorobenzene       | 0.104  |                    | "         | 0.120          |                  | 86.9        | 75-125         |       |              |        |
| Calibration Blank (P9G2608-CCB3)      |        |                    |           | Prepared: (    | )7/26/19 Aı      | nalyzed: 07 | 7/28/19        |       |              |        |
| Benzene                               | 0.00   |                    | mg/kg wet |                |                  | -           |                |       |              |        |
| Γoluene                               | 0.00   |                    | "         |                |                  |             |                |       |              |        |
| Ethylbenzene                          | 0.00   |                    | "         |                |                  |             |                |       |              |        |
| Xylene (p/m)                          | 0.00   |                    | "         |                |                  |             |                |       |              |        |
| Xylene (o)                            | 0.00   |                    | "         |                |                  |             |                |       |              |        |
| Surrogate: 1,4-Difluorobenzene        | 0.121  |                    | "         | 0.120          |                  | 101         | 75-125         |       |              |        |
| Surrogate: 4-Bromofluorobenzene       | 0.142  |                    | "         | 0.120          |                  | 118         | 75-125         |       |              |        |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley

#### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                  | Result | Reporting<br>Limit | Units       | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|--|--------|--------------------|-------------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Batch P9G2608 - General Preparation (GC) |        |                    |             |                |                  |             |                |       |              |       |
| Calibration Check (P9G2608-CCV3)         |        |                    |             | Prepared: (    | )7/26/19 A       | nalyzed: 07 | //28/19        |       |              |       |
| Benzene                                  | 0.0805 | 0.00100            | mg/kg wet   | 0.100          |                  | 80.5        | 80-120         |       |              |       |
| Toluene                                  | 0.0904 | 0.00100            | "           | 0.100          |                  | 90.4        | 80-120         |       |              |       |
| Ethylbenzene                             | 0.0832 | 0.00100            | "           | 0.100          |                  | 83.2        | 80-120         |       |              |       |
| Xylene (p/m)                             | 0.204  | 0.00200            | "           | 0.200          |                  | 102         | 80-120         |       |              |       |
| Xylene (o)                               | 0.0952 | 0.00100            | "           | 0.100          |                  | 95.2        | 80-120         |       |              |       |
| Surrogate: 1,4-Difluorobenzene           | 0.143  |                    | "           | 0.120          |                  | 119         | 75-125         |       |              |       |
| Surrogate: 4-Bromofluorobenzene          | 0.143  |                    | "           | 0.120          |                  | 119         | 75-125         |       |              |       |
| Matrix Spike (P9G2608-MS1)               | Sou    | rce: 9G26017       | <b>7-01</b> | Prepared: (    | 07/26/19 A       | nalyzed: 07 | //28/19        |       |              |       |
| Benzene                                  | 0.0303 | 0.00114            | mg/kg dry   | 0.114          | ND               | 26.7        | 80-120         |       |              | QM-05 |
| Toluene                                  | 0.0345 | 0.00114            | "           | 0.114          | ND               | 30.4        | 80-120         |       |              | QM-05 |
| Ethylbenzene                             | 0.0216 | 0.00114            | "           | 0.114          | ND               | 19.0        | 80-120         |       |              | QM-05 |
| Xylene (p/m)                             | 0.0627 | 0.00227            | "           | 0.227          | ND               | 27.6        | 80-120         |       |              | QM-05 |
| Xylene (o)                               | 0.0779 | 0.00114            | "           | 0.114          | ND               | 68.6        | 80-120         |       |              | QM-05 |
| Surrogate: 1,4-Difluorobenzene           | 0.152  |                    | "           | 0.136          |                  | 112         | 75-125         |       |              |       |
| Surrogate: 4-Bromofluorobenzene          | 0.155  |                    | "           | 0.136          |                  | 114         | 75-125         |       |              |       |
| Matrix Spike Dup (P9G2608-MSD1)          | Sou    | rce: 9G26017       | <b>7-01</b> | Prepared: (    | 07/26/19 A       | nalyzed: 07 | 7/28/19        |       |              |       |
| Benzene                                  | 0.0378 | 0.00114            | mg/kg dry   | 0.114          | ND               | 33.2        | 80-120         | 21.8  | 20           | QM-05 |
| Toluene                                  | 0.0344 | 0.00114            | "           | 0.114          | ND               | 30.3        | 80-120         | 0.198 | 20           | QM-05 |
| Ethylbenzene                             | 0.0212 | 0.00114            | "           | 0.114          | ND               | 18.7        | 80-120         | 1.86  | 20           | QM-05 |
| Xylene (p/m)                             | 0.0356 | 0.00227            | "           | 0.227          | ND               | 15.6        | 80-120         | 55.2  | 20           | QM-05 |
| Xylene (o)                               | 0.0821 | 0.00114            | "           | 0.114          | ND               | 72.3        | 80-120         | 5.25  | 20           | QM-05 |
|  |        |                    |             |                |                  |             |                |       |              |       |

0.136

0.153

Surrogate: 1,4-Difluorobenzene

112

75-125

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

Fax: (432) 520-7701

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |        | Reporting    |       | Spike      | Source      |          | %REC   |      | RPD   |       |
|--------------------------------------|--------|--------------|-------|------------|-------------|----------|--------|------|-------|-------|
| Analyte                              | Result | Limit        | Units | Level      | Result      | %REC     | Limits | RPD  | Limit | Notes |
| Batch P9G2901 - *** DEFAULT PREP *** |        |              |       |            |             |          |        |      |       |       |
| Blank (P9G2901-BLK1)                 |        |              |       | Prepared & | Analyzed:   | 07/29/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1          | %     |            |             |          |        |      |       |       |
| Blank (P9G2901-BLK2)                 |        |              |       | Prepared & | Analyzed    | 07/29/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1          | %     |            |             |          |        |      |       |       |
| Duplicate (P9G2901-DUP1)             | Sour   | ce: 9G25012- | -19   | Prepared & | Analyzed:   | 07/29/19 |        |      |       |       |
| % Moisture                           | 8.0    | 0.1          | %     |            | 8.0         |          |        | 0.00 | 20    |       |
| Duplicate (P9G2901-DUP2)             | Sour   | ce: 9G26005- | 01    | Prepared & | Analyzed:   | 07/29/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1          | %     |            | ND          |          |        |      | 20    |       |
| Duplicate (P9G2901-DUP3)             | Sour   | ce: 9G26011- | .09   | Prepared & | Analyzed:   | 07/29/19 |        |      |       |       |
| % Moisture                           | 4.0    | 0.1          | %     |            | 4.0         |          |        | 0.00 | 20    |       |
| Duplicate (P9G2901-DUP4)             | Sour   | ce: 9G26013- | -08   | Prepared & | Analyzed    | 07/29/19 |        |      |       |       |
| % Moisture                           | 5.0    | 0.1          | %     |            | 5.0         |          |        | 0.00 | 20    |       |
| Duplicate (P9G2901-DUP5)             | Sour   | ce: 9G26014- | -19   | Prepared & | Analyzed:   | 07/29/19 |        |      |       |       |
| % Moisture                           | 8.0    | 0.1          | %     |            | 9.0         |          |        | 11.8 | 20    |       |
| Duplicate (P9G2901-DUP6)             | Sour   | ce: 9G26015- | -26   | Prepared & | Analyzed:   | 07/29/19 |        |      |       |       |
| % Moisture                           | 8.0    | 0.1          | %     | -          | 10.0        |          |        | 22.2 | 20    |       |
| Duplicate (P9G2901-DUP7)             | Soui   | ce: 9G26015- | -28   | Prepared & | . Analyzed: | 07/29/19 |        |      |       |       |
| % Moisture                           | 8.0    | 0.1          | %     |            | 8.0         |          |        | 0.00 | 20    |       |
| Duplicate (P9G2901-DUP8)             | Sour   | ce: 9G26018- | -26   | Prepared & | : Analyzed: | 07/29/19 |        |      |       |       |
| % Moisture                           | 9.0    | 0.1          | %     |            | 10.0        |          |        | 10.5 | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch P9G2901 - \*\*\* DEFAULT PREP \*\*\*

| Duplicate (P9G2901-DUP9) | Source | 9G26019- | 06 | Prepared & Analyzed: 07/29/19 |      |    |  |
|--------------------------|--------|----------|----|-------------------------------|------|----|--|
| % Moisture               | 11.0   | 0.1      | %  | 10.0                          | 9.52 | 20 |  |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting |           | Spike       | Source      |             | %REC    |       | RPD   |       |
|----------------------------------|--------|-----------|-----------|-------------|-------------|-------------|---------|-------|-------|-------|
| Analyte                          | Result | Limit     | Units     | Level       | Result      | %REC        | Limits  | RPD   | Limit | Notes |
| Batch P9G2605 - TX 1005          |        |           |           |             |             |             |         |       |       |       |
| Calibration Blank (P9G2605-CCB2) |        |           |           | Prepared: ( | )7/26/19 Aı | nalyzed: 07 | //29/19 |       |       |       |
| C6-C12                           | 7.70   |           | mg/kg wet |             |             |             |         |       |       |       |
| >C12-C28                         | 6.45   |           | "         |             |             |             |         |       |       |       |
| Surrogate: 1-Chlorooctane        | 75.8   |           | "         | 100         |             | 75.8        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 40.0   |           | "         | 50.0        |             | 79.9        | 70-130  |       |       |       |
| Calibration Check (P9G2605-CCV2) |        |           |           | Prepared: ( | )7/26/19 Aı | nalyzed: 07 | //29/19 |       |       |       |
| C6-C12                           | 449    | 25.0      | mg/kg wet | 500         |             | 89.8        | 85-115  |       |       |       |
| >C12-C28                         | 452    | 25.0      | "         | 500         |             | 90.4        | 85-115  |       |       |       |
| Surrogate: 1-Chlorooctane        | 90.0   |           | "         | 100         |             | 90.0        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 40.8   |           | "         | 50.0        |             | 81.6        | 70-130  |       |       |       |
| Batch P9G2606 - TX 1005          |        |           |           |             |             |             |         |       |       |       |
| Blank (P9G2606-BLK1)             |        |           |           | Prepared: ( | )7/26/19 Aı | nalyzed: 07 | //27/19 |       |       |       |
| C6-C12                           | ND     | 25.0      | mg/kg wet |             |             |             |         |       |       |       |
| >C12-C28                         | ND     | 25.0      | "         |             |             |             |         |       |       |       |
| >C28-C35                         | ND     | 25.0      | "         |             |             |             |         |       |       |       |
| Surrogate: 1-Chlorooctane        | 74.7   |           | "         | 100         |             | 74.7        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 37.5   |           | "         | 50.0        |             | 74.9        | 70-130  |       |       |       |
| LCS (P9G2606-BS1)                |        |           |           | Prepared: ( | )7/26/19 Aı | nalyzed: 07 | //27/19 |       |       |       |
| C6-C12                           | 833    | 25.0      | mg/kg wet | 1000        |             | 83.3        | 75-125  |       |       |       |
| >C12-C28                         | 827    | 25.0      | "         | 1000        |             | 82.7        | 75-125  |       |       |       |
| Surrogate: 1-Chlorooctane        | 99.6   |           | "         | 100         |             | 99.6        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 36.7   |           | "         | 50.0        |             | 73.4        | 70-130  |       |       |       |
| LCS Dup (P9G2606-BSD1)           |        |           |           | Prepared: ( | )7/26/19 Aı | nalyzed: 07 | //27/19 |       |       |       |
| C6-C12                           | 819    | 25.0      | mg/kg wet | 1000        |             | 81.9        | 75-125  | 1.68  | 20    | ·     |
| >C12-C28                         | 831    | 25.0      | "         | 1000        |             | 83.1        | 75-125  | 0.492 | 20    |       |
| Surrogate: 1-Chlorooctane        | 98.3   |           | "         | 100         |             | 98.3        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 36.0   |           | "         | 50.0        |             | 71.9        | 70-130  |       |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

Project Number: TNM-Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

| Analyta                          | Result | Reporting | Unito     | Spike       | Source<br>Result | %REC        | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|----------------------------------|--------|-----------|-----------|-------------|------------------|-------------|----------------|-----|--------------|-------|
| Analyte                          | Kesuit | Limit     | Units     | Level       | Kesuit           | 70KEC       | Limits         | KPD | Limit        | Notes |
| Batch P9G2606 - TX 1005          |        |           |           |             |                  |             |                |     |              |       |
| Calibration Blank (P9G2606-CCB1) |        |           |           | Prepared: ( | 07/26/19 A       | nalyzed: 07 | //27/19        |     |              |       |
| C6-C12                           | 11.5   |           | mg/kg wet |             |                  |             |                |     |              |       |
| >C12-C28                         | 7.26   |           | "         |             |                  |             |                |     |              |       |
| Surrogate: 1-Chlorooctane        | 74.4   |           | "         | 100         |                  | 74.4        | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 38.0   |           | "         | 50.0        |                  | 76.0        | 70-130         |     |              |       |
| Calibration Blank (P9G2606-CCB2) |        |           |           | Prepared: ( | 07/26/19 A       | nalyzed: 07 | //28/19        |     |              |       |
| C6-C12                           | 12.9   |           | mg/kg wet |             |                  |             |                |     |              |       |
| >C12-C28                         | 18.0   |           | "         |             |                  |             |                |     |              |       |
| Surrogate: 1-Chlorooctane        | 76.4   |           | "         | 100         |                  | 76.4        | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 40.1   |           | "         | 50.0        |                  | 80.2        | 70-130         |     |              |       |
| Calibration Check (P9G2606-CCV1) |        |           |           | Prepared: ( | 07/26/19 A       | nalyzed: 07 | //27/19        |     |              |       |
| C6-C12                           | 444    | 25.0      | mg/kg wet | 500         |                  | 88.8        | 85-115         |     |              |       |
| >C12-C28                         | 436    | 25.0      | "         | 500         |                  | 87.2        | 85-115         |     |              |       |
| Surrogate: 1-Chlorooctane        | 88.1   |           | "         | 100         |                  | 88.1        | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 37.8   |           | "         | 50.0        |                  | 75.6        | 70-130         |     |              |       |
| Calibration Check (P9G2606-CCV2) |        |           |           | Prepared: ( | 07/26/19 A       | nalyzed: 07 | 7/28/19        |     |              |       |
| C6-C12                           | 442    | 25.0      | mg/kg wet | 500         |                  | 88.3        | 85-115         |     |              |       |
| >C12-C28                         | 441    | 25.0      | "         | 500         |                  | 88.2        | 85-115         |     |              |       |
| Surrogate: 1-Chlorooctane        | 91.5   |           | "         | 100         |                  | 91.5        | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 39.4   |           | "         | 50.0        |                  | 78.8        | 70-130         |     |              |       |

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were

within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

Sample results reported on a dry weight basis dry

Relative Percent Difference RPD

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Dien | Darron |       |           |  |
|---------------------|------|--------|-------|-----------|--|
| Report Approved By: |      |        | Date: | 7/29/2019 |  |

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

Permian Basin Environmental Lab, L.P.

| <u>Receiv</u>                           | ed by (   | OCD:   | 6/8/20   | 21                    | 12:      | 21; | 29          | PM <sub></sub> |  |  |              |  |             | !           |  |                 | -              | 2                        |                            |                |                  |                                |                               | Pa <sub>c</sub>  | ge 549 oj  |
|---|---|--|--|-----------------------|----------|-----|-------------|----------------|--|--|--------------|--|-------------|-------------|--|-----------------|----------------|--------------------------|----------------------------|----------------|------------------|--------------------------------|-------------------------------|------------------|--|
| Receiv Relinquished by:                 | Relinquished by   | Religquished by  |  | Special               |          |     | œ           | _1             | þ  | Q/   | Ļ            | w  | 2           |             | LAB # (lab use only)                                       | ORDER #         | (ida dae einy) | 000                      |                            |                |                  |                                |                               |                  |  |
| sned by:                                | shed by:  |  | Bill to Plains   | Special Instructions: |          |     | 2019 SP-56  | 2019 SP-55     | 2019 SP-54                                       | 2019 SP-53                                       | 2019 SP-52   | 2019 SP-51                                       | 2019 SP-50  | 2019 SP-49  |  | 96              |                | onki                     | Sampler Signature:         | Telephone No:  | City/State/Zip:  | Company Address:               | Company Name                  | Project Manager: |  |
|   |   |  |  |                       |          |     |             |                |  |  |              |  |             |             | FIELD CODE   | 71097           |                |                          | ture:                      | (432)5207720   | Midland/TX/79705 | ess: 10 Desta Drive Suite 150E |                               | er: Curt Stanley | 70   |
| Dale                                    | Date  | 7/20/19  | 7  |                       |          |     |             |                |  |  |              |  |             | 17          |  | <u></u>         |                |                          |                            |                | 9705             | /e Suite 150E                  | TRC Environmental Corporation |                  | Citative Ci  |
|   | _   | $\frac{1}{2}$  |  |                       |          |     | N<br>A      | ¥<br>N         | N.   | N/A  | N.           | ¥.   | N<br>A      | N<br>A      | Beginning Depth  |                 |                | ~                        |                            | 1              |                  |                                | ation                         |                  | ,  |
|   |   | \$ 50<br>\$ 1  |  | ŀ                     |          |     | N/A         | N/A            | N/A  | N/A  | N/A          | N/A  | N/A         | N/A         | Ending Depth   |                 |                |                          | )                          |                |                  |                                |                               |                  | Š  |
| The last of Feet                        | Received by:  | 1.   |  |                       |          |     | A 7/25/2019 | A 7/25/2019    | A 7/25/2019                                      | A 7/25/2019                                      | A 7/25/2019  | A 7/25/2019                                      | A 7/25/2019 | A 7/25/2019 | Date Sampled   |                 |                |                          | 19                         |                |                  |                                |                               |                  | Permian Basi<br>10014 S. Cou<br>Midland, Tex   |
| Donne                                   |   |  |  |                       |          |     | 15:45       | 15:40          | 15:35  | 15:30  | 15:25        | 15:20  | 15:15       | 15:10       | Time Sampled   |                 |                |                          | e-mail:                    | Fax No:        |                  |                                |                               |                  |  |
| 2                                       |   |  |  | I                     |          |     |             |                |  |  |              |  |             |             | Field Filtered   |                 | 1.             |                          | IO                         |                |                  |                                |                               |                  | Permian Basin Environmental Lab, LP<br>10014 S. County Road 1213<br>Midland, Texas 79706 |
| 8                                       |   |  |  | -                     |          |     | >           | <u> </u>       |  | <b>&gt;</b>                                      | >            |  | <u> </u>    |             | Total #. of Containers                                     | ╁┑              |                | stanley@trcsolutions.com | cdstanley@trcsolutions.com |                |                  |                                |                               |                  | nian<br>14 S   |
|   |   |  |  | -                     | $\dashv$ |     | ×           | ×              | ×  | ×  | ×            | ×  | ×           | ×           | HNO <sub>3</sub>   | 뒣               |                |                          | an                         |                |                  |                                |                               |                  | Bas<br>Co  |
|   |   |  |  | ŀ                     |          |     |             |                | ┢  |  |              |  | $\vdash$    |             | HCI  | Preservation &  |                |                          | ev(                        |                |                  |                                |                               |                  | E me   |
|   |   |  |  | ŀ                     |          |     |             |                |  |  |              | $\vdash$   |             |             | H <sub>2</sub> SO <sub>4</sub>                             | - ition         | Ì              |                          |                            |                |                  |                                |                               |                  | nviror<br>/ Roa<br>/ 7970  |
|   |   |  |  | f                     | $\neg$   |     |             | _              | <del>                                     </del> |  |              |  |             |             | NaOH   |                 | 9              | isol                     | SS                         |                |                  |                                |                               |                  | onm<br>ad 1  |
| ' '                                     |   |  |  | f                     |          |     |             |                |  |  |              | Г  | <u> </u>    |             | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>              | # of Containers |                |                          | <u>וב</u>                  |                |                  |                                |                               |                  | enta<br> 213   |
| 12                                      |   |  | 1  | Ī                     |          |     |             | <u> </u>       |  |  |              |  | l           |             | None   | ainer           |                | 3 lg                     | 92                         |                |                  |                                | '                             |                  | <u>.                                    </u>   |
| 12/19                                   | Date  | Dale   |  |                       |          |     |             |                |  |  |              |  |             |             | Other ( Specify)   | <u>l</u> "      |                | g I3                     | 000                        |                |                  |                                |                               |                  | _ <u>.</u>   |
| 9                                       | 7 6   | i in   |  |                       |          |     |             |                |  |  |              |  |             |             | DW=Drinking Water SL=Sludge                                | Ξ               | i              | 3                        | ΙĔ                         | ZD             |                  |                                |                               |                  | U  |
|   | -   |  | -  |                       |          |     |             |                |  |  |              |  |             |             | GW = Groundweter S=Soil/Solid NP=Non-Potebia Spacify Other | Matrix          |                |                          |                            | epo            |                  |                                |                               | P                |  |
|   | ime   | Ine  | 1  | ŀ                     | $\neg$   |     | ×           | ×              | ×  | ×  | ×            | ×  | ×           | ×           |  | 15B             | Τ              | T                        | 1                          | 퓼              |                  | Proj                           | T                             | ojec             |  |
| 1 3 g                                   | ं व   | Õ  | 5  | f                     | 1        |     |             |                |  |  |              |  | İ           |             | TPH: TX 1005 TX 1006                                       |                 |                |                          |                            | Report Format: | v                | Project Loc:                   | Project#:                     | Project Name:    |  |
| A Re                                    | Sa  | ි දි.මී  | 58   | <u></u>               |          |     |             |                |  |  |              | <del>                                     </del> |             |             | Cations (Ca, Mg, Na, K)                                    | $\dashv$        |                |                          |                            | <del>7.</del>  | PO#              | 000                            | #<br>#                        | me:              |  |
| Received:                               | Sample Hand Delivered<br>by Sampler/Client Rep<br>by Courier? UPS | stod   | CS F   | ora                   |          |     |             |                |  |  |              |  |             |             | Anions (Cl, SO4, Alkalinity)                               |                 | ₫,             | _                        |                            | $\times$       |                  |                                |                               | 1                |  |
| a g g                                   | nple Hand<br>by Sampler<br>by Counter?                            | / Se   | 6<br>6<br>6  | [                     |          |     |             |                | · .  |  |              |  |             |             | SAR / ESP / CEC  |                 | TOTAL:         | Ņ<br>Ž                   |                            | Star           |                  |                                |                               |                  |  |
| 12/1/2                                  |   | is o   | 의<br>의<br>기  | ပ္သ                   |          |     |             |                | ļ  |  |              |  |             |             | Metals: As Ag Ba Cd Cr Pb Hg                               | Se              | _              | إ                        |                            | Standard       |                  |                                |                               |                  | hor  |
| 12                                      | elive<br>Lient  | 200  | ead  | ᇍ                     |          |     |             |                |  |  |              | _  |             |             | Volatiles  |                 | 1              | Analyze                  |                            | Ω.             |                  | မြွ                            |                               |                  | <u> </u>   |
| Received: 42 °C F. Adjusted: 6.72 °C F. | nple Hand Delivered<br>by Sampler/Client Rep. ?<br>by Couner? UPS | ntair<br>Olea  | sample containers intact?  VOCs Free of Headspace?                           | Laboratory Comments:  |          | _   |             |                |  |  |              | ļ  | _           | <u> </u>    | Semivolatiles  |                 | _              | - Fg                     |                            |                | İ                | င်                             | ≦                             | ĕ                | ‡32 <u>-</u>   |
| CFactor                                 | Ž_ √  | Papers on container(s) Custody seals on container(s) Custody seals on container(s) | Sample containers intact?  VOCs Free of Headspace?  /Your free of Headspace? | .  -                  | $\dashv$ |     | ×           | ×              | ×  | ×  | ×            | ×  | ×           | ×           | BTEX 8021B/9030 or BTEX 82                                 | :60             | х <u>Г</u>     | ┦¨                       |                            | □              |                  | Lea County, New Mexico         | TNM Monument 18               | Monument 18      | Phone: 432-661-4184  |
| <u>ā</u> ℃                              | H   |  |  | -                     | $\dashv$ |     | <u> </u>    | <del> </del>   | <del> </del>                                     |  | <del> </del> |  | -           | ļ           | N.O.R.M.   |                 |                | -                        |                            | TRRP           |                  | Nev                            | l <u>m</u>                    | len              | <u>4</u>   |
| 5                                       | ā   |  |  | ŀ                     | $\dashv$ |     |             | <del> </del>   | _  | -  |              | <del> </del>                                     | $\vdash$    | -           | Chlorides E 300  |                 |                | $\dashv$                 |                            | •              |                  | Me                             | E E                           | 18               | 4  |
| hT                                      | FedEX   | <b>K</b> 4   | 1  | st                    | $\dashv$ |     |             | $\vdash$       | 一  | <del>                                     </del> |              | $\vdash$   | $\vdash$    |             | Paint Filter   |                 |                | 7                        |                            |                |                  | 8                              | 8                             |                  | -  |
|   | و   |  |  | t                     | 寸        |     |             | $\vdash$       | Т  | T  |              | Г  | T           |             | TCLP Benzene   |                 |                | 1                        | 1                          |                |                  |                                |                               |                  | e<br>G   |
|   | N<br>Lone Star  | Ż Z  | ZZZ  |                       |          |     |             |                |  |  |              |  |             |             | RUSH TAT (Pre-Schedule) 24                                 | , 48,           | 72 hr          | s                        | 1                          | NPDES          |                  |                                |                               |                  | raya v oi v  |
|   | <u> </u>  |  |  | ľ                     |          |     | ×           | ×              | ×  | ×  | ×            | ×  | ×           | ×           | Standard TAT   |                 |                |                          | _                          | 3,             |                  |                                | Pa                            | ge 1             | 9 of 19  |

