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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company ConocoPhillips	Contact Gwen Frost
Address 600 N. Dairy Ashford Rd., Houston, TX	Telephone No. 505-326-9549
Facility Name Krause WN Federal No. 2	Facility Type Natural Gas Well

Surface Owner Federal	Mineral Owner Federal (SF-078863)	API No. 30-045-07225

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	28	28N	11W	1000	North	1000	East	San Juan

OIL CONS. DIV DIST. 3

JUN 26 2017

Latitude 36.63777 **Longitude** 108.00393

NATURE OF RELEASE

Type of Release Hydrocarbons	Volume of Release Unk	Volume Recovered 0
Source of Release Buried Oil Dump line between separator and pit tank	Date and Hour of Occurrence Unk	Date and Hour of Discovery 02/08/15 8:30 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.* Stained soils observed between separator and pit tank. Leak from buried oil dump line between the two equipment. Hand auguring/soil sampling to 5 ft depth indicated impacted soils beneath surface. Approx. 1300 cy soil (excavated: 43.5' x 54.5' x 15' deep -loosely cemented sandstone) removed March 2015. Confirmation samples indicated 3 of 4 sidewalls and the bottom of excavation remained impacted. One boring to 36.5 ft indicated hydrocarbon impacts to at least 30 ft; another boring to the east of the excavated area delineated no impacts in this direction. March 2016 excavation increased to 80' x 72' x 17' deep. Approx. 1,474 cy additional impacted soil hauled for offsite disposal. Excavation halted due to terrain/utilities/bedrock. Three of four sidewalls and bottom impacted above 100ppm TPH from confirm. sample analyses. NMOCD agrees to allow bottom and sides of excavation be sprayed with Quantum Growth and excavation backfilled providing subsequent horiz. and vert. delineation of hydrocarbon impacts. Excavation backfilled March 14-17, 2016.

Describe Area Affected and Cleanup Action Taken.*
See C-141 *Updated* Initial, dated 3/7/2017, for details on actions taken to date. Based on a total source area soil removal of approximately 3,600 cy and post assessment soil boring data, ConocoPhillips concludes that hydrocarbons remaining in the subsurface at the site pose no threat to human health or the environment. Laboratory samples from all post-assessment soil borings showed TPH concentrations below 100 ppm TPH at their termination in a dry, hard shale layer. Concentrations of BTEX constituents are below RRALs established for the site in all samples. A minimal separation of 40 ft between the bottom of soil impacts and groundwater is also documented for the site. The evaluation of potential pathways and receptors based on total impacted soil removal to date and the relationship to hydrocarbons remaining in the subsurface supports the conclusion that no further action is necessary. A no further action status for the site is therefore requested.

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

Signature: Gwen R. Frost	OIL CONSERVATION DIVISION	
Printed Name: Gwen R. Frost	Approved by Environmental Specialist:	
Title: Environmental Coordinator	Approval Date: 8/24/17	Expiration Date:
E-mail Address: frostg@conocophillips.com	Conditions of Approval: —	Attached ☐
Date: June 20, 2017 Phone:505-326-9549		

#NCS1723633666

108

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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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 August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ConocoPhillips	Contact Brady Crouch
Address 600 N. Dairy Ashford Rd., Houston, TX	Telephone No. 832-486-3016
Facility Name Krause WN Federal No. 2	Facility Type Natural Gas Well

Surface Owner Federal	Mineral Owner Federal (SF-078863)	API No. 30-045-07225

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	28	28N	11W	1000	North	1000	East	San Juan

Latitude 36.63777 Longitude 108.00393

NATURE OF RELEASE

Type of Release Hydrocarbons	Volume of Release Unk	Volume Recovered 0
Source of Release Buried Oil Dump line between separator and pit tank	Date and Hour of Occurrence Unk	Date and Hour of Discovery 02/08/15 8:30 a.m.
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