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



## Analytical Report

#### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 9G31001



NELAP/TCEQ # T104704516-18-9

Report Date: 08/03/19

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2019 SP-57 | 9G31001-01    | Soil   | 07/30/19 11:00 | 07-31-2019 13:00 |

TRC Solutions- Midland, Texas

Project: Monument 18 10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

> 2019 SP-57 9G31001-01 (Soil)

| Analyte                                    | Result      | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|--|-------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|  | Per         | mian Basin E       | nvironmen | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                             |             |                    |           |             |              |          |          |            |       |
| Benzene                                    | ND          | 0.00114            | mg/kg dry | 1           | P9G3105      | 07/31/19 | 08/01/19 | EPA 8021B  |       |
| Toluene                                    | ND          | 0.00114            | mg/kg dry | 1           | P9G3105      | 07/31/19 | 08/01/19 | EPA 8021B  |       |
| Ethylbenzene                               | ND          | 0.00114            | mg/kg dry | 1           | P9G3105      | 07/31/19 | 08/01/19 | EPA 8021B  |       |
| Xylene (p/m)                               | ND          | 0.00227            | mg/kg dry | 1           | P9G3105      | 07/31/19 | 08/01/19 | EPA 8021B  |       |
| Xylene (o)                                 | ND          | 0.00114            | mg/kg dry | 1           | P9G3105      | 07/31/19 | 08/01/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene            |             | 116 %              | 75-1      | 25          | P9G3105      | 07/31/19 | 08/01/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene             |             | 96.1 %             | 75-1      | 25          | P9G3105      | 07/31/19 | 08/01/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Star | ndard Metho | ods                |           |             |              |          |          |            |       |
| % Moisture                                 | 12.0        | 0.1                | %         | 1           | P9H0102      | 08/01/19 | 08/01/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by El  | PA Method 8 | 8015M              |           |             |              |          |          |            |       |
| C6-C12                                     | ND          | 28.4               | mg/kg dry | 1           | P9H0103      | 08/01/19 | 08/02/19 | TPH 8015M  |       |
| >C12-C28                                   | ND          | 28.4               | mg/kg dry | 1           | Р9Н0103      | 08/01/19 | 08/02/19 | TPH 8015M  |       |
| >C28-C35                                   | ND          | 28.4               | mg/kg dry | 1           | Р9Н0103      | 08/01/19 | 08/02/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                  |             | 81.1 %             | 70-1      | 30          | P9H0103      | 08/01/19 | 08/02/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                     |             | 86.6 %             | 70-1      | 30          | P9H0103      | 08/01/19 | 08/02/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35         | ND          | 28.4               | mg/kg dry | 1           | [CALC]       | 08/01/19 | 08/02/19 | calc       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705

Project: Monument 18 Fax: (432) 520-7701

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Project Manager: Curt Stanley

| Analysis                                | D14    | Reporting | T I:4-    | Spike       | Source      | 0/DEC       | %REC   | DDD      | RPD   | Nister   |
|---|--------|-----------|-----------|-------------|-------------|-------------|--------|----------|-------|----------|
| Analyte                                 | Result | Limit     | Units     | Level       | Result      | %REC        | Limits | RPD      | Limit | Notes    |
| Batch P9G3105 - General Preparation (GC | )      |           |           |             |             |             |        |          |       |          |
| Blank (P9G3105-BLK1)                    |        |           |           | Prepared: 0 | )7/31/19 Aı | nalyzed: 08 | /01/19 |          |       |          |
| Benzene                                 | ND     | 0.00100   | mg/kg wet |             |             |             |        |          |       |          |
| Toluene                                 | ND     | 0.00100   | "         |             |             |             |        |          |       |          |
| Ethylbenzene                            | ND     | 0.00100   | "         |             |             |             |        |          |       |          |
| Xylene (p/m)                            | ND     | 0.00200   | "         |             |             |             |        |          |       |          |
| Xylene (o)                              | ND     | 0.00100   | "         |             |             |             |        |          |       |          |
| Surrogate: 4-Bromofluorobenzene         | 0.118  |           | "         | 0.120       |             | 98.1        | 75-125 |          |       |          |
| Surrogate: 1,4-Difluorobenzene          | 0.102  |           | "         | 0.120       |             | 85.1        | 75-125 |          |       |          |
| LCS (P9G3105-BS1)                       |        |           |           | Prepared &  | : Analyzed: | 07/31/19    |        |          |       |          |
| Benzene                                 | 0.0960 | 0.00100   | mg/kg wet | 0.100       |             | 96.0        | 70-130 |          |       |          |
| Toluene                                 | 0.108  | 0.00100   | "         | 0.100       |             | 108         | 70-130 |          |       |          |
| Ethylbenzene                            | 0.109  | 0.00100   | "         | 0.100       |             | 109         | 70-130 |          |       |          |
| Xylene (p/m)                            | 0.222  | 0.00200   | "         | 0.200       |             | 111         | 70-130 |          |       |          |
| Xylene (o)                              | 0.118  | 0.00100   | "         | 0.100       |             | 118         | 70-130 |          |       |          |
| Surrogate: 1,4-Difluorobenzene          | 0.133  |           | "         | 0.120       |             | 111         | 75-125 |          |       |          |
| Surrogate: 4-Bromofluorobenzene         | 0.115  |           | "         | 0.120       |             | 95.8        | 75-125 |          |       |          |
| LCS Dup (P9G3105-BSD1)                  |        |           |           | Prepared &  | Analyzed:   | 07/31/19    |        |          |       |          |
| Benzene                                 | 0.102  | 0.00100   | mg/kg wet | 0.100       |             | 102         | 70-130 | 6.19     | 20    |          |
| Toluene                                 | 0.113  | 0.00100   | "         | 0.100       |             | 113         | 70-130 | 4.24     | 20    |          |
| Ethylbenzene                            | 0.120  | 0.00100   | "         | 0.100       |             | 120         | 70-130 | 9.19     | 20    |          |
| Xylene (p/m)                            | 0.240  | 0.00200   | "         | 0.200       |             | 120         | 70-130 | 7.91     | 20    |          |
| Xylene (o)                              | 0.120  | 0.00100   | "         | 0.100       |             | 120         | 70-130 | 1.42     | 20    |          |
| Surrogate: 4-Bromofluorobenzene         | 0.127  |           | "         | 0.120       |             | 105         | 75-125 |          |       |          |
| Surrogate: 1,4-Difluorobenzene          | 0.138  |           | "         | 0.120       |             | 115         | 75-125 |          |       |          |
| Calibration Blank (P9G3105-CCB1)        |        |           |           | Prepared &  | Analyzed:   | 07/31/19    |        |          |       |          |
| Benzene                                 | 0.00   |           | mg/kg wet |             |             |             |        | <u> </u> |       | <u> </u> |
| Toluene                                 | 0.00   |           | "         |             |             |             |        |          |       |          |
| Ethylbenzene                            | 0.00   |           | "         |             |             |             |        |          |       |          |
| Xylene (p/m)                            | 0.00   |           | "         |             |             |             |        |          |       |          |
| Xylene (o)                              | 0.00   |           | "         |             |             |             |        |          |       |          |
| Surrogate: 4-Bromofluorobenzene         | 0.141  |           | "         | 0.120       |             | 117         | 75-125 |          |       |          |
| Surrogate: 1,4-Difluorobenzene          | 0.107  |           | "         | 0.120       |             | 89.0        | 75-125 |          |       |          |

Permian Basin Environmental Lab, L.P.

RPD

%REC

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

Spike

Source

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Reporting

|  |        | Reporting |           | Spike       | Source      |             | /OKEC  |     | KrD   |       |
|--|--------|-----------|-----------|-------------|-------------|-------------|--------|-----|-------|-------|
| Analyte                                | Result | Limit     | Units     | Level       | Result      | %REC        | Limits | RPD | Limit | Notes |
| Batch P9G3105 - General Preparation (C | GC)    |           |           |             |             |             |        |     |       |       |
| Calibration Blank (P9G3105-CCB2)       |        |           |           | Prepared: ( | 07/31/19 A  | nalyzed: 08 | /01/19 |     |       |       |
| Benzene                                | 0.00   |           | mg/kg wet |             |             |             |        |     |       |       |
| Toluene                                | 0.00   |           | "         |             |             |             |        |     |       |       |
| Ethylbenzene                           | 0.00   |           | "         |             |             |             |        |     |       |       |
| Xylene (p/m)                           | 0.00   |           | "         |             |             |             |        |     |       |       |
| Xylene (o)                             | 0.00   |           | "         |             |             |             |        |     |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.115  |           | "         | 0.120       |             | 96.2        | 75-125 |     |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.138  |           | "         | 0.120       |             | 115         | 75-125 |     |       |       |
| Calibration Check (P9G3105-CCV1)       |        |           |           | Prepared &  | አ Analyzed: | 07/31/19    |        |     |       |       |
| Benzene                                | 0.110  | 0.00100   | mg/kg wet | 0.100       |             | 110         | 80-120 |     |       |       |
| Toluene                                | 0.112  | 0.00100   | "         | 0.100       |             | 112         | 80-120 |     |       |       |
| Ethylbenzene                           | 0.105  | 0.00100   | "         | 0.100       |             | 105         | 80-120 |     |       |       |
| Xylene (p/m)                           | 0.212  | 0.00200   | "         | 0.200       |             | 106         | 80-120 |     |       |       |
| Xylene (o)                             | 0.117  | 0.00100   | "         | 0.100       |             | 117         | 80-120 |     |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.124  |           | "         | 0.120       |             | 103         | 75-125 |     |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.137  |           | "         | 0.120       |             | 114         | 75-125 |     |       |       |
| Calibration Check (P9G3105-CCV2)       |        |           |           | Prepared: ( | 07/31/19 A  | nalyzed: 08 | /01/19 |     |       |       |
| Benzene                                | 0.116  | 0.00100   | mg/kg wet | 0.100       |             | 116         | 80-120 |     |       |       |
| Toluene                                | 0.117  | 0.00100   | "         | 0.100       |             | 117         | 80-120 |     |       |       |
| Ethylbenzene                           | 0.111  | 0.00100   | "         | 0.100       |             | 111         | 80-120 |     |       |       |
| Xylene (p/m)                           | 0.224  | 0.00200   | "         | 0.200       |             | 112         | 80-120 |     |       |       |
| Xylene (o)                             | 0.120  | 0.00100   | "         | 0.100       |             | 120         | 80-120 |     |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.143  |           | "         | 0.120       |             | 119         | 75-125 |     |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.133  |           | "         | 0.120       |             | 111         | 75-125 |     |       |       |
| Calibration Check (P9G3105-CCV3)       |        |           |           | Prepared: ( | 07/31/19 A  | nalyzed: 08 | /01/19 |     |       |       |
| Benzene                                | 0.102  | 0.00100   | mg/kg wet | 0.100       |             | 102         | 80-120 |     |       |       |
| Toluene                                | 0.0931 | 0.00100   | "         | 0.100       |             | 93.1        | 80-120 |     |       |       |
| Ethylbenzene                           | 0.0875 | 0.00100   | "         | 0.100       |             | 87.5        | 80-120 |     |       |       |
| Xylene (p/m)                           | 0.220  | 0.00200   | "         | 0.200       |             | 110         | 80-120 |     |       |       |

0.113

0.112

0.103

0.00100

Permian Basin Environmental Lab, L.P.

Xylene (o)

Surrogate: 1,4-Difluorobenzene

Surrogate: 4-Bromofluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

113

93.1

85.6

80-120

75-125

75-125

0.100

0.120

0.120

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Surrogate: 4-Bromofluorobenzene

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
|         |        |           |       |       |        |      |        |     |       |       |

|--|

| Matrix Spike (P9G3105-MS1)      | Sour   | ce: 9G30012 | 2-12      | Prepared: 0 | 7/31/19 A | nalyzed: 08 | 8/01/19 |      |    |       |
|---------------------------------|--------|-------------|-----------|-------------|-----------|-------------|---------|------|----|-------|
| Benzene                         | 0.0658 | 0.00115     | mg/kg dry | 0.115       | ND        | 57.3        | 80-120  |      |    | QM-05 |
| Toluene                         | 0.0799 | 0.00115     | "         | 0.115       | ND        | 69.5        | 80-120  |      |    | QM-05 |
| Ethylbenzene                    | 0.103  | 0.00115     | "         | 0.115       | ND        | 89.8        | 80-120  |      |    |       |
| Xylene (p/m)                    | 0.193  | 0.00230     | "         | 0.230       | ND        | 84.0        | 80-120  |      |    |       |
| Xylene (o)                      | 0.0894 | 0.00115     | "         | 0.115       | ND        | 77.8        | 80-120  |      |    | QM-05 |
| Surrogate: 4-Bromofluorobenzene | 0.162  |             | "         | 0.138       |           | 117         | 75-125  |      |    |       |
| Surrogate: 1,4-Difluorobenzene  | 0.156  |             | "         | 0.138       |           | 113         | 75-125  |      |    |       |
| Matrix Spike Dup (P9G3105-MSD1) | Sour   | ce: 9G30012 | 2-12      | Prepared: 0 | 7/31/19 A | nalyzed: 08 | 8/01/19 |      |    |       |
| Benzene                         | 0.0734 | 0.00115     | mg/kg dry | 0.115       | ND        | 63.9        | 80-120  | 11.0 | 20 | QM-05 |
| Toluene                         | 0.0873 | 0.00115     | "         | 0.115       | ND        | 76.0        | 80-120  | 8.85 | 20 | QM-05 |
| Ethylbenzene                    | 0.110  | 0.00115     | "         | 0.115       | ND        | 95.4        | 80-120  | 6.01 | 20 |       |
| Xylene (p/m)                    | 0.200  | 0.00230     | "         | 0.230       | ND        | 87.1        | 80-120  | 3.60 | 20 |       |
| Xylene (o)                      | 0.0922 | 0.00115     | "         | 0.115       | ND        | 80.3        | 80-120  | 3.15 | 20 |       |
| Surrogate: 1,4-Difluorobenzene  | 0.160  |             | "         | 0.138       |           | 116         | 75-125  |      |    |       |

0.138

117

75-125

0.161

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

10 Desta Dr STE 150E Project Number: TNM-Monument 18 Midland TX, 79705

Project Manager: Curt Stanley

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |        | Reporting   |       | Spike      | Source    |          | %REC   |      | RPD   |       |
|--------------------------------------|--------|-------------|-------|------------|-----------|----------|--------|------|-------|-------|
| Analyte                              | Result | Limit       | Units | Level      | Result    | %REC     | Limits | RPD  | Limit | Notes |
| Batch P9H0102 - *** DEFAULT PREP *** |        |             |       |            |           |          |        |      |       |       |
| Blank (P9H0102-BLK1)                 |        |             |       | Prepared & | Analyzed: | 08/01/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1         | %     |            |           |          |        |      |       |       |
| Duplicate (P9H0102-DUP1)             | Source | e: 9G30012- | 01    | Prepared & | Analyzed: | 08/01/19 |        |      |       |       |
| % Moisture                           | 10.0   | 0.1         | %     |            | 10.0      |          |        | 0.00 | 20    |       |
| Duplicate (P9H0102-DUP2)             | Source | e: 9G30014- | 02    | Prepared & | Analyzed: | 08/01/19 |        |      |       |       |
| % Moisture                           | 1.0    | 0.1         | %     |            | 1.0       |          |        | 0.00 | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting |           | Spike       | Source      |             | %REC   |      | RPD   |       |
|----------------------------------|--------|-----------|-----------|-------------|-------------|-------------|--------|------|-------|-------|
| Analyte                          | Result | Limit     | Units     | Level       | Result      | %REC        | Limits | RPD  | Limit | Notes |
| Batch P9H0103 - TX 1005          |        |           |           |             |             |             |        |      |       |       |
| Blank (P9H0103-BLK1)             |        |           |           | Prepared: ( | 08/01/19 Aı | nalyzed: 08 | /02/19 |      |       |       |
| C6-C12                           | ND     | 25.0      | mg/kg wet |             |             |             |        |      |       |       |
| >C12-C28                         | ND     | 25.0      | "         |             |             |             |        |      |       |       |
| >C28-C35                         | ND     | 25.0      | "         |             |             |             |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 84.2   |           | "         | 100         |             | 84.2        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 44.5   |           | "         | 50.0        |             | 88.9        | 70-130 |      |       |       |
| LCS (P9H0103-BS1)                |        |           |           | Prepared: ( | 08/01/19 Aı | nalyzed: 08 | /02/19 |      |       |       |
| C6-C12                           | 892    | 25.0      | mg/kg wet | 1000        |             | 89.2        | 75-125 |      |       |       |
| >C12-C28                         | 912    | 25.0      | "         | 1000        |             | 91.2        | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane        | 112    |           | "         | 100         |             | 112         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 41.5   |           | "         | 50.0        |             | 82.9        | 70-130 |      |       |       |
| LCS Dup (P9H0103-BSD1)           |        |           |           | Prepared: ( | 08/01/19 Aı | nalyzed: 08 | /02/19 |      |       |       |
| C6-C12                           | 870    | 25.0      | mg/kg wet | 1000        |             | 87.0        | 75-125 | 2.40 | 20    |       |
| >C12-C28                         | 816    | 25.0      | "         | 1000        |             | 81.6        | 75-125 | 11.2 | 20    |       |
| Surrogate: 1-Chlorooctane        | 98.8   |           | "         | 100         |             | 98.8        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 37.0   |           | "         | 50.0        |             | 74.1        | 70-130 |      |       |       |
| Calibration Blank (P9H0103-CCB1) |        |           |           | Prepared: ( | 08/01/19 Aı | nalyzed: 08 | /02/19 |      |       |       |
| C6-C12                           | 11.4   |           | mg/kg wet |             |             |             |        |      |       |       |
| >C12-C28                         | 5.61   |           | "         |             |             |             |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 98.6   |           | "         | 100         |             | 98.6        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 52.1   |           | "         | 50.0        |             | 104         | 70-130 |      |       |       |
| Calibration Blank (P9H0103-CCB2) |        |           |           | Prepared: ( | 08/01/19 Aı | nalyzed: 08 | /02/19 |      |       |       |
| C6-C12                           | 18.0   |           | mg/kg wet |             |             |             |        |      |       |       |
| >C12-C28                         | 9.10   |           | "         |             |             |             |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 101    |           | "         | 100         |             | 101         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 52.3   |           | "         | 50.0        |             | 105         | 70-130 |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting    |           | Spike       | Source     |             | %REC    |       | RPD   |       |
|----------------------------------|--------|--------------|-----------|-------------|------------|-------------|---------|-------|-------|-------|
| Analyte                          | Result | Limit        | Units     | Level       | Result     | %REC        | Limits  | RPD   | Limit | Notes |
| Batch P9H0103 - TX 1005          |        |              |           |             |            |             |         |       |       |       |
| Calibration Check (P9H0103-CCV1) |        |              |           | Prepared: ( | 08/01/19 A | nalyzed: 08 | 3/02/19 |       |       |       |
| C6-C12                           | 455    | 25.0         | mg/kg wet | 500         |            | 91.0        | 85-115  |       |       |       |
| >C12-C28                         | 463    | 25.0         | "         | 500         |            | 92.6        | 85-115  |       |       |       |
| Surrogate: 1-Chlorooctane        | 95.9   |              | "         | 100         |            | 95.9        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 42.6   |              | "         | 50.0        |            | 85.1        | 70-130  |       |       |       |
| Calibration Check (P9H0103-CCV2) |        |              |           | Prepared: ( | 08/01/19 A | nalyzed: 08 | 3/02/19 |       |       |       |
| C6-C12                           | 455    | 25.0         | mg/kg wet | 500         |            | 91.0        | 85-115  |       |       |       |
| >C12-C28                         | 469    | 25.0         | "         | 500         |            | 93.8        | 85-115  |       |       |       |
| Surrogate: 1-Chlorooctane        | 96.4   |              | "         | 100         |            | 96.4        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 42.3   |              | "         | 50.0        |            | 84.6        | 70-130  |       |       |       |
| Calibration Check (P9H0103-CCV3) |        |              |           | Prepared: ( | 08/01/19 A | nalyzed: 08 | 3/02/19 |       |       |       |
| C6-C12                           | 461    | 25.0         | mg/kg wet | 500         |            | 92.2        | 85-115  |       |       |       |
| >C12-C28                         | 487    | 25.0         | "         | 500         |            | 97.4        | 85-115  |       |       |       |
| Surrogate: 1-Chlorooctane        | 98.8   |              | "         | 100         |            | 98.8        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 44.5   |              | "         | 50.0        |            | 88.9        | 70-130  |       |       |       |
| Duplicate (P9H0103-DUP1)         | Sou    | rce: 9H01022 | 2-04      | Prepared: ( | 08/01/19 A | nalyzed: 08 | 3/02/19 |       |       |       |
| C6-C12                           | 574    | 154          | mg/kg dry |             | 564        |             | ·       | 1.72  | 20    |       |
| >C12-C28                         | 5170   | 154          | "         |             | 5160       |             |         | 0.178 | 20    |       |
| Surrogate: 1-Chlorooctane        | 113    |              | "         | 123         |            | 91.4        | 70-130  |       |       |       |
| Surrogate: o-Terphenyl           | 63.1   |              | "         | 61.7        |            | 102         | 70-130  |       |       |       |

TRC Solutions- Midland, Texas Project: Monument 18
10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### **Notes and Definitions**

ROI Received on Ice

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were

within acceptance limits showing that the laboratory is in control and the data is acceptable.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Dien | Devour C |       |          |  |
|---------------------|------|----------|-------|----------|--|
| Report Approved By: |      |          | Date: | 8/3/2019 |  |