OIL CONS DIV DIST. 3
MAR 10 2017

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

Describe Cause of Problem and Remedial Action Taken.* Stained soils observed between separator and pit tank. Leak from buried oil dump line between the two equipment. Hand auguring/soil sampling to 5 ft depth indicated impacted soils beneath surface. Approx. 1300 cy soil (excavated: 43.5' x 54.5' x 15' deep -loosely cemented sandstone) removed March 2015. Confirmation samples indicated 3 of 4 sidewalls and the bottom of excavation remained impacted. One boring to 36.5 ft indicated hydrocarbon impacts to at least 30 ft; another boring to the east of the excavated area delineated no impacts in this direction. March 2016 excavation increased to 80' x 72' x 17' deep. Approx. 1,474 cy additional impacted soil hauled for offsite disposal. Excavation halted due to terrain/utilities/bedrock. Three of four sidewalls and bottom impacted above 100ppm TPH from confirm. sample analyses. NMOCD agrees to allow bottom and sides of excavation be sprayed with Quantum Growth and excavation backfilled providing subsequent horiz. and vert. delineation of hydrocarbon impacts. Excavation backfilled March 14-17, 2016.

Describe Area Affected and Cleanup Action Taken.*
Eight soil borings were drilled and sampled May 23-25, 2016 to further delineate extent of subsurface hydrocarbon impacts. Borings were drilled to depths of 26 to 49 ft deep. Samples were collected by split-spoon and analyzed for TPH and BTEX constituents. An area of greater than 100 ppm TPH with approx. max dimension of 160' x 120' and, in places, up to approx. 40 ft deep was delineated. To further characterize site for potential human health and environmental impacts, additional soil samples will be collected and analyzed for TX1005/TX1006 and PAH constituents. Results will be used in a human health risk and ecological risk assessment to ascertain if further site remediation may be warranted.

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

Signature: Joseph B. Crouch	OIL CONSERVATION DIVISION
Printed Name: Joseph Brady Crouch	Approved by Environmental Specialist:
Title: Program Manager - RM&R	Approval Date: / Expiration Date:
E-mail Address: j.brady.crouch@cop.com	Conditions of Approval: / Attached ☐
Date: 3-7-17 Phone: 832-486-3016	

* Attach Additional Sheets If Necessary

August 5, 2016 Reference No. 11102674

Mr. B. Keith Coffman
ConocoPhillips Company
600 N. Dairy Ashford
Houston, Texas 77079

Dear Mr. Coffman:

Re: Site Assessment and Remediation Summary Report
Krause WN Federal No. 2
San Juan County, New Mexico

On behalf of ConocoPhillips Company (ConocoPhillips), GHD Services Inc. (GHD) is providing this Site Assessment and Remediation Summary Report for the above-referenced site. The Krause WN Federal No. 2 site (hereafter referred to as the "Site") is located on land owned by the United States Department of the Interior Bureau of Land Management (BLM) within Section 28, Township 28 North, and Range 11 West in San Juan County, New Mexico. Geographical coordinates for the Site are 36.63779° North, 108.00364° West (Figure 1). The Site consists of an active gas well and associated production equipment (Figure 2).

1. Introduction

Site remediation was performed in order to address soil impacts from a historical release of an unknown quantity of natural gas condensate. A remediation work plan that included the excavation of impacted soil was submitted to the New Mexico Oil Conservation Division (NMOCD) and the BLM Farmington Field Office for approval. The GHD work plan was approved by BLM and by NMOCD prior to commencement of remediation activities.

1.1 Site History

An initial release assessment was conducted in February 2015 by Animas Environmental Services, LLC (AES) after hydrocarbon impacted soil was discovered on the surface of the Site next to the separator. in the assessment was documented in the May 13, 2015 AES Initial Release Assessment, Excavation and Continued Assessment Report. In this report, the Site was assigned Recommended Remediation Action Levels (RRALs) in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. RRALs were established primarily based on the distance to a surface water body which identified an unnamed wash located approximately 110 feet to the southeast of the pad. It is believed that the source of the water is from subsurface drainage of pivot-irrigated fields located west of the Site. The fields are operated by Navajo Agricultural Products Industries .

GHD
6121 Indian School Road NE Suite 200 Albuquerque New Mexico 87110 USA
T 505 884 0672 **F** 505 884 4932 **W** www.ghd.com

Based on these criteria, Site specific RRALs are 10 parts per million (ppm) for benzene, 50 ppm for benzene, toluene, ethylbenzene, and xylenes (BTEX), and 100 ppm for total petroleum hydrocarbons (TPH).