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

| Receiua   | d hv-   | )en-   | 6/8/21   | 21 1                  | 2r2       | 1.129        | PM              | · · · · · ·  |          | Ι.   | 1  |          | r-   |  |                | _               | 7                  |                    |                |                  |                           |                               | Pag              | ge fillialina  |
|---|---|--|--|-----------------------|-----------|--------------|-----------------|--------------|----------|--|--|----------|--|--|----------------|-----------------|--------------------|--------------------|----------------|------------------|---------------------------|-------------------------------|------------------|--|
| eceixelinquished by:  | ny Relinquished by:   | Reimguished  |  | special Instructions: |           |              | 272             |              |          |  |  |          | -  | LAB # (lab use only)                                 | ORDER #:       | (lab use only)  |                    |                    |                |                  |                           |                               | 2 008            |  |
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|   | _   | ( ' ,  | Bill to Plains                                     | ions                  |           |              |                 |              |          |  |  |          | 2019 SP-57                                       | 1  | 12             | <b>)</b>        |                    | Sampler Signature: | Telephone No:  | City/State/Zip:  | Company Address:          | Company Name                  | Project Manager. | 3  |
|   | {   | 1  | ) ji   | <u>"</u>              |           |              |                 |              |          |  |  |          | 57   | . :  | 33100          |                 |                    | Sigr               | ē<br>Z         | JZjt             | Ad                        | Na<br>Na                      | lane             |  |
|   |   | *  | † )  |                       |           |              |                 |              |          |  |  |          |  | T  |                | •               |                    | njer               | Ö              | 9.               | dre                       | ime                           | ager             |  |
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|   | -   | 人  | 1  |                       |           |              |                 |              |          |  |  |          |  | Ö  |                |                 |                    | (                  | 432)5207       | and/             | )est                      | E I                           | Sta              |  |
|   |   |  |  |                       |           |              |                 |              |          |  |  |          |  |  |                |                 |                    | *                  | 1              | X                | Dí.                       | viron                         | nley             |  |
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|   | ``  | 5  | 1  |                       |           |              |                 |              |          |  |  |          |  |  |                | - \             |                    | 4                  | IJ             |                  | 1500                      | òrp                           |                  |  |
|   |   | 7  |  |                       |           |              |                 |              |          |  |  |          | N/A  | Beginning Depth                                      | 7              | `               |                    | Ź1,                |                |                  | "                         | oratio                        |                  |  |
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| \\\\alpha \alpha d by   | ğ<br>V   |  |                       |           |              |                 |              |          |  |  |          | /20  | Date Sampled   |                |                 |                    | 1                  |                |                  |                           |                               |                  |  |
| Received by PBEL  | ••  |  |  | L                     |           |              |                 |              |          |  | L  |          | 9  |  |                |                 |                    | 1                  |                |                  |                           |                               |                  |  |
|   |   |  |  |                       |           |              |                 |              |          |  |  |          |  | . :  |                |                 |                    | ,                  |                |                  |                           |                               |                  |  |
| $  \mid \backslash \backslash \mid \mid$  |   |  | i  |                       |           |              |                 |              |          |  |  |          | 11:00  | Time Sampled   | -              |                 |                    | φ                  | β              |                  |                           |                               |                  |  |
| 1   |   |  |  |                       |           |              |                 |              |          |  |  |          | ō  |  |                |                 |                    | e-mail:            | EaxNo:         |                  |                           |                               |                  |  |
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|   |   |  |  |                       |           |              |                 |              |          |  |  |          | ×  | ice  | $\Box$         | siar            | <u>C</u>           | sta                |                |                  |                           |                               |                  | an E   |
| `   |   |  |  |                       |           |              |                 |              |          |  |  |          |  | HNO₃   | Preservation & | lle             | To N               | nle                |                |                  |                           |                               |                  | Sasir<br>Cou   |
|   |   |  |  |                       |           |              |                 |              |          |  |  |          |  | нсі  | ati            | (2)             | ant                | <b>®</b>           |                |                  |                           |                               |                  | is program   |
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|   |   |  |  | -                     | +         | <b>-</b>     |                 |              |          |  |  |          |  | NaOH   | #<br>g<br>c    | UIO             | )aa                | <u>sol</u> t       |                |                  |                           |                               | '                | nime<br>d 12   |
|   |   |  | -  | $\vdash$              |           | +            | $\square$       |              |          |  |  |          |  | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>        | of Containers  | lio             | p.c                | ıtio               |                |                  |                           |                               |                  | 13 E   |
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| <del> </del>  | Date  | Date   |  | $\vdash$              | $\dagger$ | +-           | $\vdash$        |              |          |  |  |          | _  | DW=Drinking Water SL=Sludge                          | H              | iοn             | cibryant@paalp.com | con                | l              | 1                | İ                         | I                             | I                | <b>-</b>   |
|   |   |  |  |                       |           |              |                 |              |          |  |  |          | $ \Omega $                                       | GW = Groundwater S=Soil/Sofid                        | Matrix         | ,_              |                    | i⊃                 | Ref            |                  |                           |                               |                  |  |
| [2]   | _   | _  |  | $\vdash$              | -         |              | Ш               |              |          |  |  |          |  | NP=Non-Poteble Specify-Other                         | Щ.             |                 |                    |                    | ă              |                  | 20                        |                               | Pro              |  |
|   | Time  | Time   |  | <u> </u>              | +         | +            | $\vdash \vdash$ |              |          |  | <u> </u>   |          | ×  |  | 015B           |                 | ١l                 |                    | Report Format: |                  | Project Loc:              | Pro                           | Project Name:    |  |
| ר ע ַ   | . o   | (a) C) (b)   | < 60   | -                     | +         | +            | $\vdash$        |              |          |  |  |          |  | TPH: TX 1005 TX 1006                                 |                |                 | $\  \ $            |                    | nat:           | PO#:             | Ĕ                         | Project #:                    | Nam              |  |
| just<br>ecen<br>emp   | yd<br>Qme   | usto<br>usto   | S<br>B   |                       | +-        | +-           | $\vdash \vdash$ | $\dashv$     |          |  |  |          | <u> </u>   | Cations (Ca, Mg, Na, K) Anions (Cl, SO4, Alkalinity) | _ _            | ا ا             | l l                |                    | التيا          | #<br>            | ıΩ<br>I                   | #.                            | Θ.               |  |
| ed:<br>red:<br>erati  | nple Hand D<br>by Sampler/C<br>by Couner?                     | dy su<br>dy su   | Free   | <u>라</u>              | +-        |              | $\vdash$        | -            |          |  |  |          | _  | SAR / ESP / CEC                                      | 5              | TCLP:           |                    |                    | S<br>X         |                  |                           |                               |                  |  |
| Temperature Upo<br>Received: U. /<br>Adjusted:  | and I<br>plen<br>ner?   | eals<br>als  | ontal<br>of  | გ —                   | +         |              |                 |              |          |  | _  |          |  | Metals: As Ag Ba Cd Cr Pb Hg                         |                | ب. ا            | I. I               |                    | Standard       |                  |                           |                               |                  | 뫄  |
| Temperature Upon Receipt: Received:   | Sample Hand Delivered by Sampler/Client Rep. ? by Couner? UPS | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s)  | Sample Containers Intect?  VOCs Free of Headspace? | <b> </b>              |           |              |                 |              |          |  |  |          |  | Volatiles  | +              | +               | Analyze For:       |                    | ard            |                  | -                         | .                             |                  | Phone: 432-661-4184  |
| P <sub>e</sub>  | /ered<br>⊓tRep<br>∪PS   | onta<br>onta   | linta<br>Ispa                                      |                       |           |              |                 |              |          |  |  |          |  | Semivolatiles  | $\top$         | T               | ze F               |                    |                |                  | ea C                      | Į                             | ~                | : 43   |
| ဂိုဂိန္   | -3  | (s)  | 8  |                       |           |              |                 |              |          |  |  |          | ×  | BTEX 8021B) 5030 or BTEX 82                          | 260 X          |                 | 유                  |                    |                |                  | e la                      | M                             | jon              | 2-66   |
| ceipt:<br>°C<br>Factor/   | 무   | (s)  |  | _                     | _         |              |                 |              | [        |  |  |          | <u> </u>   | RCI  |                |                 | ] ]                |                    | TRRP           |                  | Y.<br>Z                   | Ę                             | Monument 18      | <u></u>  |
| 1 3   |   |  |  | <u> </u>              | +         | +-           |                 | ļ            |          |  |  |          |  | N.O.R.M.   |                |                 |                    |                    | Ť              |                  | ₩                         | men                           | 2 1              | 184  |
|   | ₹ √   | QQ   | (C)  | -                     | +         |              |                 |              | 4        |  |  |          |  | Chlorides E 300                                      |                |                 |                    |                    |                |                  | Lea County, New Mexico    | INM Monument 18               | ∞                |  |
| _   | _ `   | 7  |  | +                     | +         |              |                 | _            | $\dashv$ |  | $\vdash$   |          |  | Paint Filter TCLP Benzene                            |                |                 |                    |                    |                |                  | ğ                         |                               |                  |  |
| (Z)   | Lone Star   | ZZZ  | ZZ   | $\vdash$              | +         | +            | $\vdash$        | <del>-</del> |          |  | $\vdash$   |          |  | RUSH TAT (Pre-Schedule) 24,                          | . AR 71        | hre             | 니                  |                    | NPDES          |                  |                           |                               |                  |  |
| <b>)</b>  | ğ   |  |  | $\vdash$              | +         | +-           |                 | $\dashv$     |          |  |  |          | _  | Standard TAT   | , 40, 72       | . 1118          |                    |                    | S              |                  | ,                         | Щ.                            |                  | 1 of 11  |
|   | ·   | and the state of t | 16.50  | <u>- 1</u> .          | 1         | : I          | · I             |              | - 1      | - 1  |  | - 1      |  |  |                |                 |                    |                    |                | 1                | ı l                       | Pac                           | 1 Ar             | 1 At 11  |

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



## Analytical Report

#### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 9H12010



NELAP/TCEQ # T104704516-18-9

Report Date: 08/20/19

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E Project: Monument 18
Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID        | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------------|---------------|--------|----------------|------------------|
| 2019 ESW-1 @ 19' | 9H12010-01    | Soil   | 08/12/19 10:30 | 08-12-2019 16:29 |
| 2019 SSW-1 @ 19' | 9H12010-03    | Soil   | 08/12/19 10:45 | 08-12-2019 16:29 |
| 2019 SSW-2 @ 19' | 9H12010-04    | Soil   | 08/12/19 10:50 | 08-12-2019 16:29 |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### 2019 ESW-1 @ 19' 9H12010-01 (Soil)

| Analyte                                       | Result      | Reporting<br>Limit | Units     | Dilution   | Batch     | Prepared | Analyzed | Method     | Notes |
|---|-------------|--------------------|-----------|------------|-----------|----------|----------|------------|-------|
|   | Permia      | ın Basin E         | nvironmen | tal Lab, I | <b>P.</b> |          |          |            |       |
| Organics by GC                                |             |                    |           |            |           |          |          |            |       |
| Benzene                                       | ND          | 0.00109            | mg/kg dry | 1          | P9H1403   | 08/14/19 | 08/14/19 | EPA 8021B  |       |
| Toluene                                       | ND          | 0.00109            | mg/kg dry | 1          | P9H1403   | 08/14/19 | 08/14/19 | EPA 8021B  |       |
| Ethylbenzene                                  | ND          | 0.00109            | mg/kg dry | 1          | P9H1403   | 08/14/19 | 08/14/19 | EPA 8021B  |       |
| Xylene (p/m)                                  | ND          | 0.00217            | mg/kg dry | 1          | P9H1403   | 08/14/19 | 08/14/19 | EPA 8021B  |       |
| Xylene (o)                                    | ND          | 0.00109            | mg/kg dry | 1          | P9H1403   | 08/14/19 | 08/14/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene               |             | 96.6 %             | 75-12     | 25         | P9H1403   | 08/14/19 | 08/14/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene                |             | 86.9 %             | 75-12     | 25         | P9H1403   | 08/14/19 | 08/14/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / Standar | d Methods   |                    |           |            |           |          |          |            |       |
| % Moisture                                    | 8.0         | 0.1                | %         | 1          | P9H1302   | 08/13/19 | 08/13/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 by EPA M  | Method 801: | 5M                 |           |            |           |          |          |            |       |
| C6-C12  | ND          | 27.2               | mg/kg dry | 1          | P9H1410   | 08/14/19 | 08/15/19 | TPH 8015M  |       |
| >C12-C28                                      | ND          | 27.2               | mg/kg dry | 1          | P9H1410   | 08/14/19 | 08/15/19 | TPH 8015M  |       |
| >C28-C35                                      | ND          | 27.2               | mg/kg dry | 1          | P9H1410   | 08/14/19 | 08/15/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane                     | •           | 106 %              | 70-1.     | 30         | P9H1410   | 08/14/19 | 08/15/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                        |             | 110 %              | 70-1.     | 80         | P9H1410   | 08/14/19 | 08/15/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35            | ND          | 27.2               | mg/kg dry | 1          | [CALC]    | 08/14/19 | 08/15/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

 $10\;Desta\;Dr\;STE\;150E$ 

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

#### 2019 SSW-1 @ 19' 9H12010-03 (Soil)

| Analyte   | Result           | Reporting<br>Limit | Units        | Dilution | Batch    | Prepared | Analyzed      | Method     | Notes  |
|---|------------------|--------------------|--------------|----------|----------|----------|---------------|------------|--------|
|   |                  | ian Basin E        |              |          |          | Tropulou | 7 11111 / 200 |            | 110005 |
| Organics by GC  |                  |                    | , 0          |          |          |          |               |            |        |
| Benzene   | ND               | 0.00108            | mg/kg dry    | 1        | P9H1403  | 08/14/19 | 08/14/19      | EPA 8021B  |        |
| Toluene   | ND               | 0.00108            | mg/kg dry    | 1        | P9H1403  | 08/14/19 | 08/14/19      | EPA 8021B  |        |
| Ethylbenzene  | ND               | 0.00108            | mg/kg dry    | 1        | P9H1403  | 08/14/19 | 08/14/19      | EPA 8021B  |        |
| Xylene (p/m)  | ND               | 0.00108            | mg/kg dry    | 1        | P9H1403  | 08/14/19 | 08/14/19      | EPA 8021B  |        |
| Xylene (o)  | ND               | 0.00213            | mg/kg dry    | 1        | P9H1403  | 08/14/19 | 08/14/19      | EPA 8021B  |        |
| Surrogate: 1,4-Difluorobenzene                        | ND               | 89.0 %             | 75-1         |          | P9H1403  | 08/14/19 | 08/14/19      | EPA 8021B  |        |
| Surrogate: 4-Bromofluorobenzene                       |                  | 102 %              | 75-1<br>75-1 |          | P9H1403  | 08/14/19 | 08/14/19      | EPA 8021B  |        |
| Comment Chamisters Bosses Acres has EDA               | / 64 JJ M-41 J   | _                  |              |          |          |          |               |            |        |
| <b>General Chemistry Parameters by EPA</b> % Moisture | 7.0              | 0.1                | %            | 1        | P9H1302  | 08/13/19 | 08/13/19      | ASTM D2216 |        |
| Total Petroleum Hydrocarbons C6-C35                   | by EPA Method 80 | 15M                |              |          |          |          |               |            |        |
| C6-C12  | ND               | 26.9               | mg/kg dry    | 1        | P9H1410  | 08/14/19 | 08/15/19      | TPH 8015M  |        |
| >C12-C28  | ND               | 26.9               | mg/kg dry    | 1        | P9H1410  | 08/14/19 | 08/15/19      | TPH 8015M  |        |
| >C28-C35  | ND               | 26.9               | mg/kg dry    | 1        | P9H1410  | 08/14/19 | 08/15/19      | TPH 8015M  |        |
| Surrogate: 1-Chlorooctane                             |                  | 82.4 %             | 70-1         | 30       | P9H1410  | 08/14/19 | 08/15/19      | TPH 8015M  |        |
| Surrogate: o-Terphenyl                                |                  | 82.6 %             | 70-1         |          | P9H1410  | 08/14/19 | 08/15/19      | TPH 8015M  |        |
| Total Petroleum Hydrocarbon C6-C35                    | ND               | 26.9               | mg/kg dry    | 1        | [CALC]   | 08/14/19 | 08/15/19      | calc       |        |
| Total I cubicalli Hydrocalboli Co-C55                 | ND               | 20.9               |              | 1        | [C. IEC] | 00/11/19 | 00/10/17      |            |        |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

#### 2019 SSW-2 @ 19' 9H12010-04 (Soil)

|  | D. I       | Reporting    | <b>T</b> T 1: | D.1:        | D . 1        | D 1      |          | M 4 1      | <b>3</b> 7.7 |
|--|------------|--------------|---------------|-------------|--------------|----------|----------|------------|--------------|
| Analyte                                    | Result     | Limit        | Units         | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes        |
|  | Per        | mian Basin E | nvironmer     | ıtal Lab, l | L <b>.P.</b> |          |          |            |              |
| Organics by GC                             |            |              |               |             |              |          |          |            |              |
| Benzene                                    | ND         | 0.00110      | mg/kg dry     | 1           | P9H1403      | 08/14/19 | 08/14/19 | EPA 8021B  |              |
| Toluene                                    | ND         | 0.00110      | mg/kg dry     | 1           | P9H1403      | 08/14/19 | 08/14/19 | EPA 8021B  |              |
| Ethylbenzene                               | ND         | 0.00110      | mg/kg dry     | 1           | P9H1403      | 08/14/19 | 08/14/19 | EPA 8021B  |              |
| Xylene (p/m)                               | ND         | 0.00220      | mg/kg dry     | 1           | P9H1403      | 08/14/19 | 08/14/19 | EPA 8021B  |              |
| Xylene (o)                                 | ND         | 0.00110      | mg/kg dry     | 1           | P9H1403      | 08/14/19 | 08/14/19 | EPA 8021B  |              |
| Surrogate: 4-Bromofluorobenzene            |            | 103 %        | 75-1          | 25          | P9H1403      | 08/14/19 | 08/14/19 | EPA 8021B  |              |
| Surrogate: 1,4-Difluorobenzene             |            | 87.7 %       | 75-1          | 25          | P9H1403      | 08/14/19 | 08/14/19 | EPA 8021B  |              |
| General Chemistry Parameters by EPA / Stan | dard Metho | ods          |               |             |              |          |          |            |              |
| % Moisture                                 | 9.0        | 0.1          | %             | 1           | P9H1302      | 08/13/19 | 08/13/19 | ASTM D2216 |              |
| Total Petroleum Hydrocarbons C6-C35 by EF  | A Method 8 | 8015M        |               |             |              |          |          |            |              |
| C6-C12                                     | ND         | 27.5         | mg/kg dry     | 1           | P9H1410      | 08/14/19 | 08/15/19 | TPH 8015M  |              |
| >C12-C28                                   | ND         | 27.5         | mg/kg dry     | 1           | P9H1410      | 08/14/19 | 08/15/19 | TPH 8015M  |              |
| >C28-C35                                   | ND         | 27.5         | mg/kg dry     | 1           | P9H1410      | 08/14/19 | 08/15/19 | TPH 8015M  |              |
| Surrogate: 1-Chlorooctane                  |            | 85.6 %       | 70-1          | 30          | P9H1410      | 08/14/19 | 08/15/19 | TPH 8015M  |              |
| Surrogate: o-Terphenyl                     |            | 86.5 %       | 70-1          | 30          | P9H1410      | 08/14/19 | 08/15/19 | TPH 8015M  |              |
| Total Petroleum Hydrocarbon C6-C35         | ND         | 27.5         | mg/kg dry     | 1           | [CALC]       | 08/14/19 | 08/15/19 | calc       |              |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Project Number: TNM-M

Midland TX, 79705

Project: Monument 18
Project Number: TNM-Monument 18

Project Number: TNM-Monument 18
Project Manager: Curt Stanley

#### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Batch P9H1403 - General Preparation (GC)   |                                 | D 1:   | Reporting | TT :-     | Spike      | Source    | 0/PEC    | %REC   | DPD  | RPD   | NT ·  |
|--|---------------------------------|--------|-----------|-----------|------------|-----------|----------|--------|------|-------|-------|
| Bank (P9H403-BLK1)   |                                 | Result | Limit     | Units     | Level      | Result    | %REC     | Limits | RPD  | Limit | Notes |
| Renizene   ND   0.00100   mg/kg wet  | 1403 - General Preparation (GC) |        |           |           |            |           |          |        |      |       |       |
| Toluene ND 0,00100 " Ethylbenzene ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 " Sylene (p'm) ND 0,00100 ND ND ND ND ND ND ND ND ND ND ND ND ND  | 403-BLK1)                       |        |           |           | Prepared & | Analyzed: | 08/14/19 |        |      |       |       |
| State   Stat |                                 | ND     | 0.00100   | mg/kg wet |            |           |          |        |      |       |       |
| No   |                                 | ND     | 0.00100   | "         |            |           |          |        |      |       |       |
| ND   |                                 | ND     | 0.00100   | "         |            |           |          |        |      |       |       |
| No.  |                                 | ND     | 0.00200   | "         |            |           |          |        |      |       |       |
| No. 120   No.  |                                 | ND     | 0.00100   | "         |            |           |          |        |      |       |       |
| Prepared & Analyzed: 08/14/19   Prepared & Analyzed: 08/14/1 | Difluorobenzene                 | 0.102  |           | "         | 0.120      |           | 85.4     | 75-125 |      |       |       |
| Benzene   0.108   0.0010   mg/kg wet   0.100   108   70-130   101   70-130   10 | romofluorobenzene               | 0.124  |           | "         | 0.120      |           | 103      | 75-125 |      |       |       |
| Toluene  | 03-BS1)                         |        |           |           | Prepared & | Analyzed: | 08/14/19 |        |      |       |       |
| Ethylbenzene 0.113 0.00100 " 0.100 113 70-130  |                                 | 0.108  | 0.00100   | mg/kg wet | 0.100      |           | 108      | 70-130 |      |       |       |
| Name    |                                 | 0.116  | 0.00100   | "         | 0.100      |           | 116      | 70-130 |      |       |       |
| Xylene (o)   0.120   0.00100   " 0.100   120   70-130  |                                 | 0.113  | 0.00100   | "         | 0.100      |           | 113      | 70-130 |      |       |       |
| Surrogate: 4-Bromofluorobenzene   0.127   " 0.120   106   75-125   |                                 | 0.213  | 0.00200   | "         | 0.200      |           | 106      | 70-130 |      |       |       |
| Surrogate: 1,4-Difluorobenzene   0.127   0.120   100   75-125  |                                 | 0.120  | 0.00100   | "         | 0.100      |           | 120      | 70-130 |      |       |       |
| Description of the image of t | romofluorobenzene               | 0.127  |           | "         | 0.120      |           | 106      | 75-125 |      |       |       |
| Benzene   0.0961   0.00100   mg/kg wet   0.100   96.1   70-130   11.2   2  | Difluorobenzene                 | 0.122  |           | "         | 0.120      |           | 102      | 75-125 |      |       |       |
| Toluene 0.115 0.00100 " 0.100 115 70-130 1.40 2 Ethylbenzene 0.110 0.00100 " 0.100 110 70-130 2.37 2 Xylene (p/m) 0.239 0.00200 " 0.200 120 70-130 11.7 2 Xylene (o) 0.114 0.00100 " 0.100 114 70-130 5.18 2 Surrogate: 1,4-Difluorobenzene 0.122 " 0.120 102 75-125 Surrogate: 4-Bromofluorobenzene 0.137 " 0.120 114 75-125  Calibration Blank (P9H1403-CCB1) Prepared & Analyzed: 08/14/19  Benzene 0.00 mg/kg wet Toluene 0.00 " Ethylbenzene 0.00 " Xylene (p/m) 0.00 " Xylene (p/m) 0.00 "  Surrogate: 1,4-Difluorobenzene 0.106 " 0.120 87.9 75-125   | 9H1403-BSD1)                    |        |           |           | Prepared & | Analyzed: | 08/14/19 |        |      |       |       |
| Ethylbenzene 0.110 0.00100 " 0.100 110 70-130 2.37 2 Xylene (p/m) 0.239 0.00200 " 0.200 120 70-130 11.7 2 Xylene (o) 0.114 0.00100 " 0.100 114 70-130 5.18 2 Surrogate: 1,4-Difluorobenzene 0.122 " 0.120 102 75-125 Surrogate: 4-Bromofluorobenzene 0.137 " 0.120 114 75-125  Calibration Blank (P9H1403-CCB1) Prepared & Analyzed: 08/14/19  Benzene 0.00 mg/kg wet Toluene 0.00 " Ethylbenzene 0.00 " Xylene (p/m) 0.00 "  Xylene (o) 0.00 "  Surrogate: 1,4-Difluorobenzene 0.106 " 0.120 87.9 75-125  |                                 | 0.0961 | 0.00100   | mg/kg wet | 0.100      |           | 96.1     | 70-130 | 11.2 | 20    |       |
| Xylene (p/m)       0.239       0.00200       "       0.200       120       70-130       11.7       2         Xylene (o)       0.114       0.00100       "       0.100       114       70-130       5.18       2         Surrogate: 1,4-Difluorobenzene       0.122       "       0.120       102       75-125         Surrogate: 4-Bromofluorobenzene       0.137       "       0.120       114       75-125         Calibration Blank (P9H1403-CCB1)       Prepared & Analyzed: 08/14/19         Benzene       0.00       "         Toluene       0.00       "         Ethylbenzene       0.00       "         Xylene (p/m)       0.00       "         Xylene (o)       0.00       "         Surrogate: 1,4-Difluorobenzene       0.106       "       0.120       87.9       75-125   |                                 | 0.115  | 0.00100   | "         | 0.100      |           | 115      | 70-130 | 1.40 | 20    |       |
| Xylene (o)         0.114         0.00100         "         0.100         114         70-130         5.18         2           Surrogate: 1,4-Difluorobenzene         0.122         "         0.120         102         75-125           Surrogate: 4-Bromofluorobenzene         0.137         "         0.120         114         75-125           Calibration Blank (P9H1403-CCB1)         Prepared & Analyzed: 08/14/19           Benzene         0.00         mg/kg wet           Toluene         0.00         "           Ethylbenzene         0.00         "           Xylene (p/m)         0.00         "           Xylene (o)         0.00         "           Surrogate: 1,4-Difluorobenzene         0.106         "         0.120         87.9         75-125  |                                 | 0.110  | 0.00100   | "         | 0.100      |           | 110      | 70-130 | 2.37 | 20    |       |
| Surrogate: 1,4-Difluorobenzene         0.122         " 0.120         102         75-125           Surrogate: 4-Bromofluorobenzene         0.137         " 0.120         114         75-125           Calibration Blank (P9H1403-CCB1)         Prepared & Analyzed: 08/14/19           Benzene         0.00         mg/kg wet           Toluene         0.00         "           Ethylbenzene         0.00         "           Xylene (p/m)         0.00         "           Xylene (o)         0.00         "           Surrogate: 1,4-Difluorobenzene         0.106         " 0.120         87.9         75-125   |                                 | 0.239  | 0.00200   | "         | 0.200      |           | 120      | 70-130 | 11.7 | 20    |       |
| Surrogate: 4-Bromofluorobenzene         0.122         0.120         114         75-125           Calibration Blank (P9H1403-CCB1)         Prepared & Analyzed: 08/14/19           Benzene         0.00         mg/kg wet           Toluene         0.00         "           Ethylbenzene         0.00         "           Xylene (p/m)         0.00         "           Xylene (o)         0.00         "           Surrogate: 1,4-Difluorobenzene         0.106         "         0.120         87.9         75-125   |                                 | 0.114  | 0.00100   | "         | 0.100      |           | 114      | 70-130 | 5.18 | 20    |       |
| Calibration Blank (P9H1403-CCB1)         Prepared & Analyzed: 08/14/19           Benzene         0.00         mg/kg wet           Toluene         0.00         "           Ethylbenzene         0.00         "           Xylene (p/m)         0.00         "           Xylene (o)         0.00         "           Surrogate: 1,4-Difluorobenzene         0.106         "         0.120         87.9         75-125  | Difluorobenzene                 | 0.122  |           | "         | 0.120      |           | 102      | 75-125 |      |       |       |
| Benzene         0.00         mg/kg wet           Toluene         0.00         "           Ethylbenzene         0.00         "           Xylene (p/m)         0.00         "           Xylene (o)         0.00         "           Surrogate: 1,4-Difluorobenzene         0.106         "         0.120         87.9         75-125   | romofluorobenzene               | 0.137  |           | "         | 0.120      |           | 114      | 75-125 |      |       |       |
| Toluene 0.00 " Ethylbenzene 0.00 " Xylene (p/m) 0.00 " Xylene (o) 0.00 "  Surrogate: 1,4-Difluorobenzene 0.106 " 0.120 87.9 75-125   | Blank (P9H1403-CCB1)            |        |           |           | Prepared & | Analyzed: | 08/14/19 |        |      |       |       |
| Ethylbenzene 0.00 "  Xylene (p/m) 0.00 "  Xylene (o) 0.00 "  Surrogate: 1,4-Difluorobenzene 0.106 " 0.120 87.9 75-125  |                                 | 0.00   |           | mg/kg wet |            |           |          |        |      |       |       |
| Xylene (p/m)       0.00       "         Xylene (o)       0.00       "         Surrogate: 1,4-Difluorobenzene       0.106       "       0.120       87.9       75-125   |                                 | 0.00   |           | "         |            |           |          |        |      |       |       |
| Xylene (o)         0.00         "           Surrogate: 1,4-Difluorobenzene         0.106         " 0.120         87.9         75-125   |                                 | 0.00   |           | "         |            |           |          |        |      |       |       |
| Surrogate: 1,4-Difluorobenzene 0.106 " 0.120 87.9 75-125   |                                 | 0.00   |           | "         |            |           |          |        |      |       |       |
|  |                                 | 0.00   |           | "         |            |           |          |        |      |       |       |
| 0.130  | Difluorobenzene                 | 0.106  |           | "         | 0.120      |           | 87.9     | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene         0.136         "         0.120         113         75-125   | romofluorobenzene               | 0.136  |           | "         | 0.120      |           | 113      | 75-125 |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18 Project Manager: Curt Stanley Fax: (432) 520-7701