During the initial release assessment, AES advanced ten hand auger borings to assess the extent of subsurface hydrocarbon impacts. Boring depths ranged from 0.5 feet to five feet below ground surface (bgs) where refusal was met in sandstone. Field screening results above the RRALs were recorded in several of the soil samples from these borings and excavation of impacted soils was recommended.

On March 30 and March 31, 2015, confirmation soil samples were collected by AES from an excavation that had been conducted by the ConocoPhillips San Juan Business Unit. The excavation was centered on the area of the release beneath the separator and measured approximately 43.5 feet by 54.5 feet by 15 feet deep. The lithology encountered during excavation primarily consisted of loose, weakly-cemented sandstone. The depth to regional groundwater is estimated to be 95 feet bgs based on Site reports posted on NMOCD Online.

AES collected six composite soil samples from the four walls and bottom of the excavation. Soil samples were field screened for volatile organic compounds (VOCs). Selected samples were also field screened for TPH. Two composite samples were submitted for laboratory confirmation analyses (see AES Report in Appendix A for analytical results).

In addition, AES advanced two soil borings using a CME 75 hollow stem auger rig to assess the horizontal and vertical extent of soil impacts within the sandstone. Split spoon samples were collected at five foot intervals with both borings terminating at 36.5 feet bgs in hard shale. One boring, SB-12, was drilled adjacent to the eastern wall of the excavation and encountered a black, hydrocarbon stained layer from 25 to 30 feet bgs. The sample from this layer also indicated elevated field screening levels of VOCs and TPH. A second boring, SB 11, was drilled at the far eastern edge of the well pad. This boring did not encounter any elevated hydrocarbon readings from field screened samples.

The AES Report concluded that since all but one of the sidewall samples and the bottom sample showed contaminant levels above the RRALS, further excavation to remove impacted sandstone was warranted.

2. Remediation Activities

Between March 7 and March 10, 2016, GHD excavated additional hydrocarbon-impacted soils. The dimensions of the final excavation were approximately 80 feet by 72 feet by 17 ft deep (Figure 3). A summary of remediation activities is presented below.

2.1 Excavation and Soil Sampling

During excavation, a calibrated photo-ionization detector and PetroFlag Hydrocarbon Analyzer were used to field screen soil for the presence of VOCs and TPH, respectively. Field screened soils that indicated

TPH concentrations below 100 ppm were segregated to the extent possible and used as eventual backfill material.

Due to the presence of competent bedrock in the bottom of the excavation, large hills to the west, and underground utilities to the east, it became evident that excavation of soils to below Site-specific RRALs would be infeasible.In a March 11, 2016 email correspondence, the NMOCD agreed to allow ConocoPhillips to backfill the excavation and apply a microbial agent to exposed soils contingent upon ConocoPhillips performing additional delineation of soil impacts.

Confirmation composite soil samples were collected from the south, west, and north walls of the excavation (Figure 3). Soil samples were placed in laboratory-supplied containers, labeled, place on ice, and submitted to Pace Analytical Services, Inc. (Pace) in Lenexa, Kansas for analysis. Samples were analyzed for TPH gasoline/diesel/oil-range organics (GRO/DRO/ORO) by Environmental Protection Agency (EPA) Method 8015, and BTEX by EPA Method 8260, and chloride by EPA Method 300.0.

All confirmation samples except from the east end of the south wall returned analytical results above the Site-specific RRALs for TPH, with results ranging from 152.8 milligrams per kilogram (mg/kg,or ppm) to 744.2 mg/kg. Excavation soil laboratory analytical reports are included as Appendix A and summarized on Table 1.

Approximately 1,474 cubic yards (cy) of impacted soils were removed from the site for offsite disposal at the Envirotech landfarm south of the Site. Waste shipment manifests and the disposal facility Waste Acceptance Form (NMOCD Form C-138) have been included as Appendix B.

The excavations were backfilled with segregated field screened soils (i.e., below 100 ppm PID) and clean, imported, BLM-approved fill material. The excavation area was graded to natural ground surface from March 14 through March 17, 2016. A photographic log illustrating excavation activities is included as Appendix C.

2.2 Soil Treatment

On March 14, 2016, prior to initiation of backfilling activities, Nelson Revegetation of Farmington, New Mexico sprayed a solution containing six gallons of Quantum GrowthTM product in 1,000 gallons of water onto the bottom and side walls of the excavation. Quantum GrowthTM was applied to assist in the natural attenuation of hydrocarbon impacts.

2.3 Additional Subsurface Soil Assessment

A workplan to conduct additional site assessment, as prescribed in the NMOCD March 11, 2016 excavation approval letter, was submitted to the NMOCD and to the BLM for approval on April 18, 2016. Approval was received and GHD mobilized to the site and conducted the post-excavation soil assessment on May 23 through 25, 2016. A total of eight soil borings, GB-01 through GB-08, were advanced using hollow stem auger drilling methods to depths of 26 to 49 feet bgs. Figure 4 depicts the boring locations relative to current Site equipment layout. It should be noted that all site equipment, including the

separators, compressor, condensate and produced water tanks, were reset to new or slightly different pre-excavation locations on the Site.

Samples were collected via split-spoon sampler at 5 foot intervals. Soils were logged according to the Unified Soil Classification System by a field geologist. Borings generally encountered relatively soft, incompetent fine to medium grained sandstone overlaying hard, dry shale. The shale layer was encountered at a depth of approximately 25 to 30 feet bgs in borings placed near the southern edge of the Site (borings GB-01 through GB-03). The shale layer appeared to dip sharply to the northeast, being encountered at approximately 40 feet bgs in borings GB-04, GB-05 and GB-08. Logs of the soil borings are included as Appendix D. Geologic cross-sections showing lithology and inferred limits of soil impacts are depicted on Figures 5 and 6.

Each sample interval was field screened using a calibrated photo-ionization detector and at discrete intervals using a PetroFlag hydrocarbon test kit. Once field screening results indicated that the boring had reached a depth such that soils were below the RRALs, laboratory confirmation samples were collected and submitted for analyses of TPH by EPA Method 8015 and for BTEX constituents by EPA Method 8260.

Benzene and BTEX constituents were detected in all samples at concentrations below RRALs. TPH impacts above RRALS ranged from 348.7 ppm at 11 feet bgs in boring GB-08, located nearest the believed point of release at the separator, to 1631.2 ppm in boring GB-04 at 20 feet bgs, a TPH concentration of 522.8 ppm was detected in boring GB-05 located to the north and east of the wellhead. Soil boring laboratory analytical reports are included as Appendix E and summarized on Table 2.

The inferred line of impacted soils depicted in Figure 4 suggests the condensate release migrated north and east from the release point. The release appears to have followed the original topography of the site, moving downhill in this direction.

3. Summary and Recommendations

A summary of the events and findings from the remediation and assessment activities performed at the Site are as follows:

- Approximately 1,474 cy of impacted soil was excavated and transported offsite for disposal;
- Confirmation samples except from the east end of the south wall returned analytical results above the Site specific RRALs for TPH;
- A microbial agent was sprayed onto the bottom and side walls of the excavation in order to assist in the natural attenuation of hydrocarbon impacts; and
- The excavation was backfilled and graded to natural ground surface.
- Soil samples were collected and field screened at five-foot intervals from eight soil borings advanced to depths of 26 to 49 feet bgs to characterize extent of hydrocarbons remaining after excavation.

- Soil boring sample data suggest contaminant migration followed the natural topography that dips to the north and east of the release point.
- TPH contamination above RRALs does not extend off site and does not extend vertically beyond the hard, dry shale layer.

Based on the extent of hydrocarbon contaminants remaining in the subsurface, GHD and ConocoPhillips believes the volume of excavation to date is protective of human health and the environment and recommends no further action at the site.

If you have any questions or comments with regards to this report, please do not hesitate to contact GHD's Albuquerque office at (505) 884-0672.