RPD

%REC

### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Spike

Source

Reporting

0.0971

0.0994

0.0930

0.197

0.112

0.111

0.124

0.00100

0.00100

0.00100

0.00200

0.00100

mg/kg wet

| Batch P9H1403 - General Preparation (G | <b>C</b> ) |         |           |             |             |             |        |  |  |
|--|------------|---------|-----------|-------------|-------------|-------------|--------|--|--|
| Calibration Blank (P9H1403-CCB2)       |            |         |           | Prepared &  | Analyzed:   | 08/14/19    |        |  |  |
| Benzene                                | 0.00       |         | mg/kg wet |             |             |             |        |  |  |
| Toluene                                | 0.00       |         | "         |             |             |             |        |  |  |
| Ethylbenzene                           | 0.00       |         | "         |             |             |             |        |  |  |
| Xylene (p/m)                           | 0.00       |         | "         |             |             |             |        |  |  |
| Xylene (o)                             | 0.00       |         | "         |             |             |             |        |  |  |
| Surrogate: 1,4-Difluorobenzene         | 0.107      |         | "         | 0.120       |             | 88.8        | 75-125 |  |  |
| Surrogate: 4-Bromofluorobenzene        | 0.128      |         | "         | 0.120       |             | 107         | 75-125 |  |  |
| Calibration Blank (P9H1403-CCB3)       |            |         |           | Prepared: 0 | 08/14/19 A  | nalyzed: 08 | /15/19 |  |  |
| Benzene                                | 0.00       |         | mg/kg wet |             |             |             |        |  |  |
| Toluene                                | 0.00       |         | "         |             |             |             |        |  |  |
| Ethylbenzene                           | 0.00       |         | "         |             |             |             |        |  |  |
| Xylene (p/m)                           | 0.00       |         | "         |             |             |             |        |  |  |
| Xylene (o)                             | 0.00       |         | "         |             |             |             |        |  |  |
| Surrogate: 1,4-Difluorobenzene         | 0.101      |         | "         | 0.120       |             | 83.8        | 75-125 |  |  |
| Surrogate: 4-Bromofluorobenzene        | 0.141      |         | "         | 0.120       |             | 117         | 75-125 |  |  |
| Calibration Check (P9H1403-CCV1)       |            |         |           | Prepared &  | : Analyzed: | 08/14/19    |        |  |  |
| Benzene                                | 0.0881     | 0.00100 | mg/kg wet | 0.100       |             | 88.1        | 80-120 |  |  |
| Toluene                                | 0.109      | 0.00100 | "         | 0.100       |             | 109         | 80-120 |  |  |
| Ethylbenzene                           | 0.111      | 0.00100 | "         | 0.100       |             | 111         | 80-120 |  |  |
| Xylene (p/m)                           | 0.231      | 0.00200 | "         | 0.200       |             | 115         | 80-120 |  |  |
| Xylene (o)                             | 0.118      | 0.00100 | "         | 0.100       |             | 118         | 80-120 |  |  |
| Surrogate: 1,4-Difluorobenzene         | 0.115      |         | "         | 0.120       |             | 95.8        | 75-125 |  |  |
| Surrogate: 4-Bromofluorobenzene        | 0.125      |         | "         | 0.120       |             | 104         | 75-125 |  |  |
| Calibration Check (P9H1403-CCV2)       |            |         |           | Prepared &  | . Analyzed  | 08/14/19    |        |  |  |

0.100

0.100

0.100

0.200

0.100

0.120

0.120

Permian Basin Environmental Lab, L.P.

Benzene

Toluene

Ethylbenzene

Xylene (p/m)

Surrogate: 4-Bromofluorobenzene Surrogate: 1,4-Difluorobenzene

Xylene (o)

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

97.1

99.4

93.0

98.6

112

92.4

104

80-120

80-120

80-120

80-120

80-120

75-125

75-125

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley

#### Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                  | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|--|--------|--------------------|-----------|----------------|------------------|----------|----------------|------|--------------|-------|
| Batch P9H1403 - General Preparation (GC) |        |                    |           |                |                  |          |                |      |              |       |
| Calibration Check (P9H1403-CCV3)         |        |                    |           | Prepared &     | Analyzed:        | 08/14/19 |                |      |              |       |
| Benzene                                  | 0.0909 | 0.00100            | mg/kg wet | 0.100          |                  | 90.9     | 80-120         |      |              |       |
| Toluene                                  | 0.105  | 0.00100            | "         | 0.100          |                  | 105      | 80-120         |      |              |       |
| Ethylbenzene                             | 0.103  | 0.00100            | "         | 0.100          |                  | 103      | 80-120         |      |              |       |
| Xylene (p/m)                             | 0.204  | 0.00200            | "         | 0.200          |                  | 102      | 80-120         |      |              |       |
| Xylene (o)                               | 0.110  | 0.00100            | "         | 0.100          |                  | 110      | 80-120         |      |              |       |
| Surrogate: 1,4-Difluorobenzene           | 0.123  |                    | "         | 0.120          |                  | 102      | 75-125         |      |              |       |
| Surrogate: 4-Bromofluorobenzene          | 0.123  |                    | "         | 0.120          |                  | 102      | 75-125         |      |              |       |
| Matrix Spike (P9H1403-MS1)               | Sour   | rce: 9H12010       | )-01      | Prepared &     | Analyzed:        | 08/14/19 |                |      |              |       |
| Benzene                                  | 0.0972 | 0.00109            | mg/kg dry | 0.109          | ND               | 89.5     | 80-120         |      |              |       |
| Toluene                                  | 0.112  | 0.00109            | "         | 0.109          | ND               | 103      | 80-120         |      |              |       |
| Ethylbenzene                             | 0.108  | 0.00109            | "         | 0.109          | ND               | 99.2     | 80-120         |      |              |       |
| Xylene (p/m)                             | 0.226  | 0.00217            | "         | 0.217          | ND               | 104      | 80-120         |      |              |       |
| Xylene (o)                               | 0.119  | 0.00109            | "         | 0.109          | ND               | 110      | 80-120         |      |              |       |
| Surrogate: 4-Bromofluorobenzene          | 0.143  |                    | "         | 0.130          |                  | 110      | 75-125         |      |              |       |
| Surrogate: 1,4-Difluorobenzene           | 0.153  |                    | "         | 0.130          |                  | 117      | 75-125         |      |              |       |
| Matrix Spike Dup (P9H1403-MSD1)          | Sour   | rce: 9H12010       | )-01      | Prepared &     | Analyzed:        | 08/14/19 |                |      |              |       |
| Benzene                                  | 0.0888 | 0.00109            | mg/kg dry | 0.109          | ND               | 81.6     | 80-120         | 9.13 | 20           |       |
| Toluene                                  | 0.0950 | 0.00109            | "         | 0.109          | ND               | 87.4     | 80-120         | 16.2 | 20           |       |
| Ethylbenzene                             | 0.114  | 0.00109            | "         | 0.109          | ND               | 105      | 80-120         | 5.41 | 20           |       |
| Xylene (p/m)                             | 0.195  | 0.00217            | "         | 0.217          | ND               | 89.9     | 80-120         | 14.5 | 20           |       |
| Xylene (o)                               | 0.102  | 0.00109            | "         | 0.109          | ND               | 94.0     | 80-120         | 15.6 | 20           |       |
| Surrogate: 1,4-Difluorobenzene           | 0.141  |                    | "         | 0.130          |                  | 108      | 75-125         |      |              |       |
| Surrogate: 4-Bromofluorobenzene          | 0.139  |                    | "         | 0.130          |                  | 106      | 75-125         |      |              |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |                       | Reporting    |        | Spike      | Source      |          | %REC     |      | RPD    |       |
|--------------------------------------|-----------------------|--------------|--------|------------|-------------|----------|----------|------|--------|-------|
| Analyte                              | Result                | Limit        | Units  | Level      | Result      | %REC     | Limits   | RPD  | Limit  | Notes |
| Analyte                              | Result                | LIIIII       | Oillts | Level      | Kesuit      | /0KEC    | LIIIIIIS | KrD  | Lillit | notes |
| Batch P9H1302 - *** DEFAULT PREP *** |                       |              |        |            |             |          |          |      |        |       |
| Blank (P9H1302-BLK1)                 |                       |              |        | Prepared & | Analyzed:   | 08/13/19 |          |      |        |       |
| % Moisture                           | ND                    | 0.1          | %      |            |             |          |          |      |        |       |
| Duplicate (P9H1302-DUP1)             | Sour                  | ce: 9H12002- | 03     | Prepared & | Analyzed:   | 08/13/19 |          |      |        |       |
| % Moisture                           | 13.0                  | 0.1          | %      |            | 13.0        |          |          | 0.00 | 20     |       |
| Duplicate (P9H1302-DUP2)             | Sour                  | се: 9Н12005- | 18     | Prepared & | Analyzed:   | 08/13/19 |          |      |        |       |
| % Moisture                           | 21.0                  | 0.1          | %      |            | 21.0        |          |          | 0.00 | 20     |       |
| Duplicate (P9H1302-DUP3)             | Sour                  | се: 9Н12005- | 28     | Prepared & | Analyzed:   | 08/13/19 |          |      |        |       |
| % Moisture                           | 7.0                   | 0.1          | %      |            |             | 13.3     | 20       |      |        |       |
| Duplicate (P9H1302-DUP4)             | Source: 9H12010-04 Pr |              |        |            | : Analyzed: | 08/13/19 |          |      |        |       |
| % Moisture                           | 9.0                   | 0.1          | %      |            | 9.0         |          |          | 0.00 | 20     |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting |           | Spike       | Source     |             | %REC   |       | RPD   |       |
|----------------------------------|--------|-----------|-----------|-------------|------------|-------------|--------|-------|-------|-------|
| Analyte                          | Result | Limit     | Units     | Level       | Result     | %REC        | Limits | RPD   | Limit | Notes |
| Batch P9H1410 - TX 1005          |        |           |           |             |            |             |        |       |       |       |
| Blank (P9H1410-BLK1)             |        |           |           | Prepared &  | Analyzed:  | 08/14/19    |        |       |       |       |
| C6-C12                           | ND     | 25.0      | mg/kg wet |             |            |             |        |       |       |       |
| >C12-C28                         | ND     | 25.0      | "         |             |            |             |        |       |       |       |
| >C28-C35                         | ND     | 25.0      | "         |             |            |             |        |       |       |       |
| Surrogate: 1-Chlorooctane        | 110    |           | "         | 100         |            | 110         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 55.7   |           | "         | 50.0        |            | 111         | 70-130 |       |       |       |
| LCS (P9H1410-BS1)                |        |           |           | Prepared &  | Analyzed:  | 08/14/19    |        |       |       |       |
| C6-C12                           | 909    | 25.0      | mg/kg wet | 1000        |            | 90.9        | 75-125 |       |       |       |
| >C12-C28                         | 1000   | 25.0      | "         | 1000        |            | 100         | 75-125 |       |       |       |
| Surrogate: 1-Chlorooctane        | 129    |           | "         | 100         |            | 129         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 48.9   |           | "         | 50.0        |            | 97.9        | 70-130 |       |       |       |
| LCS Dup (P9H1410-BSD1)           |        |           |           | Prepared &  | Analyzed:  | 08/14/19    |        |       |       |       |
| C6-C12                           | 925    | 25.0      | mg/kg wet | 1000        |            | 92.5        | 75-125 | 1.70  | 20    |       |
| >C12-C28                         | 1010   | 25.0      | "         | 1000        |            | 101         | 75-125 | 0.435 | 20    |       |
| Surrogate: 1-Chlorooctane        | 128    |           | "         | 100         |            | 128         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 52.5   |           | "         | 50.0        |            | 105         | 70-130 |       |       |       |
| Calibration Blank (P9H1410-CCB1) |        |           |           | Prepared &  | Analyzed:  | 08/14/19    |        |       |       |       |
| C6-C12                           | 8.73   |           | mg/kg wet |             |            |             |        |       |       |       |
| >C12-C28                         | 14.5   |           | "         |             |            |             |        |       |       |       |
| Surrogate: 1-Chlorooctane        | 107    |           | "         | 100         |            | 107         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 54.5   |           | "         | 50.0        |            | 109         | 70-130 |       |       |       |
| Calibration Blank (P9H1410-CCB2) |        |           |           | Prepared: ( | 08/14/19 A | nalyzed: 08 | /15/19 |       |       |       |
| C6-C12                           | 6.77   |           | mg/kg wet |             |            |             |        |       |       |       |
| >C12-C28                         | 15.6   |           | "         |             |            |             |        |       |       |       |
| Surrogate: 1-Chlorooctane        | 109    |           | "         | 100         |            | 109         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 54.2   |           | "         | 50.0        |            | 108         | 70-130 |       |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting    |           | Spike       | Source     |             | %REC    |          | RPD   |       |
|----------------------------------|--------|--------------|-----------|-------------|------------|-------------|---------|----------|-------|-------|
| Analyte                          | Result | Limit        | Units     | Level       | Result     | %REC        | Limits  | RPD      | Limit | Notes |
| Batch P9H1410 - TX 1005          |        |              |           |             |            |             |         |          |       |       |
| Calibration Check (P9H1410-CCV1) |        |              |           | Prepared &  | Analyzed   | 08/14/19    |         |          |       |       |
| C6-C12                           | 498    | 25.0         | mg/kg wet | 500         |            | 99.5        | 85-115  |          |       |       |
| >C12-C28                         | 494    | 25.0         | "         | 500         |            | 98.8        | 85-115  |          |       |       |
| Surrogate: 1-Chlorooctane        | 121    |              | "         | 100         |            | 121         | 70-130  |          |       |       |
| Surrogate: o-Terphenyl           | 53.0   |              | "         | 50.0        |            | 106         | 70-130  |          |       |       |
| Calibration Check (P9H1410-CCV2) |        |              |           | Prepared: ( | 08/14/19 A | nalyzed: 08 | 8/15/19 |          |       |       |
| C6-C12                           | 509    | 25.0         | mg/kg wet | 500         |            | 102         | 85-115  |          |       |       |
| >C12-C28                         | 550    | 25.0         | "         | 500         |            | 110         | 85-115  |          |       |       |
| Surrogate: 1-Chlorooctane        | 128    |              | "         | 100         |            | 128         | 70-130  |          |       |       |
| Surrogate: o-Terphenyl           | 54.3   |              | "         | 50.0        |            | 109         | 70-130  |          |       |       |
| Calibration Check (P9H1410-CCV3) |        |              |           | Prepared: ( | 08/14/19 A | nalyzed: 08 | 3/15/19 |          |       |       |
| C6-C12                           | 506    | 25.0         | mg/kg wet | 500         |            | 101         | 85-115  |          |       |       |
| >C12-C28                         | 553    | 25.0         | "         | 500         |            | 111         | 85-115  |          |       |       |
| Surrogate: 1-Chlorooctane        | 124    |              | "         | 100         |            | 124         | 70-130  |          |       |       |
| Surrogate: o-Terphenyl           | 53.5   |              | "         | 50.0        |            | 107         | 70-130  |          |       |       |
| Duplicate (P9H1410-DUP1)         | Sou    | rce: 9H12010 | 0-04      | Prepared: ( | 08/14/19 A | nalyzed: 08 | 3/15/19 |          |       |       |
| C6-C12                           | 11.3   | 27.5         | mg/kg dry |             | ND         | <u> </u>    |         | <u> </u> | 20    |       |
| >C12-C28                         | 14.4   | 27.5         | "         |             | 13.9       |             |         | 3.72     | 20    |       |
| Surrogate: 1-Chlorooctane        | 104    |              | "         | 110         |            | 94.4        | 70-130  |          |       |       |
| Surrogate: o-Terphenyl           | 52.4   |              | "         | 54.9        |            | 95.4        | 70-130  |          |       |       |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18 Project Manager: Curt Stanley

#### **Notes and Definitions**

ROI Received on Ice

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Burnon |       |           |
|---------------------|--------|-------|-----------|
| Report Approved By: |        | Date: | 8/20/2019 |

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

| Rec  | erved Relinquished by:  Date       | Date ( ) Date                      | Refindushed by.   Spate  | 2) Special instructions: Bill to Plains                               |          | 21-2   |           |   |     |            |           | 2 2019 ESW-2 @ 19 | 2019 ESW-1 @ 19' | AB# (lab/use only).   | (lab use only)<br>ORDER # 4月 12010 | Sampler Signature:         |                |        | Company Address: 10 Desta Drive Ste 150E | Company Name TRC Environmental Corporation | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Permian Basi 10014 S. Coi Project Manager: Curt Stanley |
|--|------------------------------------|------------------------------------|--|---|----------|--------|-----------|---|-----|------------|-----------|-------------------|------------------|---|------------------------------------|----------------------------|----------------|--------|--|--|--|
|  | Time                               | , mi                               | が<br>で<br>で<br>で   |   |          |        |           |   |     |            |           |                   |                  | Beginning Depth   | #                                  | 5                          | 1              |        |  | ion  | USTO   |
| *  |                                    | о                                  | 72   |   |          |        |           |   |     |            |           | ~                 |                  | Ending Depth  | 1-4-4-                             | 4                          | 4              |        |  |  | DYRE   |
| X  | Received by PBEI                   | Received by:                       | Received by:   |   |          |        |           |   |     | 8/12/2019  | 8/12/2019 | 8/12/2019         | 8/12/2019        | Date Sampled  | E                                  |                            |                |        |  |  | CORD AND   |
|  |                                    |                                    |  |   |          |        |           |   |     | 1050       | 1045      | 1040              | 1030             | Time Sampled  |                                    | e-mail:                    | Fax No.        |        |  |  | ) ANALYSIS   |
| 100000000000000000000000000000000000000  |                                    |                                    |  |   |          |        |           |   |     | _          |           | _                 | -                | Field Filtered  Total #. of Containers                      | GIA                                | _ <u>√</u>  8              |                |        |  |  | REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213 Midland, Texas 79706           |
| 12,000   | ٨v                                 |                                    |  |   |          |        |           |   |     | ×          | ×         | ×                 | ×                | ice (   | 71                                 | cdstanley@trcsolutions.com |                |        |  |  | UES<br>an Ba<br>s, c,  |
| **************************************   | 11                                 |                                    |  |   |          |        |           |   |     | . # 5.<br> |           | \$4.5<br>2.5      |                  | HNO₃  | Preservation &                     | nley                       |                |        |  |  | T Isin E ount  |
| 200  | 1                                  |                                    |  |   |          | _      |           | _ |     |            | _         |                   |                  | HCI<br>H₂SO₄  | vation                             | 100                        |                |        |  |  | invironn<br>y Road<br>79706  |
| CONTRACTOR OF  |                                    |                                    |  |   |          | -      | $\vdash$  |   |     |            |           |                   |                  | NaOH  | - ° #                              | pa                         |                |        |  |  | onmo   |
| CHECKURGE  | ₩                                  |                                    |  |   |          | 1      |           |   | 111 |            |           |                   |                  | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>               | # of Containers                    |                            |                |        |  |  | ental<br>213   |
|  | <b>J</b>                           |                                    |  |   |          |        |           |   |     |            |           |                   |                  | None  | iners                              |                            |                |        |  |  | <b></b>  |
| The state of the s | 河豐                                 | Date                               | Date   | ,   | <u> </u> |        |           | 1 |     | 1          |           |                   |                  | Other ( Specify)  DW=Drinking Water SL=Sludge               | $\mathbf{H}$                       | ر<br>ا                     | T              | 1      | 1 4                                      | 1  | <b>1</b>   |
| 188  | <u> </u>                           |                                    |  |   |          |        |           |   |     | Soil       | Soil      | Soil              | Soil             | GW = Groundwater S=Soil/Soild  NP=Non-Potable Specify Other | Matrix                             | ı                          | Report Format: |        | Ŧ  |  | P  |
|  | ÷<br>₹∧Z                           | Ime                                | , in   |   |          |        |           |   |     | ×          | ×         | ×                 | ×                |   | 015B                               | П                          | t Fon          |        | Project Loc:                             | Pro  | Project Name:  |
| 1  | Z°                                 |                                    |  | 1   |          |        |           |   |     |            |           |                   |                  | TPH: TX 1005 TX 1006  | <u>-</u>                           |                            | mat            | PO#:   | Ct Lo                                    | Project #:                                 | Nam  |
|  | Received<br>Adjusted               | i am                               | Education (allers) (Custody seals on container(s) Custody seals on container(s) Custody seals (custodiens) 2 | Laboratory comments. Sample Sonaines intact VOCs Free of Headspace;   | <u> </u> | -      | 1         | _ | -   | $\vdash$   | -         |                   | +                | Cations (Ca, Mg, Na, K)  Anions (Ci, SO4, Alkalinity)       | _                                  |                            |                | ;#<br> | <br>B                                    | **<br>                                     | <b>.</b>   |
|  | Received<br>Adjusted               | ple mand<br>by Sample<br>by Couner |  | SFI   | -        | 1      | +         | + | -   | $\vdash$   | +         |                   | +-               | SAR / ESP / CEC   | TOTAL                              |                            | St<br>St       |        |  |  |  |
|  | Received 4 2 °C FAdjusted 5 0 °C F |                                    | seals  | Lappratory Comments.  Apple Leonance Violate  VOCs Free of Headspace? | <u> </u> | +      |           | + |     | $\vdash$   | $\vdash$  | $\dagger$         | $\vdash$         | Metals: As Ag Ba Cd Cr Pb H                                 |                                    | 1.1.                       | X Standard     |        |  |  | Pho  |
|  | On E                               |                                    |  |   |          |        | +         | 1 |     |            |           | Ī                 |                  | Metals: Al, B, Co, Cu, Fe, Mn,                              |                                    | Analyze                    | ā              |        |  |  | Phone: 432-661-4184<br>Monument  |
|  | ğ                                  |                                    | on on a  | ds pa   |          |        |           |   |     |            |           |                   |                  | Metals: Ni, Zn  |                                    | že For:                    |                |        | Ĕ  | Z  | 432<br>Mo  |
| All and a second   | င္ပံုငံ                            | (                                  |  | 8,8   |          |        |           |   |     | ×          | ×         | ×                 | ×                | BTEK 8021B/5030 or BTEX 8                                   | 260 X                              | =                          |                | 1      | Lea County, NM                           | TNM Monument 18                            | 32-661-4184<br>Monument 18   |
|  | *C Factor (* 🕂 ) , ( (             | .异··                               | 9  |   | _        | _      | 1         | + | 1.  | 1          | 1         | +                 | +                | RCI<br>N O R M  | ·                                  |                            | ☐ TRRP         |        | Į,                                       | IIII                                       | 418<br>nent  |
|  | ٠.                                 |                                    |  |   | _        | -      | +         | + | +   | -          | +         | +                 | +                | N.O.R.M.<br>Chlorides E 300                                 |                                    | 11                         |                |        | N N                                      | ent  | <del>2</del> ************************************  |
|  | <u>+</u> 2                         | FedEx                              | ()()   | ( <b>a</b> (2   | _        | +      | +         | + | +-  |            | +         | +                 | +                | Paint Filter  |                                    |                            |                |        |  | 18   | Pa   |
| 1  | 元:<br>:                            |                                    | $\mathbb{X}$   | Y 🛭   | $\vdash$ | -      | $\dagger$ | + | +   | +          | T         | +                 | $\dagger$        | TCLP BTEX   |                                    |                            | NPDES          |        |  |  | Page 1 of 1  |
|  | $\wp$ .                            | N<br>Lone Star                     | 222  | 222   |          | $\top$ | 1         | T | +-  | 1          | T         | +                 |                  | RUSH TAT (Pre-Schedule) 2                                   | 4, 48, 72 hrs                      |                            | ĎES            |        |  |  | 9.   |
| . 1  |                                    | 超                                  |  |   |          | 1      | T         | 1 | T   | $\vdash$   | ℸ         | ×                 | ×                | Standard TAT  |                                    |                            |                |        |  | ·  | Page 13 of 13  |

## PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



## Analytical Report

#### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 9H15003



NELAP/TCEQ # T104704516-18-9

Report Date: 08/28/19

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: Monument 18

Project Number: TNM-Monument 18
Project Manager: Curt Stanley

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID        | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------------|---------------|--------|----------------|------------------|
| 2019 ESW-2 @ 19' | 9H15003-01    | Soil   | 08/14/19 10:00 | 08-15-2019 09:36 |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E

Project: Monument 18

Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### 2019 ESW-2 @ 19' 9H15003-01 (Soil)

| Analyte                               | Result          | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|-----------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|                                       | Pern            | nian Basin E       | Invironmen | ntal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                        |                 |                    |            |             |              |          |          |            |       |
| Benzene                               | ND              | 0.00118            | mg/kg dry  | 1           | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Toluene                               | ND              | 0.00118            | mg/kg dry  | 1           | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Ethylbenzene                          | ND              | 0.00118            | mg/kg dry  | 1           | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Xylene (p/m)                          | ND              | 0.00235            | mg/kg dry  | 1           | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Xylene (o)                            | ND              | 0.00118            | mg/kg dry  | 1           | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                 | 112 %              | 75-1       | 25          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                 | 81.7 %             | 75-1       | 25          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / | Standard Method | ds                 |            |             |              |          |          |            |       |
| % Moisture                            | 15.0            | 0.1                | %          | 1           | Р9Н1603      | 08/16/19 | 08/16/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 b | y EPA Method 80 | 015M               |            |             |              |          |          |            |       |
| C6-C12                                | ND              | 29.4               | mg/kg dry  | 1           | P9H1611      | 08/16/19 | 08/18/19 | TPH 8015M  |       |
| >C12-C28                              | ND              | 29.4               | mg/kg dry  | 1           | P9H1611      | 08/16/19 | 08/18/19 | TPH 8015M  |       |
| >C28-C35                              | ND              | 29.4               | mg/kg dry  | 1           | P9H1611      | 08/16/19 | 08/18/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                 | 124 %              | 70-1       | 30          | P9H1611      | 08/16/19 | 08/18/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                 | 120 %              | 70-1       | 30          | P9H1611      | 08/16/19 | 08/18/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon C6-C35    | ND              | 29.4               | mg/kg dry  | 1           | [CALC]       | 08/16/19 | 08/18/19 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18 10 Desta Dr STE 150E Project Number: TNM-Monument 18

0.122

Midland TX, 79705

Project Manager: Curt Stanley

Fax: (432) 520-7701

## **Organics by GC - Quality Control** Permian Basin Environmental Lab, L.P.

| Analyte                               | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|---------------------------------------|--------|--------------------|-----------|----------------|------------------|----------|----------------|------|--------------|-------|
|                                       |        | Limit              | Omo       | Lever          | resurt           | /VICEC   | Limits         | МЪ   | Dillit       |       |
| Batch P9H1602 - General Preparation ( | GC)    |                    |           |                |                  |          |                |      |              |       |
| Blank (P9H1602-BLK1)                  |        |                    |           | Prepared &     | Analyzed:        | 08/16/19 |                |      |              |       |
| Benzene                               | ND     | 0.00100            | mg/kg wet |                |                  |          |                |      |              |       |
| Toluene                               | ND     | 0.00100            | "         |                |                  |          |                |      |              |       |
| Ethylbenzene                          | ND     | 0.00100            | "         |                |                  |          |                |      |              |       |
| Xylene (p/m)                          | ND     | 0.00200            | "         |                |                  |          |                |      |              |       |
| Xylene (o)                            | ND     | 0.00100            | "         |                |                  |          |                |      |              |       |
| Surrogate: 1,4-Difluorobenzene        | 0.100  |                    | "         | 0.120          |                  | 83.5     | 75-125         |      |              |       |
| Surrogate: 4-Bromofluorobenzene       | 0.121  |                    | "         | 0.120          |                  | 101      | 75-125         |      |              |       |
| LCS (P9H1602-BS1)                     |        |                    |           | Prepared &     | Analyzed:        | 08/16/19 |                |      |              |       |
| Benzene                               | 0.0863 | 0.00100            | mg/kg wet | 0.100          |                  | 86.3     | 70-130         |      |              |       |
| Toluene                               | 0.104  | 0.00100            | "         | 0.100          |                  | 104      | 70-130         |      |              |       |
| Ethylbenzene                          | 0.105  | 0.00100            | "         | 0.100          |                  | 105      | 70-130         |      |              |       |
| Xylene (p/m)                          | 0.208  | 0.00200            | "         | 0.200          |                  | 104      | 70-130         |      |              |       |
| Xylene (o)                            | 0.110  | 0.00100            | "         | 0.100          |                  | 110      | 70-130         |      |              |       |
| Surrogate: 1,4-Difluorobenzene        | 0.127  |                    | "         | 0.120          |                  | 106      | 75-125         |      |              |       |
| Surrogate: 4-Bromofluorobenzene       | 0.130  |                    | "         | 0.120          |                  | 108      | 75-125         |      |              |       |
| LCS Dup (P9H1602-BSD1)                |        |                    |           | Prepared &     | Analyzed:        | 08/16/19 |                |      |              |       |
| Benzene                               | 0.106  | 0.00100            | mg/kg wet | 0.100          |                  | 106      | 70-130         | 20.4 | 20           | I     |
| Toluene                               | 0.120  | 0.00100            | "         | 0.100          |                  | 120      | 70-130         | 13.8 | 20           |       |
| Ethylbenzene                          | 0.113  | 0.00100            | "         | 0.100          |                  | 113      | 70-130         | 7.68 | 20           |       |
| Xylene (p/m)                          | 0.229  | 0.00200            | "         | 0.200          |                  | 114      | 70-130         | 9.32 | 20           |       |
| Xylene (o)                            | 0.119  | 0.00100            | "         | 0.100          |                  | 119      | 70-130         | 8.04 | 20           |       |
| Surrogate: 1,4-Difluorobenzene        | 0.135  |                    | "         | 0.120          |                  | 113      | 75-125         |      |              | ,     |
| Surrogate: 4-Bromofluorobenzene       | 0.126  |                    | "         | 0.120          |                  | 105      | 75-125         |      |              |       |
| Calibration Blank (P9H1602-CCB1)      |        |                    |           | Prepared &     | Analyzed:        | 08/16/19 |                |      |              |       |
| Benzene                               | 0.00   |                    | mg/kg wet |                | <u> </u>         |          |                |      |              |       |
| Toluene                               | 0.00   |                    | "         |                |                  |          |                |      |              |       |
| Ethylbenzene                          | 0.00   |                    | "         |                |                  |          |                |      |              |       |
| Xylene (p/m)                          | 0.00   |                    | "         |                |                  |          |                |      |              |       |
| Xylene (o)                            | 0.00   |                    | "         |                |                  |          |                |      |              |       |
| Surrogate: 1,4-Difluorobenzene        | 0.0989 |                    | "         | 0.120          |                  | 82.4     | 75-125         |      |              |       |

Permian Basin Environmental Lab, L.P.

Surrogate: 4-Bromofluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

102

75-125

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                               | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD | RPD<br>Limit | Notes  |
|---------------------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|-----|--------------|--------|
| -                                     |        | Ziiiii             |           | 20,01          | 100011           | , , , , ,   | 2              |     | 2            | 1.0.00 |
| Batch P9H1602 - General Preparation ( | GC)    |                    |           |                |                  |             |                |     |              |        |
| Calibration Blank (P9H1602-CCB2)      |        |                    |           | Prepared &     | Analyzed:        | 08/16/19    |                |     |              |        |
| Benzene                               | 0.00   |                    | mg/kg wet |                |                  |             |                |     |              |        |
| Toluene                               | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Ethylbenzene                          | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Xylene (p/m)                          | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Xylene (o)                            | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Surrogate: 1,4-Difluorobenzene        | 0.102  |                    | "         | 0.120          |                  | 85.0        | 75-125         |     |              |        |
| Surrogate: 4-Bromofluorobenzene       | 0.132  |                    | "         | 0.120          |                  | 110         | 75-125         |     |              |        |
| Calibration Blank (P9H1602-CCB3)      |        |                    |           | Prepared: (    | 08/16/19 A       | nalyzed: 08 | /17/19         |     |              |        |
| Benzene                               | 0.00   |                    | mg/kg wet |                |                  |             |                |     |              |        |
| Toluene                               | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Ethylbenzene                          | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Xylene (p/m)                          | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Xylene (o)                            | 0.00   |                    | "         |                |                  |             |                |     |              |        |
| Surrogate: 1,4-Difluorobenzene        | 0.112  |                    | "         | 0.120          |                  | 93.2        | 75-125         |     |              |        |
| Surrogate: 4-Bromofluorobenzene       | 0.126  |                    | "         | 0.120          |                  | 105         | 75-125         |     |              |        |
| Calibration Check (P9H1602-CCV1)      |        |                    |           | Prepared &     | : Analyzed:      | 08/16/19    |                |     |              |        |
| Benzene                               | 0.0910 | 0.00100            | mg/kg wet | 0.100          |                  | 91.0        | 80-120         |     |              |        |
| Toluene                               | 0.112  | 0.00100            | "         | 0.100          |                  | 112         | 80-120         |     |              |        |
| Ethylbenzene                          | 0.118  | 0.00100            | "         | 0.100          |                  | 118         | 80-120         |     |              |        |
| Xylene (p/m)                          | 0.223  | 0.00200            | "         | 0.200          |                  | 112         | 80-120         |     |              |        |
| Xylene (o)                            | 0.115  | 0.00100            | "         | 0.100          |                  | 115         | 80-120         |     |              |        |
| Surrogate: 4-Bromofluorobenzene       | 0.140  |                    | "         | 0.120          |                  | 116         | 75-125         |     |              |        |
| Surrogate: 1,4-Difluorobenzene        | 0.128  |                    | "         | 0.120          |                  | 107         | 75-125         |     |              |        |
| Calibration Check (P9H1602-CCV2)      |        |                    |           | Prepared &     | : Analyzed:      | 08/16/19    |                |     |              |        |
| Benzene                               | 0.0947 | 0.00100            | mg/kg wet | 0.100          |                  | 94.7        | 80-120         |     |              |        |
| Toluene                               | 0.103  | 0.00100            | "         | 0.100          |                  | 103         | 80-120         |     |              |        |
| Ethylbenzene                          | 0.0934 | 0.00100            | "         | 0.100          |                  | 93.4        | 80-120         |     |              |        |
| Xylene (p/m)                          | 0.205  | 0.00200            | "         | 0.200          |                  | 103         | 80-120         |     |              |        |
| Xylene (o)                            | 0.114  | 0.00100            | "         | 0.100          |                  | 114         | 80-120         |     |              |        |

Permian Basin Environmental Lab, L.P.

 ${\it Surrogate: 4-Bromofluor obenzene}$ 

Surrogate: 1,4-Difluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

105

109

75-125

75-125

0.120

0.120

0.126

TRC Solutions- Midland, Texas

Project: Monument 18 Project Number: TNM-Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

## **Organics by GC - Quality Control** Permian Basin Environmental Lab, L.P.

|                                       |        | Reporting    |           | Spike       | Source     |             | %REC   |      | RPD   |       |
|---------------------------------------|--------|--------------|-----------|-------------|------------|-------------|--------|------|-------|-------|
| Analyte                               | Result | Limit        | Units     | Level       | Result     | %REC        | Limits | RPD  | Limit | Notes |
| Batch P9H1602 - General Preparation ( | GC)    |              |           |             |            |             |        |      |       |       |
| Calibration Check (P9H1602-CCV3)      |        |              |           | Prepared: ( | 08/16/19 A | nalyzed: 08 | /17/19 |      |       |       |
| Benzene                               | 0.103  | 0.00100      | mg/kg wet | 0.100       |            | 103         | 80-120 |      |       |       |
| Toluene                               | 0.102  | 0.00100      | "         | 0.100       |            | 102         | 80-120 |      |       |       |
| Ethylbenzene                          | 0.0992 | 0.00100      | "         | 0.100       |            | 99.2        | 80-120 |      |       |       |
| Xylene (p/m)                          | 0.208  | 0.00200      | "         | 0.200       |            | 104         | 80-120 |      |       |       |
| Xylene (o)                            | 0.118  | 0.00100      | "         | 0.100       |            | 118         | 80-120 |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.125  |              | "         | 0.120       |            | 104         | 75-125 |      |       |       |
| Surrogate: 1,4-Difluorobenzene        | 0.127  |              | "         | 0.120       |            | 106         | 75-125 |      |       |       |
| Matrix Spike (P9H1602-MS1)            | Sou    | rce: 9H16002 | 2-01      | Prepared: ( | 08/16/19 A | nalyzed: 08 | /17/19 |      |       |       |
| Benzene                               | 0.0674 | 0.00103      | mg/kg dry | 0.103       | ND         | 65.4        | 80-120 |      |       | QM-0  |
| Toluene                               | 0.0674 | 0.00103      | "         | 0.103       | ND         | 65.4        | 80-120 |      |       | QM-0  |
| Ethylbenzene                          | 0.0767 | 0.00103      | "         | 0.103       | ND         | 74.4        | 80-120 |      |       | QM-0  |
| Xylene (p/m)                          | 0.134  | 0.00206      | "         | 0.206       | ND         | 65.0        | 80-120 |      |       | QM-0  |
| Xylene (o)                            | 0.0742 | 0.00103      | "         | 0.103       | ND         | 72.0        | 80-120 |      |       | QM-0  |
| Surrogate: 1,4-Difluorobenzene        | 0.125  |              | "         | 0.124       |            | 101         | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.111  |              | "         | 0.124       |            | 89.3        | 75-125 |      |       |       |
| Matrix Spike Dup (P9H1602-MSD1)       | Sou    | rce: 9H16002 | 2-01      | Prepared: ( | 08/16/19 A | nalyzed: 08 | /17/19 |      |       |       |
| Benzene                               | 0.0773 | 0.00103      | mg/kg dry | 0.103       | ND         | 75.0        | 80-120 | 13.6 | 20    | QM-0  |
| Toluene                               | 0.0788 | 0.00103      | "         | 0.103       | ND         | 76.4        | 80-120 | 15.5 | 20    | QM-0  |
| Ethylbenzene                          | 0.0899 | 0.00103      | "         | 0.103       | ND         | 87.2        | 80-120 | 15.9 | 20    |       |
| Xylene (p/m)                          | 0.154  | 0.00206      | "         | 0.206       | ND         | 74.7        | 80-120 | 13.9 | 20    | QM-0  |
| Xylene (o)                            | 0.0844 | 0.00103      | "         | 0.103       | ND         | 81.9        | 80-120 | 12.8 | 20    |       |
| Surrogate: 4-Bromofluorobenzene       | 0.118  |              | "         | 0.124       |            | 95.5        | 75-125 |      |       |       |
| Surrogate: 1,4-Difluorobenzene        | 0.130  |              | "         | 0.124       |            | 105         | 75-125 |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |        | Reporting     |       | Spike      | Source      |            | %REC   |      | RPD   |       |
|--------------------------------------|--------|---------------|-------|------------|-------------|------------|--------|------|-------|-------|
| Analyte                              | Result | Limit         | Units | Level      | Result      | %REC       | Limits | RPD  | Limit | Notes |
| Batch P9H1603 - *** DEFAULT PREP *** |        |               |       |            |             |            |        |      |       |       |
| Blank (P9H1603-BLK1)                 |        |               |       | Prepared & | k Analyzed  | 08/16/19   |        |      |       |       |
| % Moisture                           | ND     | 0.1           | %     |            |             |            |        |      |       |       |
| Blank (P9H1603-BLK2)                 |        |               |       | Prepared & | t Analyzed: | : 08/16/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1           | %     |            |             |            |        |      |       |       |
| Duplicate (P9H1603-DUP1)             | Sou    | rce: 9H14012- | -11   | Prepared & | t Analyzed: | : 08/16/19 |        |      |       |       |
| % Moisture                           | 6.0    | 0.1           | %     |            | ND          |            |        | 200  | 20    |       |
| Duplicate (P9H1603-DUP2)             | Sou    | rce: 9H14019- | -09   | Prepared & | k Analyzed  | 08/16/19   |        |      |       |       |
| % Moisture                           | 20.0   | 0.1           | %     |            | 20.0        |            |        | 0.00 | 20    |       |
| Duplicate (P9H1603-DUP3)             | Sou    | rce: 9H15013- | -03   | Prepared & | k Analyzed: | 08/16/19   |        |      |       |       |
| % Moisture                           | 1.0    | 0.1           | %     |            | 1.0         | ·          |        | 0.00 | 20    |       |
| Duplicate (P9H1603-DUP4)             | Sou    | rce: 9H15014- | -12   | Prepared & | t Analyzed: | : 08/16/19 |        |      |       |       |
| % Moisture                           | ND     | 0.1           | %     |            | ND          | ·          | ·      |      | 20    |       |
| Duplicate (P9H1603-DUP5)             | Sou    | rce: 9H15015- | -16   | Prepared & | k Analyzed: | 08/16/19   |        |      |       |       |
| % Moisture                           | ND     | 0.1           | %     |            | ND          |            |        |      | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18 Project Manager: Curt Stanley

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                          | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|----------------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|-----|--------------|-------|
| Batch P9H1611 - TX 1005          |        |                    |           |                |                  |             |                |     | <u> </u>     |       |
| Blank (P9H1611-BLK1)             |        |                    |           | Prenared: (    | 08/16/19 A       | nalyzed: 08 | 2/17/19        |     |              |       |
| C6-C12                           | ND     | 25.0               | mg/kg wet | Trepured.      | 70/10/17 71      | naryzea. 00 | 7/1//1/        |     |              |       |
| >C12-C28                         | ND     | 25.0               | mg kg wet |                |                  |             |                |     |              |       |
| >C28-C35                         | ND     | 25.0               | "         |                |                  |             |                |     |              |       |
| Surrogate: 1-Chlorooctane        | 105    |                    | "         | 100            |                  | 105         | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 61.6   |                    | "         | 50.0           |                  | 123         | 70-130         |     |              |       |
| LCS (P9H1611-BS1)                |        |                    |           | Prepared: (    | 08/16/19 A       | nalyzed: 08 | 3/17/19        |     |              |       |
| C6-C12                           | 977    | 25.0               | mg/kg wet | 1000           |                  | 97.7        | 75-125         |     |              |       |
| >C12-C28                         | 837    | 25.0               | "         | 1000           |                  | 83.7        | 75-125         |     |              |       |
| Surrogate: 1-Chlorooctane        | 128    |                    | "         | 100            |                  | 128         | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 47.4   |                    | "         | 50.0           |                  | 94.9        | 70-130         |     |              |       |
| Calibration Blank (P9H1611-CCB1) |        |                    |           | Prepared: (    | 08/16/19 A       | nalyzed: 08 | 3/17/19        |     |              |       |
| C6-C12                           | 11.2   |                    | mg/kg wet |                |                  |             |                |     |              |       |
| >C12-C28                         | 9.70   |                    | "         |                |                  |             |                |     |              |       |
| Surrogate: 1-Chlorooctane        | 118    |                    | "         | 100            |                  | 118         | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 54.4   |                    | "         | 50.0           |                  | 109         | 70-130         |     |              |       |
| Calibration Blank (P9H1611-CCB2) |        |                    |           | Prepared: (    | 08/16/19 A       | nalyzed: 08 | 3/17/19        |     |              |       |
| C6-C12                           | 8.91   |                    | mg/kg wet |                |                  |             |                |     |              |       |
| >C12-C28                         | 0.460  |                    | "         |                |                  |             |                |     |              |       |
| Surrogate: 1-Chlorooctane        | 120    |                    | "         | 100            |                  | 120         | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 55.0   |                    | "         | 50.0           |                  | 110         | 70-130         |     |              |       |
| Calibration Check (P9H1611-CCV2) |        |                    |           | Prepared: (    | 08/16/19 A       | nalyzed: 08 | 3/17/19        |     |              |       |
| C6-C12                           | 532    | 25.0               | mg/kg wet | 500            |                  | 106         | 85-115         |     |              |       |
| >C12-C28                         | 426    | 25.0               | "         | 500            |                  | 85.2        | 85-115         |     |              |       |
| Surrogate: 1-Chlorooctane        | 124    |                    | "         | 100            |                  | 124         | 70-130         |     |              |       |
| Surrogate: o-Terphenyl           | 52.4   |                    | "         | 50.0           |                  | 105         | 70-130         |     |              |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18
Project Number: TNM-Monument 18

10 Desta Dr STE 150E Midland TX, 79705

rioject Number. Trivi-Monumen

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                          | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|----------------------------------|--------|--------------------|-----------|----------------|------------------|-------------|----------------|------|--------------|-------|
| Batch P9H1611 - TX 1005          |        |                    |           |                |                  |             |                |      |              |       |
| Calibration Check (P9H1611-CCV3) |        |                    |           | Prepared: (    | 08/16/19 A       | nalyzed: 08 | /18/19         |      |              |       |
| C6-C12                           | 475    | 25.0               | mg/kg wet | 500            |                  | 95.0        | 85-115         |      |              |       |
| >C12-C28                         | 518    | 25.0               | "         | 500            |                  | 104         | 85-115         |      |              |       |
| Surrogate: 1-Chlorooctane        | 115    |                    | "         | 100            |                  | 115         | 70-130         |      |              |       |
| Surrogate: o-Terphenyl           | 60.2   |                    | "         | 50.0           |                  | 120         | 70-130         |      |              |       |
| Duplicate (P9H1611-DUP1)         | Sour   | rce: 9H15003       | 3-01      | Prepared: (    | 08/16/19 A       | nalyzed: 08 | /18/19         |      |              |       |
| C6-C12                           | ND     | 29.4               | mg/kg dry |                | 14.4             |             |                |      | 20           |       |
| >C12-C28                         | 18.2   | 29.4               | "         |                | 23.5             |             |                | 25.6 | 20           |       |
| Surrogate: 1-Chlorooctane        | 134    |                    | "         | 118            |                  | 114         | 70-130         |      |              |       |
| Surrogate: o-Terphenyl           | 81.0   |                    | "         | 58.8           |                  | 138         | 70-130         |      |              | S-GC  |

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

R2 The RPD exceeded the acceptance limit.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By: Date: 8/28/2019

Brent Barron, Laboratory Director/Technical Director

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150EProject Number: TNM-Monument 18Midland TX, 79705Project Manager: Curt Stanley

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

| Rec       | eived  | by Q  | CD: 6  | /8/202   | 1 12.    | 21:  | 29 I                | M        | 1, F-1          | 10 ger   | gasti.   | 17 Ly-1 | in the          | landitaliäläkisenlessi                        | o =             | 3                            |                |                  |                         |                               | P                | age 585 of 613  |
|-----------|--|---|--|--|----------|--|---------------------|----------|-----------------|----------|----------|---------|-----------------|---|-----------------|------------------------------|----------------|------------------|-------------------------|-------------------------------|------------------|---|
|           | Relinquished by:                             | Relinquished  | elinguished  | pecial instructions.  Bill   |          |  |                     |          | in a            |          |          |         | _               | LAB # (lab use only)                          | ORDER #:        | ř.                           |                |                  |                         |                               |                  |   |
|           | Jishe  | iishe   | <b>[</b>   |  |          |  | 19 30<br>17 30<br>1 |          |                 |          | 11.33    |         |                 |   | 7 6             | S                            | -              | 0                | 0                       | 0                             | 70               |   |
|           | by.  | ą.  | 13   | 2  |          |  |                     |          |                 |          |          |         |                 |   | 10.0            | Sampler Signatuke            | Telephone No:  | City/State/Zip:  | Company Address:        | Company Name                  | Project Manager: | W   |
|           |  | $\wedge$  | 7.   | <b>₩</b>   |          | ŀ  |                     |          |                 |          |          |         |                 |   | 5               | pler                         | oho            | Stat             | pan                     | pan                           | Σ.               |   |
|           |  |   | K  |  |          |  |                     |          |                 |          |          |         |                 | 1   |                 | Sig                          | Je Z           | e/Zi             | ΥĄ                      | Ž.                            | /an              |   |
|           |  |   | 4  | to Plains  |          |  | ١.                  |          |                 |          | -        |         | 2019 ESW-2 @ 19 |   | 9H15003         | natu                         | <u>ē</u>       | 9                | dre                     | ame                           | age              |   |
|           |  |   | 15   |  |          |  |                     |          |                 |          |          |         | 띥               | FIELD CODE                                    | Ď.              | <u></u>                      | $\supset$      |                  | SS                      | ٠,                            | .7               |   |
|           |  | _   | 2  | <b>P</b> .   |          | ļ  |                     | 7        |                 |          |          |         | ×               | D   | O               | \{\z\                        | (432)          | <u>≅</u>         | 10                      | 돐                             | ξ                | Q   |
|           |  |   | P\   |  |          |  |                     |          |                 |          |          |         | 20              |   |                 |                              | <b>1</b> 2)    | Midland/TX/79705 | 10 Desta Drive Ste 150E | E                             | Curt Stanley     |   |
| 1         |  |   |  | 1  |          | Ì  |                     |          |                 |          |          |         | 100             |   |                 |                              | K.             | \frac{1}{2}      | a Dri                   | Viro                          | nley             | **  |
| T         |  |   | 00   | <b>1</b> ′   |          |  |                     |          |                 |          |          |         | -               |   |                 | 1                            | - B            | 7970             | Ve S                    | mer                           |                  | ð   |
|           | Date   | Dag   |  | 2  |          |  |                     |          |                 |          |          |         |                 |   |                 | ] [{_                        |                | 5                | e 1                     | <u>a</u>                      |                  | IAII  |
|           | · · · ·                                      | Ф   | 2014 19  |  |          |  |                     |          |                 |          |          |         |                 |   |                 | \$                           |                |                  | 50E                     | orp                           |                  | Q   |
| $\vdash$  | 一  |   |  | 1  | ļ        | <del>                                     </del> |                     |          |                 |          |          |         |                 | Paringing Dooth                               | 1 .             | 1                            | -              |                  | :                       | TRC Environmental Corporation |                  | Ω   |
|           | Time   | lime  | 16.28  | 1  |          | _  |                     |          |                 |          | ı.       |         |                 | Beginning Depth                               |                 |                              |                |                  |                         | 3                             |                  | US1   |
|           | 9  | 76  | 178  |  | 1        |  |                     |          |                 |          |          |         |                 | Ending Depth                                  |                 | ĮΨ                           | Ψ              |                  |                         |                               |                  | 9   |
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| 1         | 灣  | Received by:  | Received by:   |  |          |  |                     |          |                 |          |          |         | 8/14/2019       |   |                 | 12                           | _              |                  |                         |                               |                  | ĘĊ  |
| 1         | \$ \$  | èd<br>b   | ) èd   |  | 1        | ļ  |                     |          |                 |          |          |         | 1/20            | Date Sampled                                  |                 |                              | Ψ              |                  |                         |                               |                  | . &   |
| 1         | y PB   | Υ.  | , ×  |  |          |  | İ                   |          |                 |          |          |         | 100             |   |                 | >                            |                |                  | '                       |                               |                  | A .   |
| (         | Ived by PBEL                                 |   |  |  |          |  |                     |          |                 |          |          |         |                 |   | 1               | 7                            | • •            |                  |                         |                               |                  | 5   |
| Š         | ₹  |   |  |  |          |  |                     | i        |                 |          |          | ·       | 1000            | Tir⊓e Sampled                                 |                 | الا<br>الا                   | ਜ਼             |                  |                         |                               |                  | €   |
| Q         | 8  |   | ļ  |  |          |  |                     |          | .               |          |          |         | 8               |   |                 | K.v. email:                  | Fax No:        |                  |                         |                               |                  | E   |
|           | 9  |   |  |  | $\vdash$ | ┼—   | ļ                   |          |                 |          |          |         | _               | Field Filtered                                | -               | <b>≓</b> 0                   | <u>.</u>       | 1                |                         |                               | _                | Z RS  |
| 8         |  |   |  |  | -        | ┼  |                     | _        |                 |          |          |         | _               | Total #, of Containers                        | · ·             | . <u> </u>  2                |                |                  |                         | ĺ                             |                  | REQUE<br>Permian I  |
|           | 40   | 4.  | İ  |  |          | ┿  |                     |          |                 |          |          |         | ×               | Ice   | $\Box$          | cdstanley@trcs<br>cibryant@p |                |                  |                         |                               | Midland, Texas   | REQUEST Permian Basin Environmental Lab, LP 10014 S. County Road 1213 |
|           |  |   | '  |  | <b> </b> | t  |                     |          |                 |          | -        | _       |                 | HNO <sub>3</sub>                              | Pres            |                              |                |                  |                         | ļ                             | Texas 79706      | Sasi<br>Col   |
|           |  |   |  |  | <u> </u> | T  |                     |          |                 |          |          | _       |                 | на  | reservation &   | /an                          |                |                  |                         |                               | 8                | φ <u>π</u>  |
| 200       |  |   |  |  |          |  |                     |          |                 |          |          |         |                 | H <sub>2</sub> SO <sub>4</sub>                |                 | <u> </u>                     |                | 1                | 1                       |                               | 7970             | Roa Piro  |
| X.        |  |   |  |  | -        |  |                     |          |                 |          |          |         |                 | NaOH  | # of Containers | sol<br>oaa                   |                |                  |                         |                               | ŏ                | nme   |
|           |  |   |  |  |          | ļ  | Ш                   |          |                 |          |          |         |                 | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> | ontai           | i di                         | l              |                  |                         | 1                             |                  | 73 <u>a</u>   |
| <u>2</u>  | <u> </u>                                     |   |  |  | _        | <u> </u>   |                     |          |                 |          |          |         |                 | None  | ners            | solutions.c                  |                |                  |                         |                               |                  | Lab   |
| ^         | Date   | Date  | Date   | }  | _        | <del>                                     </del> |                     | -        |                 | _        | .        |         |                 | Other ( Specify)  DW=Drinking Water SL=Sludge | H               | solutions.com<br>paalp.com   |                | 1.               | 1                       | ł                             | 1                | 5   |
| Ī         |  |   |  |  |          |  |                     |          |                 | ļ        |          |         | Soil            | GW = Groundweter SESoil/Solid                 | Matrix          | H                            | ₽              | •                |                         |                               | •                |   |
| Ž         | =  |   |  |  |          |  |                     |          |                 |          |          |         | =               | NP=Non-Potable Specify-Other                  | ₹               |                              | port           |                  | T                       |                               | Pro              |   |
| 16.00     | or, a  | Time  | Time   |  |          |  |                     |          |                 |          |          |         | X               | TPH: 418.1 8015M 80                           | 15B             | П                            | Report Format: |                  | Project Loc:            | Pro                           | Project Name:    |   |
| 25.0      |  |   | •  |  | <u> </u> | <u> </u>   |                     |          | _               |          | _        |         |                 | TPH: TX 1005 TX 1006                          | _               |                              | mat            | PO#:             | ᄄ                       | Project#:                     | Nam              |   |
| jdju      | ece.   | , o ⊒   | abe<br>Sustr   |  | -        |  |                     | _        |                 | $\dashv$ |          |         |                 | Cations (Ca, Mg, Na, K)                       | _               |                              |                | .¥.<br>          | រ្ត័                    | **<br>                        |                  |   |
| šted:     | pera<br>ived                                 | y Sa  | ay de se   | S Fre  | -        |  |                     | $\vdash$ | {               | {        | $\dashv$ |         |                 | Anions (CI, SO4, Alkalinity)                  |                 |                              | ⊠<br>S         |                  |                         |                               |                  |   |
|           | 4  | mple<br>mple  | Seals  | ě ě ž  | $\vdash$ |  | $\vdash$            |          | -+              | -        |          |         |                 | SAR / ESP / CEC  Metals: As Ag Ba Cd Cr Pb Hg |                 | 1. 1                         | Standard       |                  |                         |                               |                  | <u>"</u>  |
| U         | Température Upon Receipt:                    | nple Hand Delivered by Sampler/Client Rep. ? by Couner? | Labels on container(s) Custody seals on container(s) Custody seals on container(s) | Laboratory Comments: Sample Containers Intact? VOCs Free of Headspace? | 1        | -  |                     | $\vdash$ | $\dashv$        | $\dashv$ |          |         |                 | Metals: Al, B, Co, Cu, Fe, Mn, N              |                 | Ana<br>a                     | ard            |                  |                         |                               |                  | Phone: 432-661-4184   |
|           | n Re   | _ #¥ #<br># # # # #                                     | Cont   | s int  |          |  |                     |          | -+              | $\dashv$ |          |         |                 | Metals; Ni, Zn                                | -++             | Analyze For:                 |                |                  | _                       | <u>I</u>                      | _                | #<br><b>#</b>   |
| ဂိ        | က <u>ို</u>                                  | აფ <u> </u>   | aine<br>en(s)  | acts   | $\vdash$ | $\Box$   |                     |          | 1               | ᅦ        |          |         |                 | BTEX 8021B/5030 or BTEX 826                   | 30 X            | [3]                          |                |                  | Lea County, NM          | TNM Monument 18               | Monument 18      | \$2-60  |
| °C Factor | G)   | ⊒ `<br>⊒  | (S)  |  |          |  |                     |          | _               | 7        |          |         | -               | RCI   |                 | 1                            | ] TRRP         |                  | Sun                     | Ont                           | m                | <u> </u>  |
|           |  |   |  |  |          |  |                     |          |                 |          |          |         |                 | N.O.R.M.                                      |                 | 1                            | 7              |                  | Ę.                      | ıme                           | Ħ                | H 84  |
| ć         | <u>;                                    </u> | $\langle \langle \rangle$                               |  | 1000   |          |  |                     |          |                 |          |          |         |                 | Chlorides E 300                               |                 | ] [                          |                |                  | Ź                       | <u>2</u> 1                    | ∞                | . •   |
|           | ,  |   | <b>∀</b> ≺*  | 994 VG   |          |  |                     |          | $\Box$          | $\Box$   | $\Box$   |         |                 | Paint Filter                                  |                 |                              |                |                  | į                       | 000                           |                  | Pag   |
|           |  | ]<br>  22   | ZZZ  | _  |          | igsqcup  |                     |          | _               | _]       | _ ]      |         |                 | TCLP BTEX                                     |                 | Ц                            | NPDES          |                  |                         |                               | 1                | Page 1 of   |
|           |  | , ZZ  | ZZZ  | ZZ   | -        | <u> </u>   | $\Box$              |          |                 | _        | $\dashv$ |         | _               | RUSH TAT (Pre-Schedule) 24,                   | 48, 72 hrs      |                              | ΈS             |                  |                         | _                             | <u></u>          |   |
|           | 44.0   |   | esa ika  |  | 1        | . 1  | i 1                 |          | - 1             | - 1      | - 1      | - 1     | $\times$ 1      | Standard TAT                                  | 1               |                              |                | 3                |                         | 1 1                           | Page             | 12 of 12  |

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: TNM Monument 18
Project Number: TNM Monument 18
Location: Lea County, NM

Lab Order Number: 9H14022



NELAP/TCEQ # T104704516-18-9

Report Date: 08/28/19

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E Project: TNM Monument 18
Project Number: TNM Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID  | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------|---------------|--------|----------------|------------------|
| 2019-SP-58 | 9H14022-01    | Soil   | 08/14/19 09:30 | 08-14-2019 16:28 |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Project Number: TNM Monument 18 Midland TX, 79705 Project Manager: Curt Stanley

Project: TNM Monument 18

Fax: (432) 520-7701

### 2019-SP-58 9H14022-01 (Soil)

| Analyte                               | Result              | Reporting<br>Limit | Units      | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|---------------------|--------------------|------------|-------------|--------------|----------|----------|------------|-------|
|                                       | Pern                | nian Basin E       | Environmen | ıtal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                        |                     |                    |            |             |              |          |          |            |       |
| Benzene                               | ND                  | 0.0244             | mg/kg dry  | 20          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Toluene                               | 0.698               | 0.0244             | mg/kg dry  | 20          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Ethylbenzene                          | 1.49                | 0.0244             | mg/kg dry  | 20          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Xylene (p/m)                          | 5.04                | 0.0488             | mg/kg dry  | 20          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Xylene (o)                            | 0.969               | 0.0244             | mg/kg dry  | 20          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                     | 118 %              | 75-1       | 25          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                     | 107 %              | 75-1       | 25          | P9H1602      | 08/16/19 | 08/16/19 | EPA 8021B  |       |
| General Chemistry Parameters by EPA   | \ / Standard Method | ds                 |            |             |              |          |          |            |       |
| % Moisture                            | 18.0                | 0.1                | %          | 1           | P9H1505      | 08/15/19 | 08/15/19 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35   | 5 by EPA Method 80  | 015M               |            |             |              |          |          |            |       |
| C6-C12                                | 1880                | 305                | mg/kg dry  | 10          | P9H1502      | 08/15/19 | 08/15/19 | TPH 8015M  |       |
| >C12-C28                              | 7690                | 305                | mg/kg dry  | 10          | P9H1502      | 08/15/19 | 08/15/19 | TPH 8015M  |       |
| >C28-C35                              | 1490                | 305                | mg/kg dry  | 10          | P9H1502      | 08/15/19 | 08/15/19 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                     | 109 %              | 70-1       | 30          | P9H1502      | 08/15/19 | 08/15/19 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                     | 107 %              | 70-1       | 30          | P9H1502      | 08/15/19 | 08/15/19 | TPH 8015M  |       |
| Total Petroleum Hydrocarbon<br>C6-C35 | 11100               | 305                | mg/kg dry  | 10          | [CALC]       | 08/15/19 | 08/15/19 | calc       |       |

RPD

%REC

TRC Solutions- Midland, Texas

Project: TNM Monument 18
Project Number: TNM Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Manager: Curt Stanley

Reporting

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Spike

Source

| Analyte                               | Result | Limit   | Units     | Level      | Result    | %REC     | Limits | RPD  | Limit | Notes |
|---------------------------------------|--------|---------|-----------|------------|-----------|----------|--------|------|-------|-------|
| Batch P9H1602 - General Preparation ( | GC)    |         |           |            |           |          |        |      |       |       |
| Blank (P9H1602-BLK1)                  |        |         |           | Prepared & | Analyzed: | 08/16/19 |        |      |       |       |
| Benzene                               | ND     | 0.00100 | mg/kg wet |            |           |          |        |      |       |       |
| Toluene                               | ND     | 0.00100 | "         |            |           |          |        |      |       |       |
| Ethylbenzene                          | ND     | 0.00100 | "         |            |           |          |        |      |       |       |
| Xylene (p/m)                          | ND     | 0.00200 | "         |            |           |          |        |      |       |       |
| Xylene (o)                            | ND     | 0.00100 | "         |            |           |          |        |      |       |       |
| Surrogate: 1,4-Difluorobenzene        | 0.100  |         | "         | 0.120      |           | 83.5     | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.121  |         | "         | 0.120      |           | 101      | 75-125 |      |       |       |
| LCS (P9H1602-BS1)                     |        |         |           | Prepared & | Analyzed: | 08/16/19 |        |      |       |       |
| Benzene                               | 0.0863 | 0.00100 | mg/kg wet | 0.100      |           | 86.3     | 70-130 |      |       |       |
| Toluene                               | 0.104  | 0.00100 | "         | 0.100      |           | 104      | 70-130 |      |       |       |
| Ethylbenzene                          | 0.105  | 0.00100 | "         | 0.100      |           | 105      | 70-130 |      |       |       |
| Xylene (p/m)                          | 0.208  | 0.00200 | "         | 0.200      |           | 104      | 70-130 |      |       |       |
| Xylene (o)                            | 0.110  | 0.00100 | "         | 0.100      |           | 110      | 70-130 |      |       |       |
| Surrogate: 1,4-Difluorobenzene        | 0.127  |         | "         | 0.120      |           | 106      | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.130  |         | "         | 0.120      |           | 108      | 75-125 |      |       |       |
| LCS Dup (P9H1602-BSD1)                |        |         |           | Prepared & | Analyzed: | 08/16/19 |        |      |       |       |
| Benzene                               | 0.106  | 0.00100 | mg/kg wet | 0.100      |           | 106      | 70-130 | 20.4 | 20    | R     |
| Toluene                               | 0.120  | 0.00100 | "         | 0.100      |           | 120      | 70-130 | 13.8 | 20    |       |
| Ethylbenzene                          | 0.113  | 0.00100 | "         | 0.100      |           | 113      | 70-130 | 7.68 | 20    |       |
| Xylene (p/m)                          | 0.229  | 0.00200 | "         | 0.200      |           | 114      | 70-130 | 9.32 | 20    |       |
| Xylene (o)                            | 0.119  | 0.00100 | "         | 0.100      |           | 119      | 70-130 | 8.04 | 20    |       |
| Surrogate: 1,4-Difluorobenzene        | 0.135  |         | "         | 0.120      |           | 113      | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene       | 0.126  |         | "         | 0.120      |           | 105      | 75-125 |      |       |       |
| Calibration Blank (P9H1602-CCB1)      |        |         |           | Prepared & | Analyzed: | 08/16/19 |        |      |       |       |
| Benzene                               | 0.00   |         | mg/kg wet |            |           |          |        |      |       |       |
| Toluene                               | 0.00   |         | "         |            |           |          |        |      |       |       |
| Ethylbenzene                          | 0.00   |         | "         |            |           |          |        |      |       |       |
| Xylene (p/m)                          | 0.00   |         | "         |            |           |          |        |      |       |       |
| Xylene (o)                            | 0.00   |         | "         |            |           |          |        |      |       |       |

Permian Basin Environmental Lab, L.P.

Surrogate: 1,4-Difluorobenzene

Surrogate: 4-Bromofluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

82.4

102

75-125

75-125

0.120

0.120

0.0989

RPD

%REC

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E Project: TNM Monument 18
Project Number: TNM Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

Reporting

0.205

0.114

0.126

0.130

0.00200

0.00100

Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Spike

Source

|  |        | reporting |           | Брис        |             |             |        |     | IG D  |       |
|--|--------|-----------|-----------|-------------|-------------|-------------|--------|-----|-------|-------|
| Analyte                                | Result | Limit     | Units     | Level       | Result      | %REC        | Limits | RPD | Limit | Notes |
| Batch P9H1602 - General Preparation (C | GC)    |           |           |             |             |             |        |     |       |       |
| Calibration Blank (P9H1602-CCB2)       |        |           |           | Prepared &  | Analyzed:   | 08/16/19    |        |     |       |       |
| Benzene                                | 0.00   |           | mg/kg wet |             |             |             |        |     |       |       |
| Toluene                                | 0.00   |           | "         |             |             |             |        |     |       |       |
| Ethylbenzene                           | 0.00   |           | "         |             |             |             |        |     |       |       |
| Xylene (p/m)                           | 0.00   |           | "         |             |             |             |        |     |       |       |
| Xylene (o)                             | 0.00   |           | "         |             |             |             |        |     |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.132  |           | "         | 0.120       |             | 110         | 75-125 |     |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.102  |           | "         | 0.120       |             | 85.0        | 75-125 |     |       |       |
| Calibration Blank (P9H1602-CCB3)       |        |           |           | Prepared: 0 | 08/16/19 A  | nalyzed: 08 | /17/19 |     |       |       |
| Benzene                                | 0.00   |           | mg/kg wet |             |             |             |        |     |       |       |
| Toluene                                | 0.00   |           | "         |             |             |             |        |     |       |       |
| Ethylbenzene                           | 0.00   |           | "         |             |             |             |        |     |       |       |
| Xylene (p/m)                           | 0.00   |           | "         |             |             |             |        |     |       |       |
| Xylene (o)                             | 0.00   |           | "         |             |             |             |        |     |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.112  |           | "         | 0.120       |             | 93.2        | 75-125 |     |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.126  |           | "         | 0.120       |             | 105         | 75-125 |     |       |       |
| Calibration Check (P9H1602-CCV1)       |        |           |           | Prepared &  | : Analyzed: | 08/16/19    |        |     |       |       |
| Benzene                                | 0.0910 | 0.00100   | mg/kg wet | 0.100       |             | 91.0        | 80-120 |     |       |       |
| Toluene                                | 0.112  | 0.00100   | "         | 0.100       |             | 112         | 80-120 |     |       |       |
| Ethylbenzene                           | 0.118  | 0.00100   | "         | 0.100       |             | 118         | 80-120 |     |       |       |
| Xylene (p/m)                           | 0.223  | 0.00200   | "         | 0.200       |             | 112         | 80-120 |     |       |       |
| Xylene (o)                             | 0.115  | 0.00100   | "         | 0.100       |             | 115         | 80-120 |     |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.140  |           | "         | 0.120       |             | 116         | 75-125 |     |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.128  |           | "         | 0.120       |             | 107         | 75-125 |     |       |       |
| Calibration Check (P9H1602-CCV2)       |        |           |           | Prepared &  | : Analyzed: | 08/16/19    |        |     |       |       |
| Benzene                                | 0.0947 | 0.00100   | mg/kg wet | 0.100       |             | 94.7        | 80-120 |     |       |       |
| Toluene                                | 0.103  | 0.00100   | "         | 0.100       |             | 103         | 80-120 |     |       |       |
| Ethylbenzene                           | 0.0934 | 0.00100   | "         | 0.100       |             | 93.4        | 80-120 |     |       |       |

Permian Basin Environmental Lab, L.P.

Xylene (p/m)

Surrogate: 4-Bromofluorobenzene

Surrogate: 1,4-Difluorobenzene

Xylene (o)

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

103

114

105

109

80-120

80-120

75-125

75-125

0.200

0.100

0.120

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705 Project: TNM Monument 18

Project Number: TNM Monument 18 Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

|   |        | Reporting    |           | Spike       | Source     |             | %REC   |      | RPD   |       |
|---|--------|--------------|-----------|-------------|------------|-------------|--------|------|-------|-------|
| Analyte                                 | Result | Limit        | Units     | Level       | Result     | %REC        | Limits | RPD  | Limit | Notes |
| Batch P9H1602 - General Preparation (GC | ()     |              |           |             |            |             |        |      |       |       |
| Calibration Check (P9H1602-CCV3)        |        |              |           | Prepared: ( | 08/16/19 A | nalyzed: 08 | /17/19 |      |       |       |
| Benzene                                 | 0.103  | 0.00100      | mg/kg wet | 0.100       |            | 103         | 80-120 |      |       |       |
| Toluene                                 | 0.102  | 0.00100      | "         | 0.100       |            | 102         | 80-120 |      |       |       |
| Ethylbenzene                            | 0.0992 | 0.00100      | "         | 0.100       |            | 99.2        | 80-120 |      |       |       |
| Xylene (p/m)                            | 0.208  | 0.00200      | "         | 0.200       |            | 104         | 80-120 |      |       |       |
| Xylene (o)                              | 0.118  | 0.00100      | "         | 0.100       |            | 118         | 80-120 |      |       |       |
| Surrogate: 1,4-Difluorobenzene          | 0.127  |              | "         | 0.120       |            | 106         | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene         | 0.125  |              | "         | 0.120       |            | 104         | 75-125 |      |       |       |
| Matrix Spike (P9H1602-MS1)              | Sou    | rce: 9H16002 | 2-01      | Prepared: ( | 08/16/19 A | nalyzed: 08 | /17/19 |      |       |       |
| Benzene                                 | 0.0674 | 0.00103      | mg/kg dry | 0.103       | ND         | 65.4        | 80-120 |      |       | QM-0  |
| Toluene                                 | 0.0674 | 0.00103      | "         | 0.103       | ND         | 65.4        | 80-120 |      |       | QM-0  |
| Ethylbenzene                            | 0.0767 | 0.00103      | "         | 0.103       | ND         | 74.4        | 80-120 |      |       | QM-0  |
| Xylene (p/m)                            | 0.134  | 0.00206      | "         | 0.206       | ND         | 65.0        | 80-120 |      |       | QM-0  |
| Xylene (o)                              | 0.0742 | 0.00103      | "         | 0.103       | ND         | 72.0        | 80-120 |      |       | QM-0  |
| Surrogate: 1,4-Difluorobenzene          | 0.125  |              | "         | 0.124       |            | 101         | 75-125 |      |       |       |
| Surrogate: 4-Bromofluorobenzene         | 0.111  |              | "         | 0.124       |            | 89.3        | 75-125 |      |       |       |
| Matrix Spike Dup (P9H1602-MSD1)         | Sou    | rce: 9H16002 | 2-01      | Prepared: ( | 08/16/19 A | nalyzed: 08 | /17/19 |      |       |       |
| Benzene                                 | 0.0773 | 0.00103      | mg/kg dry | 0.103       | ND         | 75.0        | 80-120 | 13.6 | 20    | QM-0  |
| Toluene                                 | 0.0788 | 0.00103      | "         | 0.103       | ND         | 76.4        | 80-120 | 15.5 | 20    | QM-0  |
| Ethylbenzene                            | 0.0899 | 0.00103      | "         | 0.103       | ND         | 87.2        | 80-120 | 15.9 | 20    |       |
| Xylene (p/m)                            | 0.154  | 0.00206      | "         | 0.206       | ND         | 74.7        | 80-120 | 13.9 | 20    | QM-0  |
| Xylene (o)                              | 0.0844 | 0.00103      | "         | 0.103       | ND         | 81.9        | 80-120 | 12.8 | 20    |       |
| Surrogate: 4-Bromofluorobenzene         | 0.118  |              | "         | 0.124       |            | 95.5        | 75-125 |      |       |       |
| Surrogate: 1,4-Difluorobenzene          | 0.130  |              | "         | 0.124       |            | 105         | 75-125 |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: TNM Monument 18

10 Desta Dr STE 150E Project Number: TNM Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte Result Limit Units Level Result %REC Limits RPD Limit No |         | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|--|---------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
|  | Analyte | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

Batch P9H1505 - \*\*\* DEFAULT PREP \*\*\*

**Blank (P9H1505-BLK1)** Prepared & Analyzed: 08/15/19

% Moisture ND 0.1 %

 Duplicate (P9H1505-DUP1)
 Source: 9H14023-05
 Prepared & Analyzed: 08/15/19

 % Moisture
 17.0
 0.1
 %
 17.0
 0.00
 20

TRC Solutions- Midland, Texas

Project: TNM Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM Monument 18

Project Manager: Curt Stanley

# Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |        | Reporting |           | Spike      | Source      | 0/755    | %REC   | 222  | RPD   |       |
|----------------------------------|--------|-----------|-----------|------------|-------------|----------|--------|------|-------|-------|
| Analyte                          | Result | Limit     | Units     | Level      | Result      | %REC     | Limits | RPD  | Limit | Notes |
| Batch P9H1502 - TX 1005          |        |           |           |            |             |          |        |      |       |       |
| Blank (P9H1502-BLK1)             |        |           |           | Prepared & | አ Analyzed: | 08/15/19 |        |      |       |       |
| C6-C12                           | ND     | 25.0      | mg/kg wet |            |             |          |        |      |       |       |
| >C12-C28                         | ND     | 25.0      | "         |            |             |          |        |      |       |       |
| >C28-C35                         | ND     | 25.0      | "         |            |             |          |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 110    |           | "         | 100        |             | 110      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 54.8   |           | "         | 50.0       |             | 110      | 70-130 |      |       |       |
| LCS (P9H1502-BS1)                |        |           |           | Prepared & | ኔ Analyzed: | 08/15/19 |        |      |       |       |
| C6-C12                           | 984    | 25.0      | mg/kg wet | 1000       |             | 98.4     | 75-125 |      |       |       |
| >C12-C28                         | 1000   | 25.0      | "         | 1000       |             | 100      | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane        | 111    |           | "         | 100        |             | 111      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 50.0   |           | "         | 50.0       |             | 99.9     | 70-130 |      |       |       |
| LCS Dup (P9H1502-BSD1)           |        |           |           | Prepared & | ኔ Analyzed: | 08/15/19 |        |      |       |       |
| C6-C12                           | 999    | 25.0      | mg/kg wet | 1000       |             | 99.9     | 75-125 | 1.52 | 20    |       |
| >C12-C28                         | 1030   | 25.0      | "         | 1000       |             | 103      | 75-125 | 2.60 | 20    |       |
| Surrogate: 1-Chlorooctane        | 111    |           | "         | 100        |             | 111      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 53.6   |           | "         | 50.0       |             | 107      | 70-130 |      |       |       |
| Calibration Blank (P9H1502-CCB1) |        |           |           | Prepared & | ኔ Analyzed: | 08/15/19 |        |      |       |       |
| C6-C12                           | 4.75   |           | mg/kg wet |            |             |          |        |      |       |       |
| >C12-C28                         | 16.6   |           | "         |            |             |          |        |      |       |       |
| Surrogate: 1-Chlorooctane        | 110    |           | "         | 100        |             | 110      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 54.4   |           | "         | 50.0       |             | 109      | 70-130 |      |       |       |
| Calibration Check (P9H1502-CCV1) |        |           |           | Prepared 8 | ኔ Analyzed: | 08/15/19 |        |      |       |       |
| C6-C12                           | 540    | 25.0      | mg/kg wet | 500        | -           | 108      | 85-115 |      |       |       |
| >C12-C28                         | 549    | 25.0      | "         | 500        |             | 110      | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 118    |           | "         | 100        |             | 118      | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 54.6   |           | ,,        | 50.0       |             | 109      | 70-130 |      |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E

Project: TNM Monument 18
Project Number: TNM Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|         |        | Reporting |       | Spike | Source |      | %REC   |     | RPD   |       |
|---------|--------|-----------|-------|-------|--------|------|--------|-----|-------|-------|
| Analyte | Result | Limit     | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |

#### Batch P9H1502 - TX 1005

| Duplicate (P9H1502-DUP1)  | Source | : 9Н13006-10   | Prepared & Analy | zed: 08/15/19 |        |      |    |
|---------------------------|--------|----------------|------------------|---------------|--------|------|----|
| C6-C12                    | 49.0   | 28.4 mg/kg dry | 53.4             | 1             |        | 8.59 | 20 |
| >C12-C28                  | 725    | 28.4 "         | 693              |               |        | 4.48 | 20 |
| Surrogate: 1-Chlorooctane | 127    | "              | 114              | 112           | 70-130 |      |    |
| Surrogate: o-Terphenyl    | 62.6   | "              | 56.8             | 110           | 70-130 |      |    |

TRC Solutions- Midland, Texas Project: TNM Monument 18 10 Desta Dr STE 150E Project Number: TNM Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

#### **Notes and Definitions**

ROI Received on Ice

R2 The RPD exceeded the acceptance limit.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

|                     | Dren | Darron |       |           |
|---------------------|------|--------|-------|-----------|
| Report Approved By: |      |        | Date: | 8/28/2019 |

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: TNM Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM Monument 18
Midland TX 70705
Project Manager: Curt Stapley

Midland TX, 79705 Project Manager: Curt Stanley

Permian Basin Environmental Lab, L.P.

| e       | eeiveg<br>®  | by Q  | <i>D:</i> 6   |                         | 2021<br>G  | 12:      | <del>21:</del> 2 | 29 P     | $M_{-}$  |          |                    | \$4.00°  |               | in type  |   | O ·             | (बि            |                            |                |                  |                         |                               | 1 1                | Page :  | 597 of                                       | 613           |
|---------|--|---|---|-------------------------|--|----------|------------------|----------|----------|----------|--------------------|----------|---------------|--|---|-----------------|----------------|----------------------------|----------------|------------------|-------------------------|-------------------------------|--------------------|---|--|---------------|
|         | eeiveelinquished by:                                 | elinquished by:   |   |                         | Special  |          |                  |          |          |          |                    |          |               |  | LAB # (lab use only)  | ORDER #:        | (lab use only) |                            |                |                  |                         |                               |                    |   |  |               |
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|         |  | - {-  | *   | 7                       | Bi   |          |                  |          |          |          |                    |          |               |  |   | <u>Q</u>        |                | ĕ                          | hon            | itate            | yan)                    | an)                           | iΣ                 |   | 3  |               |
|         |  |   | 3   | 1                       | o<br>= *:  |          |                  |          |          |          |                    |          |               |  |   | 王               |                | Sigr                       | ō<br>Z         | Z)               | Ad                      | Z                             | lang               |   |  |               |
|         |  |   | 2   | <u>.</u>                | Pa   |          |                  |          |          |          |                    |          |               | 2  |   | 220pl Hb        |                | Sampler Signature:         | 0              | Ö                | Company Address:        | Company Name                  | Project Manager:   |   |  |               |
|         |  | ,   |   |                         | ij.  |          |                  | · .      |          |          |                    |          |               | 2019 - SP-58                                     | FIELD CODE  | 13              |                | (ē )                       | $\geq$         |                  |                         |                               |                    |   |  |               |
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|         |  |   |   |                         | £  | -        |                  |          | ٠.       |          |                    |          |               | ပ္က  |   |                 |                | 1                          | 53             | Midland/TX/79705 | 10 Desta Drive Ste 150E | ğ                             | Curt Stanley       |   | ·  |               |
|         |  |   |   | $\setminus$             | 코  | -        | '                |          |          |          |                    |          |               | ‴  |   |                 |                |                            | 15             | \frac{1}{8}      | a Dri                   | viror                         | nley               |   |  |               |
| ſ       |  |   | 200   | ]                       | ¥  |          |                  |          |          |          |                    |          |               |  |   |                 |                | nsi,                       | 20             | 7970             | ve s                    | mer                           |                    |   | Ç  |               |
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|         | , u  | U   | 20  | ן"                      | S.   |          |                  |          |          |          |                    |          |               |  | £   |                 |                | H                          |                |                  | 30E                     | orp                           |                    |   | Q  |               |
| ľ       |  |   |   | 1                       | ons:<br>Bill to Plains, RUSH TPH ANALYSIS (24 hrs) |          |                  |          |          |          |                    |          |               | <del>                                     </del> | Beginning Depth   | 7               |                | 27.02                      | $\sqrt{}$      |                  |                         | TRC Environmental Corporation |                    |   | Ω  |               |
|         | Time   | Time  | 16:28   | Time<br>Omi             | <u>4</u><br>⊒                                      |          | <u> </u>         |          | L.       |          |                    |          |               | <u> </u>   | beginning Deptil  |                 |                | <b>₽</b>                   | ψ              |                  |                         | 음                             |                    |   | UST  |               |
|         | ក  | ดิ  | 5   | Ĭ                       | S)   |          | l                |          |          |          | ٠.                 |          |               |  | Ending Depth  |                 |                | ٢                          |                |                  |                         |                               |                    |   | 8  |               |
|         | िश्च   | 70  | ā   | 5                       |  |          | <del> </del>     |          |          |          | l+                 | ·        |               | _  | ·   | -               |                | TT-A                       |                |                  |                         |                               |                    |   | CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST |               |
| 1       |  | Received by:  | Verginer by   | 5                       |  |          |                  | 1        | ĺ        |          |                    |          |               | 8/14/2019  |   |                 |                | 5                          | 7              |                  |                         |                               |                    |   | EC   |               |
| ľ       | 6 8  | <u>5</u>  | 2   | <u> </u>                |  |          |                  | l        |          |          |                    |          |               | /20  | Date Sampled  |                 |                | 1                          | ĺ              |                  |                         |                               |                    |   | 25   |               |
|         | Wed by PBEL  |   | ,   |                         |  |          |                  |          |          |          |                    |          |               | 19   |   |                 |                | 6                          |                | ĺ                |                         |                               |                    |   | Ą  |               |
|         | ا"جـــا  |   |   |                         |  |          |                  |          |          |          |                    |          |               |  |   | 1               |                | ACKUBOD e-mail:            | •              |                  |                         |                               |                    |   | ₹  |               |
| ļ       | 8  |   |   |                         |  |          |                  |          |          |          |                    |          |               | 930  | Time Sampled  |                 |                | ()<br>()                   | TI             |                  |                         |                               |                    |   | <b>₹</b>                                     |               |
|         | 8  |   | ĺ   |                         |  |          |                  |          |          | ĺĺ       |                    |          |               | 0  |   |                 |                | ∄a                         | Fax No:        |                  |                         |                               |                    |   | <u> </u>                                     |               |
|         | ed by PBEL:  |   |   |                         |  | $\vdash$ |                  |          |          | $\vdash$ | $\dashv$           |          |               | · ·  | Field Filtered  | -               |                | <del>:::</del>             | ı<br>I         |                  |                         |                               | 1.                 | 2 TO  | Sis  |               |
|         | <b>ሶ</b>   |   |   |                         |  |          |                  |          |          |          |                    |          |               | 1  | Total #. of Containers  | 1               |                | 8                          |                |                  |                         |                               |                    | Permian Basin Environmenta<br>10014 S. County Road 1213<br>Midland Toyas 70706          | Σ  |               |
| ľ       |  | i   |   |                         |  |          |                  |          |          |          | 一                  |          |               | X  | Ice   | $\Box$          | Įc             | Sta                        |                |                  |                         |                               |                    | 4s.   | Ω.   |               |
| -       |  |   |   |                         |  |          |                  |          |          |          |                    |          |               |  | HNO₃  | Pres            |                |                            |                |                  |                         |                               | 5                  | Tav   | ST   |               |
|         |  |   |   |                         |  |          |                  |          |          |          |                    |          |               |  | HCI   | ervat           | ď              |                            | ŀ              |                  |                         |                               |                    | n En  | ı  |               |
|         |  |   |   |                         |  |          |                  |          |          |          |                    |          |               |  | H₂SO₄   | /ation &        | 0              | त्र                        |                |                  |                         |                               |                    | nvironr<br>/ Road<br>70706  |  |               |
| 100     |  |   |   |                         |  |          |                  |          |          | -        |                    |          |               |  | NaOH  | # of Containers | dad            | SO                         |                |                  |                         |                               | 3                  | id nme  |  |               |
| ŀ       |  |   |   | -                       |  |          |                  |          |          |          | 4                  |          |               |  | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>                   | ontai           | jo.            |                            |                |                  |                         |                               |                    | 113<br>113  | $\mathcal{O}$                                | \             |
| ŀ       | Date   | ,,,,,   | _   |                         |  |          |                  | <b></b>  |          | $\Box$   | _                  |          |               |  | None<br>Other / Specific  | ners            | Ö              | cdstanley@trcsolutions.com |                |                  |                         |                               |                    | Permian Basin Environmental Lab, LP<br>10014 S. County Road 1213<br>Midland Tayas 70706 | . /<br>/                                     | )             |
| ŀ       |  | Date  | Date  | 1                       |  | -        |                  |          | $\vdash$ | +        | _                  |          | -             |  | Other ( Specify)  DW=Drinking Water SL=Sludge                   | H               | <u>,</u>       | <u> </u>                   | 1              | 1                |                         |                               | ļ                  | 5   | 1  |               |
|         | هـ   | _   |   |                         |  |          |                  |          |          |          |                    | Í        |               | Soil   | GW = Groundweter S=Soil/Solid                                   | Matrix          |                | Iゴ                         | Re             |                  |                         |                               |                    |   | <u>`</u>                                     | <del></del> , |
|         | हा   |   |   |                         |  |          |                  |          |          |          |                    |          |               |  | NP=Non-Poteble Specify Other                                    | 로               |                | _                          | port           |                  | ס                       |                               | Pro                |   | $\stackrel{\sim}{\prec}$                     |               |
|         | Time   | Time  | me  |                         |  |          |                  |          | $\Box$   |          | $\Box$             |          |               | ×  |   | 15B             | T              |                            | Report Format: |                  | Project Loc:            | Pro                           | Project Name:      |   | )  |               |
| Ľ       |  |   |   | L                       | con r-   | -        |                  |          | _        |          |                    | $\dashv$ | _             | ,  | TPH: TX 1005 TX 1006  | _               |                |                            | mat:           | PO<br>#          | ᄄ                       | Project #:                    | Nan                |   | <del>/</del>                                 | r -           |
| je<br>G | Temperatu<br>Received:<br>Adirusted:                 | اَدُو و<br>القوو  | usic<br>Usic  | Š                       | a a  | _        |                  |          | _        | _        | _                  | _        |               |  | Cations (Ca, Mg, Na, K)   | -               |                |                            |                | ,# <u>*</u>      | i<br>S                  | #                             | je:                |   |  | V             |
| Š       | ved:   | )<br>Sar<br>⊞   | oys<br>oys  | Fre                     | e a  | $\dashv$ |                  |          |          | $\dashv$ |                    |          | _             | $\rightarrow$                                    | Anions (Cl, SO4, Alkalinity) SAR / ESP / CEC                    | TOTAL           | <u>0</u>       |                            | 区<br>G         |                  |                         |                               | 1                  |   | $\mathcal{L}$                                | ٠.            |
|         | T E  | nple and  | eals<br>eals  | e of                    | 유장   |          |                  |          | $\dashv$ | $\dashv$ |                    |          |               |  | Metals: As Ag Ba Cd Cr Pb Hg                                    |                 | ٦.             |                            | Standard       |                  |                         |                               |                    | <b>1</b> 0  | (/   | 7             |
|         | Temperature Upon Receipt: Received: +/ C C Adjusted: | Sample Hand Delivered by Sampler/Client Rep. ? by Course? | Labels on container(s) Custody seals on container(s) Custody seals on cooler(s) | VOCs Free of Headspace? | Laboratory Comments: Sample Containers Infact?     | $\dashv$ |                  | $\dashv$ | $\dashv$ | $\dashv$ | -                  | $\dashv$ | $\dashv$      |  | Metals: Al, B, Co, Cu, Fe, Ma, N                                | -+              | <u> </u>       |                            | ard            |                  |                         |                               | :                  | Phone: 432-661-4184   | 光  |               |
|         | 1 Re   | _ 2 6<br>7 7 6  | Solic<br>Stuce  | dsp                     | ent ent  | $\dashv$ |                  | _        |          | $\dashv$ | $\dashv$           | $\dashv$ | 1             |  | Metals: Ní, Zn  |                 | Analyze For:   |                            |                |                  | _                       | Ĭ<br>Z                        |                    | !!<br><del>!!</del>   | 1  | -             |
| C       | ကို ကို 🚊  | ၇မွာ <del>င</del><br>သ                                    | is and  | ន្ត                     | 3000   |          |                  | _        |          |          | 寸                  | 一        | 1             | _  | BTEX 8021B/5030 or BTEX 826                                     | 30 X            | 19             |                            |                |                  | ea                      | ≤<br> ≤                       | lon                | 32-6  | $\mathbb{Z}$                                 | )             |
| a<br>C  |  | D<br>E  | (S)   |                         |  |          |                  | \        |          |          |                    |          |               |  | RCI   | L               | 1              |                            | TRRP           |                  | Lea County, NM          | TNM Monument 18               | Monument 18        | <u> </u>  | 2  |               |
| ٦       | 4. C.  | _   |   |                         |  |          |                  |          |          |          |                    |          |               |  | N.O.R.M.  |                 | ]              |                            | 꾸              |                  | 7                       | me                            | THE STATE OF       | 1184  |  |               |
|         | ٧- ا   |   |   | $\vdash$                |  | [        | $\Box$           | $\prod$  | $\Box$   | $\bot$   | $oxed{\mathbb{I}}$ | $\Box$   |               |  | Chlorides E 300   |                 |                |                            |                |                  | Ē                       | nt 1                          | <u>∞</u>           |   |  | _             |
|         | <b>*</b>   | ~ ~   |   | 2                       |  | $\dashv$ | _                |          |          |          | $\dashv$           | $\dashv$ | _             |  | Paint Filter  |                 | ]              |                            |                |                  |                         | 000                           | [:·                |   | Page 1                                       | )             |
|         |  | ZZ  |   | Z                       | Z  | -        | _                |          | _        | _        | $\dashv$           | _        | _             |  | TCLP BTEX   |                 | L              |                            | NPDES          |                  |                         |                               |                    |   | = 1  | _             |
|         | ĝ  | ZZ  |   | -                       | ₹ I  |          |                  | $\dashv$ | -        | -        | $\dashv$           | $\dashv$ | <del></del>   |  | RUSH TAT (Pre-Schedule) 24,<br>Standard TAT                     | 48, 72 hrs      |                |                            | S              |                  |                         | _                             | Do                 | e 12 o  | 9 1  | 7             |
| 1       | 1.000  |   | 953 ··· \$25  | a B                     | 25520  | - 1      | 1                |          | - 1      |          | - 1                | - 1      | - 1.          | ×ド   | Januaru IAT   | 1               |                |                            |                | 1                | i                       | 1 1                           | $-a\alpha\epsilon$ | ュッソハ  | ロコン  | 1             |

# PERMIAN BASIN ENVIRONMENTAL LAB, LP 1400 Rankin Hwy Midland, TX 79701



# Analytical Report

### **Prepared for:**

Curt Stanley
TRC Solutions- Midland, Texas
10 Desta Dr STE 150E
Midland, TX 79705

Project: Monument 18

Project Number: TNM-Monument 18

Location: Lea County, NM

Lab Order Number: 0A16010



NELAP/TCEQ # T104704516-17-8

Report Date: 01/24/20

TRC Solutions- Midland, Texas 10 Desta Dr STE 150E Project: Monument 18
Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID        | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------------|---------------|--------|----------------|------------------|
| 2020-WSW-1 @ 18' | 0A16010-01    | Soil   | 01/14/20 10:00 | 01-16-2020 10:39 |
| 2020-WSW-2 @ 18' | 0A16010-02    | Soil   | 01/14/20 10:15 | 01-16-2020 10:39 |

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E

Project: Monument 18

Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

### 2020-WSW-1 @ 18' 0A16010-01 (Soil)

| Analyte                               | Result          | Reporting<br>Limit | Units     | Dilution    | Batch        | Prepared | Analyzed | Method     | Notes |
|---------------------------------------|-----------------|--------------------|-----------|-------------|--------------|----------|----------|------------|-------|
|                                       | Pern            | nian Basin E       | Environme | ntal Lab, l | L <b>.P.</b> |          |          |            |       |
| Organics by GC                        |                 |                    |           |             |              |          |          |            |       |
| Benzene                               | ND              | 0.00111            | mg/kg dry | 1           | P0A1702      | 01/17/20 | 01/17/20 | EPA 8021B  |       |
| Toluene                               | ND              | 0.00111            | mg/kg dry | 1           | P0A1702      | 01/17/20 | 01/17/20 | EPA 8021B  |       |
| Ethylbenzene                          | ND              | 0.00111            | mg/kg dry | 1           | P0A1702      | 01/17/20 | 01/17/20 | EPA 8021B  |       |
| Xylene (p/m)                          | ND              | 0.00222            | mg/kg dry | 1           | P0A1702      | 01/17/20 | 01/17/20 | EPA 8021B  |       |
| Xylene (o)                            | ND              | 0.00111            | mg/kg dry | 1           | P0A1702      | 01/17/20 | 01/17/20 | EPA 8021B  |       |
| Surrogate: 4-Bromofluorobenzene       |                 | 106 %              | 75-1      | 25          | P0A1702      | 01/17/20 | 01/17/20 | EPA 8021B  |       |
| Surrogate: 1,4-Difluorobenzene        |                 | 102 %              | 75-1      | 25          | P0A1702      | 01/17/20 | 01/17/20 | EPA 8021B  |       |
| General Chemistry Parameters by EPA / | Standard Method | ds                 |           |             |              |          |          |            |       |
| % Moisture                            | 10.0            | 0.1                | %         | 1           | P0A1709      | 01/17/20 | 01/17/20 | ASTM D2216 |       |
| Total Petroleum Hydrocarbons C6-C35 l | oy EPA Method 8 | 015M               |           |             |              |          |          |            |       |
| C6-C12                                | ND              | 27.8               | mg/kg dry | 1           | P0A1711      | 01/17/20 | 01/19/20 | TPH 8015M  |       |
| >C12-C28                              | ND              | 27.8               | mg/kg dry | 1           | P0A1711      | 01/17/20 | 01/19/20 | TPH 8015M  |       |
| >C28-C35                              | ND              | 27.8               | mg/kg dry | 1           | P0A1711      | 01/17/20 | 01/19/20 | TPH 8015M  |       |
| Surrogate: 1-Chlorooctane             |                 | 124 %              | 70-1      | 30          | P0A1711      | 01/17/20 | 01/19/20 | TPH 8015M  |       |
| Surrogate: o-Terphenyl                |                 | 137 %              | 70-1      | 30          | P0A1711      | 01/17/20 | 01/19/20 | TPH 8015M  | S-GC  |
| Total Petroleum Hydrocarbon C6-C35    | ND              | 27.8               | mg/kg dry | 1           | [CALC]       | 01/17/20 | 01/19/20 | calc       |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

### 2020-WSW-2 @ 18' 0A16010-02 (Soil)

| Result      | Reporting<br>Limit                       | Units     | Dilution  | Batch   | Prepared                                  | Analyzed   | Method  | Notes |
|-------------|--|-----------|---|---------|---|--|---|-------|
| Perr        | nian Basin E                             | nvironmer | ıtal Lab, I   | P.      |   |  |   |       |
|             |  |           |   |         |   |  |   |       |
| ND          | 0.00109                                  | mg/kg dry | 1   | P0A1702 | 01/17/20                                  | 01/17/20   | EPA 8021B   |       |
| ND          | 0.00109                                  | mg/kg dry | 1   | P0A1702 | 01/17/20                                  | 01/17/20   | EPA 8021B   |       |
| ND          | 0.00109                                  | mg/kg dry | 1   | P0A1702 | 01/17/20                                  | 01/17/20   | EPA 8021B   |       |
| ND          | 0.00217                                  | mg/kg dry | 1   | P0A1702 | 01/17/20                                  | 01/17/20   | EPA 8021B   |       |
| ND          | 0.00109                                  | mg/kg dry | 1   | P0A1702 | 01/17/20                                  | 01/17/20   | EPA 8021B   |       |
|             | 105 %                                    | 75-1      | 25  | P0A1702 | 01/17/20                                  | 01/17/20   | EPA 8021B   |       |
|             | 102 %                                    | 75-1      | 25  | P0A1702 | 01/17/20                                  | 01/17/20   | EPA 8021B   |       |
| ndard Metho | ds                                       |           |   |         |   |  |   |       |
| 8.0         | 0.1                                      | %         | 1   | P0A1709 | 01/17/20                                  | 01/17/20   | ASTM D2216  |       |
| PA Method 8 | 015M                                     |           |   |         |   |  |   |       |
| ND          | 27.2                                     | mg/kg dry | 1   | P0A1711 | 01/17/20                                  | 01/19/20   | TPH 8015M   |       |
| ND          | 27.2                                     | mg/kg dry | 1   | P0A1711 | 01/17/20                                  | 01/19/20   | TPH 8015M   |       |
| ND          | 27.2                                     | mg/kg dry | 1   | P0A1711 | 01/17/20                                  | 01/19/20   | TPH 8015M   |       |
|             | 120 %                                    | 70-1      | 30  | P0A1711 | 01/17/20                                  | 01/19/20   | TPH 8015M   |       |
|             | 130 %                                    | 70-1      | 30  | P0A1711 | 01/17/20                                  | 01/19/20   | TPH 8015M   |       |
| ND          | 27.2                                     | mg/kg dry | 1   | [CALC]  | 01/17/20                                  | 01/19/20   | calc  |       |
|             | ND ND ND ND ND ND ND ND ND ND ND ND ND N | ND        | ND   0.00109   mg/kg dry   ND   0.00109   mg/kg dry   ND   0.00109   mg/kg dry   ND   0.00217   mg/kg dry   ND   0.00109   mg/kg dry   ND   0.00109   mg/kg dry   ND   0.00109   mg/kg dry   ND   0.00109   mg/kg dry   105 %   75-1   102 %   75-1   102 %   75-1   102 %   75-1   ND   27.2   mg/kg dry   ND   27.2   mg/kg dry   ND   27.2   mg/kg dry   ND   27.2   mg/kg dry   ND   27.2   mg/kg dry   120 %   70-1   130 %   70-1 | ND      | Result   Limit   Units   Dilution   Batch | Result   Limit   Units   Dilution   Batch   Prepared | Result   Limit   Units   Dilution   Batch   Prepared   Analyzed | ND    |

RPD

%REC

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705

Project Manager: Curt Stanley

Spike

Source

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

Reporting

0.00

0.00

0.00

0.00

0.118

0.122

| Analyte                                | Result | Limit   | Units     | Level      | Result    | %REC     | Limits | RPD   | Limit | Notes |
|--|--------|---------|-----------|------------|-----------|----------|--------|-------|-------|-------|
| Batch P0A1702 - General Preparation (C | GC)    |         |           |            |           |          |        |       |       |       |
| Blank (P0A1702-BLK1)                   |        |         |           | Prepared & | Analyzed: | 01/17/20 |        |       |       |       |
| Benzene                                | ND     | 0.00100 | mg/kg wet |            |           |          |        |       |       |       |
| Toluene                                | ND     | 0.00100 | "         |            |           |          |        |       |       |       |
| Ethylbenzene                           | ND     | 0.00100 | "         |            |           |          |        |       |       |       |
| Xylene (p/m)                           | ND     | 0.00200 | "         |            |           |          |        |       |       |       |
| Xylene (o)                             | ND     | 0.00100 | "         |            |           |          |        |       |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.122  |         | "         | 0.120      |           | 101      | 75-125 |       |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.119  |         | "         | 0.120      |           | 98.9     | 75-125 |       |       |       |
| LCS (P0A1702-BS1)                      |        |         |           | Prepared & | Analyzed: | 01/17/20 |        |       |       |       |
| Benzene                                | 0.114  | 0.00100 | mg/kg wet | 0.100      |           | 114      | 70-130 |       |       |       |
| Toluene                                | 0.118  | 0.00100 | "         | 0.100      |           | 118      | 70-130 |       |       |       |
| Ethylbenzene                           | 0.115  | 0.00100 | "         | 0.100      |           | 115      | 70-130 |       |       |       |
| Xylene (p/m)                           | 0.231  | 0.00200 | "         | 0.200      |           | 116      | 70-130 |       |       |       |
| Xylene (o)                             | 0.105  | 0.00100 | "         | 0.100      |           | 105      | 70-130 |       |       |       |
| Surrogate: 1,4-Difluorobenzene         | 0.123  |         | "         | 0.120      |           | 103      | 75-125 |       |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.126  |         | "         | 0.120      |           | 105      | 75-125 |       |       |       |
| LCS Dup (P0A1702-BSD1)                 |        |         |           | Prepared & | Analyzed: | 01/17/20 |        |       |       |       |
| Benzene                                | 0.116  | 0.00100 | mg/kg wet | 0.100      |           | 116      | 70-130 | 1.73  | 20    |       |
| Toluene                                | 0.116  | 0.00100 | "         | 0.100      |           | 116      | 70-130 | 1.07  | 20    |       |
| Ethylbenzene                           | 0.113  | 0.00100 | "         | 0.100      |           | 113      | 70-130 | 1.26  | 20    |       |
| Xylene (p/m)                           | 0.229  | 0.00200 | "         | 0.200      |           | 115      | 70-130 | 0.846 | 20    |       |
| Xylene (o)                             | 0.106  | 0.00100 | "         | 0.100      |           | 106      | 70-130 | 0.598 | 20    |       |
| Surrogate: 1,4-Difluorobenzene         | 0.124  |         | "         | 0.120      |           | 103      | 75-125 |       |       |       |
| Surrogate: 4-Bromofluorobenzene        | 0.124  |         | "         | 0.120      |           | 103      | 75-125 |       |       |       |
| Calibration Blank (P0A1702-CCB1)       |        |         |           | Prepared & | Analyzed: | 01/17/20 |        |       |       |       |
| Benzene                                | 0.00   |         | mg/kg wet |            |           |          |        |       |       |       |

Permian Basin Environmental Lab, L.P.

Toluene

Ethylbenzene

Xylene (p/m)

Surrogate: 1,4-Difluorobenzene

Surrogate: 4-Bromofluorobenzene

Xylene (o)

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

98.5

102

75-125

75-125

0.120

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|--|--------|--------------------|-----------|----------------|------------------|----------|----------------|-----|--------------|-------|
| Batch P0A1702 - General Preparation (C | GC)    |                    |           |                |                  |          |                |     |              |       |
| Calibration Blank (P0A1702-CCB2)       |        |                    |           | Prepared &     | z Analyzed:      | 01/17/20 |                |     |              |       |
| Benzene                                | 0.00   |                    | mg/kg wet |                |                  |          |                |     |              |       |
| Toluene                                | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Ethylbenzene                           | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Xylene (p/m)                           | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Xylene (o)                             | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.120  |                    | "         | 0.120          |                  | 100      | 75-125         |     |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.123  |                    | "         | 0.120          |                  | 103      | 75-125         |     |              |       |
| Calibration Blank (P0A1702-CCB3)       |        |                    |           | Prepared &     | Analyzed:        | 01/17/20 |                |     |              |       |
| Benzene                                | 0.00   |                    | mg/kg wet |                |                  |          |                |     |              |       |
| Γoluene                                | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Ethylbenzene                           | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Xylene (p/m)                           | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Xylene (o)                             | 0.00   |                    | "         |                |                  |          |                |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.118  |                    | "         | 0.120          |                  | 98.6     | 75-125         |     |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.119  |                    | "         | 0.120          |                  | 98.9     | 75-125         |     |              |       |
| Calibration Check (P0A1702-CCV1)       |        |                    |           | Prepared &     | Analyzed:        | 01/17/20 |                |     |              |       |
| Benzene                                | 0.109  | 0.00100            | mg/kg wet | 0.100          |                  | 109      | 80-120         |     |              |       |
| Toluene                                | 0.104  | 0.00100            | "         | 0.100          |                  | 104      | 80-120         |     |              |       |
| Ethylbenzene                           | 0.104  | 0.00100            | "         | 0.100          |                  | 104      | 80-120         |     |              |       |
| Xylene (p/m)                           | 0.221  | 0.00200            | "         | 0.200          |                  | 110      | 80-120         |     |              |       |
| Xylene (o)                             | 0.112  | 0.00100            | "         | 0.100          |                  | 112      | 80-120         |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.121  |                    | "         | 0.120          |                  | 101      | 75-125         |     |              |       |
| Surrogate: 4-Bromofluorobenzene        | 0.120  |                    | "         | 0.120          |                  | 100      | 75-125         |     |              |       |
| Calibration Check (P0A1702-CCV2)       |        |                    |           | Prepared &     | Analyzed:        | 01/17/20 |                |     |              |       |
| Benzene                                | 0.101  | 0.00100            | mg/kg wet | 0.100          |                  | 101      | 80-120         |     |              |       |
| Γoluene                                | 0.104  | 0.00100            | "         | 0.100          |                  | 104      | 80-120         |     |              |       |
| Ethylbenzene                           | 0.106  | 0.00100            | "         | 0.100          |                  | 106      | 80-120         |     |              |       |
| Xylene (p/m)                           | 0.209  | 0.00200            | "         | 0.200          |                  | 105      | 80-120         |     |              |       |
| Xylene (o)                             | 0.109  | 0.00100            | "         | 0.100          |                  | 109      | 80-120         |     |              |       |
| Surrogate: 1,4-Difluorobenzene         | 0.124  |                    | "         | 0.120          |                  | 103      | 75-125         |     |              |       |

Permian Basin Environmental Lab, L.P.

Surrogate: 4-Bromofluorobenzene

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

106

75-125

0.120

TRC Solutions- Midland, Texas

10 Desta Dr STE 150E Midland TX, 79705

Surrogate: 4-Bromofluorobenzene

Project: Monument 18

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Organics by GC - Quality Control Permian Basin Environmental Lab, L.P.

| Analyte                                  | Result | Reporting<br>Limit | Units     | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|--|--------|--------------------|-----------|----------------|------------------|----------|----------------|-----|--------------|-------|
| Batch P0A1702 - General Preparation (GC) |        |                    |           |                |                  |          |                |     |              |       |
| Calibration Check (P0A1702-CCV3)         |        |                    |           | Prepared &     | Analyzed:        | 01/17/20 |                |     |              |       |
| Benzene                                  | 0.100  | 0.00100            | mg/kg wet | 0.100          |                  | 100      | 80-120         |     |              |       |
| Toluene                                  | 0.102  | 0.00100            | "         | 0.100          |                  | 102      | 80-120         |     |              |       |
| Ethylbenzene                             | 0.102  | 0.00100            | "         | 0.100          |                  | 102      | 80-120         |     |              |       |
| Xylene (p/m)                             | 0.204  | 0.00200            | "         | 0.200          |                  | 102      | 80-120         |     |              |       |
| Xylene (o)                               | 0.108  | 0.00100            | "         | 0.100          |                  | 108      | 80-120         |     |              |       |
| Surrogate: 1,4-Difluorobenzene           | 0.124  |                    | "         | 0.120          |                  | 103      | 75-125         |     |              |       |
| Surrogate: 4-Bromofluorobenzene          | 0.123  |                    | "         | 0.120          |                  | 102      | 75-125         |     |              |       |
| Matrix Spike (P0A1702-MS1)               | Sou    | ırce: 0A17001      | -01       | Prepared &     | Analyzed:        | 01/17/20 |                |     |              |       |
| Benzene                                  | 0.0897 | 0.00106            | mg/kg dry | 0.106          | 0.00589          | 78.8     | 80-120         |     |              | QM-07 |
| Toluene                                  | 0.0911 | 0.00106            | "         | 0.106          | 0.0118           | 74.6     | 80-120         |     |              | QM-07 |
| Ethylbenzene                             | 0.105  | 0.00106            | "         | 0.106          | ND               | 98.7     | 80-120         |     |              |       |
| Xylene (p/m)                             | 0.182  | 0.00213            | "         | 0.213          | 0.0196           | 76.3     | 80-120         |     |              | QM-07 |
| Xylene (o)                               | 0.0859 | 0.00106            | "         | 0.106          | 0.00357          | 77.4     | 80-120         |     |              | QM-07 |
| Surrogate: 1,4-Difluorobenzene           | 0.127  |                    | "         | 0.128          |                  | 99.4     | 75-125         |     |              |       |

0.128

105

75-125

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705 Project Number: TNM-Monument 18

Project Manager: Curt Stanley

# General Chemistry Parameters by EPA / Standard Methods - Quality Control Permian Basin Environmental Lab, L.P.

|                                      |                    | Reporting     |                               | Spike      | Source      |            | %REC   |      | RPD   |       |
|--------------------------------------|--------------------|---------------|-------------------------------|------------|-------------|------------|--------|------|-------|-------|
| Analyte                              | Result             | Limit         | Units                         | Level      | Result      | %REC       | Limits | RPD  | Limit | Notes |
| Batch P0A1709 - *** DEFAULT PREP *** |                    |               |                               |            |             |            |        |      |       |       |
| Blank (P0A1709-BLK1)                 |                    |               |                               | Prepared & | Analyzed:   | 01/17/20   |        |      |       |       |
| % Moisture                           | ND                 | 0.1           | %                             |            |             |            |        |      |       |       |
| Duplicate (P0A1709-DUP1)             | Source: 0A15004-73 |               | Prepared & Analyzed: 01/17/20 |            |             |            |        |      |       |       |
| % Moisture                           | 4.0                | 0.1           | %                             |            | 4.0         |            |        | 0.00 | 20    |       |
| Duplicate (P0A1709-DUP2)             | Source: 0A15004-46 |               | Prepared & Analyzed: 01/17/20 |            |             |            |        |      |       |       |
| % Moisture                           | 7.0                | 0.1           | %                             |            | 7.0         |            |        | 0.00 | 20    |       |
| Duplicate (P0A1709-DUP3)             | Source: 0A15005-19 |               | Prepared & Analyzed: 01/17/20 |            |             |            |        |      |       |       |
| % Moisture                           | 4.0                | 0.1           | %                             |            | 4.0         |            |        | 0.00 | 20    |       |
| Duplicate (P0A1709-DUP4)             | Source: 0A15007-08 |               | Prepared & Analyzed: 01/17/20 |            |             |            |        |      |       |       |
| % Moisture                           | 10.0               | 0.1           | %                             |            | 10.0        |            |        | 0.00 | 20    |       |
| Duplicate (P0A1709-DUP5)             | Source: 0A15010-06 |               | Prepared & Analyzed: 01/17/20 |            |             |            |        |      |       |       |
| % Moisture                           | 7.0                | 0.1           | %                             |            | 7.0         |            |        | 0.00 | 20    |       |
| Duplicate (P0A1709-DUP6)             | Source: 0A16004-39 |               | Prepared & Analyzed: 01/17/20 |            |             |            |        |      |       |       |
| % Moisture                           | 8.0                | 0.1           | %                             |            | 8.0         |            |        | 0.00 | 20    |       |
| Duplicate (P0A1709-DUP7)             | Sou                | rce: 0A16011- | 01                            | Prepared & | : Analyzed: | : 01/17/20 |        |      |       |       |
| % Moisture                           | 3.0                | 0.1           | %                             |            | 4.0         |            |        | 28.6 | 20    |       |

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E Midland TX, 79705

Project Number: TNM-Monument 18

Project Manager: Curt Stanley

## Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  | D 1:   | Reporting                             | TT **     | Spike       | Source      | N/DEG       | %REC   | DDD   | RPD   | 27.   |
|----------------------------------|--------|---------------------------------------|-----------|-------------|-------------|-------------|--------|-------|-------|-------|
| Analyte                          | Result | Limit                                 | Units     | Level       | Result      | %REC        | Limits | RPD   | Limit | Notes |
| Batch P0A1711 - TX 1005          |        |                                       |           |             |             |             |        |       |       |       |
| Blank (P0A1711-BLK1)             |        |                                       |           | Prepared: ( | 01/17/20 Aı | nalyzed: 01 | /19/20 |       |       |       |
| C6-C12                           | ND     | 25.0                                  | mg/kg wet |             |             |             |        |       |       |       |
| >C12-C28                         | ND     | 25.0                                  | "         |             |             |             |        |       |       |       |
| >C28-C35                         | ND     | 25.0                                  | "         |             |             |             |        |       |       |       |
| Surrogate: 1-Chlorooctane        | 108    |                                       | "         | 100         |             | 108         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 57.6   |                                       | "         | 50.0        |             | 115         | 70-130 |       |       |       |
| LCS (P0A1711-BS1)                |        |                                       |           | Prepared: ( | 01/17/20 Aı | nalyzed: 01 | /19/20 |       |       |       |
| C6-C12                           | 904    | 25.0                                  | mg/kg wet | 1000        |             | 90.4        | 75-125 |       |       |       |
| >C12-C28                         | 1120   | 25.0                                  | "         | 1000        |             | 112         | 75-125 |       |       |       |
| Surrogate: 1-Chlorooctane        | 111    |                                       | "         | 100         |             | 111         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 49.5   |                                       | "         | 50.0        |             | 98.9        | 70-130 |       |       |       |
| LCS Dup (P0A1711-BSD1)           |        |                                       |           | Prepared: ( | 01/17/20 Aı | nalyzed: 01 | /19/20 |       |       |       |
| C6-C12                           | 928    | 25.0                                  | mg/kg wet | 1000        |             | 92.8        | 75-125 | 2.53  | 20    |       |
| >C12-C28                         | 1120   | 25.0                                  | "         | 1000        |             | 112         | 75-125 | 0.384 | 20    |       |
| Surrogate: 1-Chlorooctane        | 115    |                                       | "         | 100         |             | 115         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 51.8   |                                       | "         | 50.0        |             | 104         | 70-130 |       |       |       |
| Calibration Blank (P0A1711-CCB1) |        | Prepared: 01/17/20 Analyzed: 01/19/20 |           |             |             |             |        |       |       |       |
| C6-C12                           | 18.2   |                                       | mg/kg wet |             |             |             |        |       |       |       |
| >C12-C28                         | 5.78   |                                       | "         |             |             |             |        |       |       |       |
| Surrogate: 1-Chlorooctane        | 106    |                                       | "         | 100         |             | 106         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 57.2   |                                       | "         | 50.0        |             | 114         | 70-130 |       |       |       |
| Calibration Check (P0A1711-CCV1) |        |                                       |           | Prepared: ( | 01/17/20 Aı | nalyzed: 01 | /19/20 |       |       |       |
| C6-C12                           | 494    | 25.0                                  | mg/kg wet | 500         |             | 98.9        | 85-115 |       |       |       |
| >C12-C28                         | 569    | 25.0                                  | "         | 500         |             | 114         | 85-115 |       |       |       |
| Surrogate: 1-Chlorooctane        | 108    |                                       | "         | 100         |             | 108         | 70-130 |       |       |       |
| Surrogate: o-Terphenyl           | 53.6   |                                       | "         | 50.0        |             | 107         | 70-130 |       |       |       |

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas

Project: Monument 18

10 Desta Dr STE 150E

Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control Permian Basin Environmental Lab, L.P.

|                                  |                                       | Reporting |                                       | Spike                                 | Source     |             | %REC   |      | RPD   |       |
|----------------------------------|---------------------------------------|-----------|---------------------------------------|---------------------------------------|------------|-------------|--------|------|-------|-------|
| Analyte                          | Result                                | Limit     | Units                                 | Level                                 | Result     | %REC        | Limits | RPD  | Limit | Notes |
| Batch P0A1711 - TX 1005          |                                       |           |                                       |                                       |            |             |        |      |       |       |
| Calibration Check (P0A1711-CCV2) |                                       |           |                                       | Prepared: (                           | 01/17/20 A | nalyzed: 01 | /19/20 |      |       |       |
| C6-C12                           | 490                                   | 25.0      | mg/kg wet                             | 500                                   |            | 98.1        | 85-115 |      |       |       |
| >C12-C28                         | 567                                   | 25.0      | "                                     | 500                                   |            | 113         | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 105                                   |           | "                                     | 100                                   |            | 105         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 56.7                                  |           | "                                     | 50.0                                  |            | 113         | 70-130 |      |       |       |
| Calibration Check (P0A1711-CCV3) | Prepared: 01/17/20 Analyzed: 01/19/20 |           |                                       |                                       |            |             |        |      |       |       |
| C6-C12                           | 486                                   | 25.0      | mg/kg wet                             | 500                                   |            | 97.1        | 85-115 |      |       |       |
| >C12-C28                         | 574                                   | 25.0      | "                                     | 500                                   |            | 115         | 85-115 |      |       |       |
| Surrogate: 1-Chlorooctane        | 105                                   |           | "                                     | 100                                   |            | 105         | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 52.1                                  |           | "                                     | 50.0                                  |            | 104         | 70-130 |      |       |       |
| Matrix Spike (P0A1711-MS1)       | Source: 0A16016-01                    |           |                                       | Prepared: 01/17/20 Analyzed: 01/19/20 |            |             |        |      |       |       |
| C6-C12                           | 867                                   | 26.6      | mg/kg dry                             | 1060                                  | 17.1       | 79.9        | 75-125 |      |       |       |
| >C12-C28                         | 1040                                  | 26.6      | "                                     | 1060                                  | 16.0       | 96.2        | 75-125 |      |       |       |
| Surrogate: 1-Chlorooctane        | 99.6                                  |           | "                                     | 106                                   |            | 93.6        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 53.5                                  |           | "                                     | 53.2                                  |            | 101         | 70-130 |      |       |       |
| Matrix Spike Dup (P0A1711-MSD1)  | Source: 0A16016-01                    |           | Prepared: 01/17/20 Analyzed: 01/19/20 |                                       |            |             |        |      |       |       |
| C6-C12                           | 827                                   | 26.6      | mg/kg dry                             | 1060                                  | 17.1       | 76.1        | 75-125 | 4.80 | 20    |       |
| >C12-C28                         | 995                                   | 26.6      | "                                     | 1060                                  | 16.0       | 92.0        | 75-125 | 4.47 | 20    |       |
| Surrogate: 1-Chlorooctane        | 94.1                                  |           | "                                     | 106                                   |            | 88.5        | 70-130 |      |       |       |
| Surrogate: o-Terphenyl           | 51.1                                  |           | "                                     | 53.2                                  |            | 96.0        | 70-130 |      |       |       |

Fax: (432) 520-7701 TRC Solutions- Midland, Texas Project: Monument 18

10 Desta Dr STE 150E Project Number: TNM-Monument 18 Midland TX, 79705 Project Manager: Curt Stanley

#### **Notes and Definitions**

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

ROI Received on Ice

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

BULK Samples received in Bulk soil containers

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

Sample results reported on a dry weight basis dry

Relative Percent Difference RPD

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

TRC Solutions- Midland, Texas Project: Monument 18 Fax: (432) 520-7701

10 Desta Dr STE 150E Project Number: TNM-Monument 18

Midland TX, 79705 Project Manager: Curt Stanley

Permian Basin Environmental Lab, L.P.

# Appendix D NMOCD Release Notification and Corrective Action (Form C-141)

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

### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Attached

#### **Release Notification and Corrective Action OPERATOR** x Initial Report Final Report Plains Pipeline, LP Contact: Camille Reynolds Name of Company 3705 E. Hwy 158, Midland, TX 79706 Address: Telephone No. 505-441-0965 Monument # 18 Facility Type: Facility Name Pipeline Surface Owner: Mineral Owner Lease No. Jim B Cooper LOCATION OF RELEASE Unit Letter Section Township Feet from the North/South Line Feet from the East/West Line Range County D 7 37F Lea Latitude 32 degrees 35' 30.0" Longitude 103 degrees 17' 55.9" NATURE OF RELEASE Type of Release: Volume of Release: Volume Recovered Source of Release: Date and Hour of Occurrence Date and Hour of Discovery Unknown Was Immediate Notice Given? If YES, To Whom? Yes No Not Required By Whom? Date and Hour Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.\* Describe Cause of Problem and Remedial Action Taken.\* Describe Area Affected and Cleanup Action Taken.\* NOTE: Texas-New Mexico Pipeline was the owner/operator of the pipeline system at the time of the release, initial response information is unavailable. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Camille Reynolds Title: Remediation Coordinator Approval Date: **Expiration Date:**

Conditions of Approval:

cjreynolds@paalp.com

Phone:

(505)441-0965

E-mail Address:

Date: 3/21/2005

<sup>\*</sup> Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

CONDITIONS

Action 30997

#### **CONDITIONS**

| Operator:             | OGRID:                                    |
|-----------------------|---|
| PLAINS MARKETING L.P. | 34053                                     |
| 333 Clay St, Ste 1600 | Action Number:                            |
| Houston, TX 77002     | 30997                                     |
|                       | Action Type:                              |
|                       | [C-141] Release Corrective Action (C-141) |

#### CONDITIONS

| Created   | Condition   | Condition |
|-----------|---|-----------|
| Ву        |   | Date      |
| bbillings | OCD requests that Plains check with the SLO (NM) to evaluate their desire or not to maintain any of the current monitor wells Please then inform OCD of those remaining and or plugging of monitor wells. | 6/8/2021  |