Sincerely,

GHD

Jeff Walker, CPG, PMP
Senior Project Manager

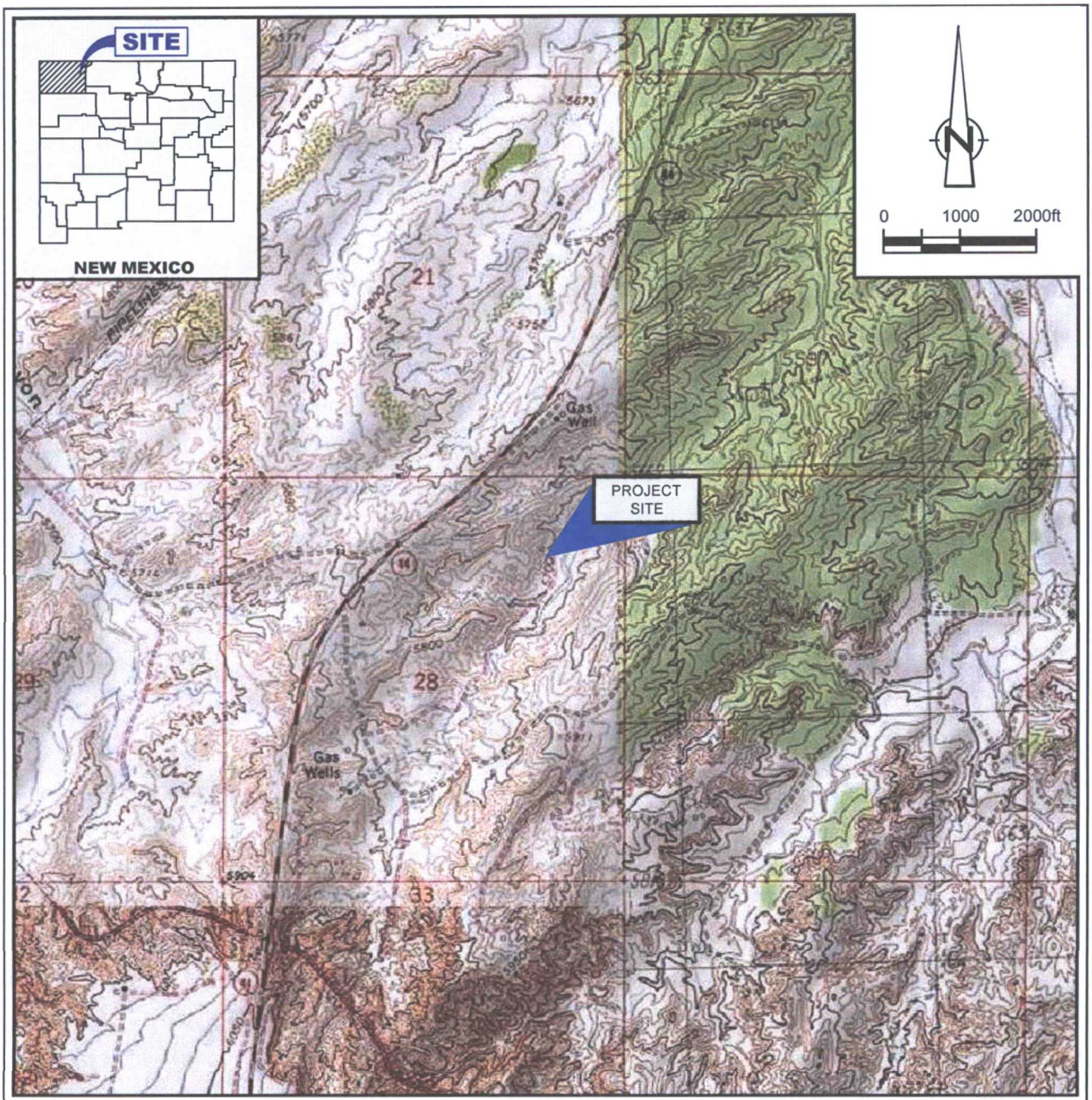
Bernard Bockisch, PMP
Senior Project Manager

JW/mc/2

Enclosures:

- Figure 1 – Site Location Map
- Figure 2 – Site Details Map
- Figure 3 – Excavation Soil Sample Map
- Figure 4 – Soil Boring Assessment Map
- Figure 5 – Cross-Section A-A'
- Figure 6 – Cross-Section B-B'
- Table 1 – Excavation Soil Analytical Results Summary
- Table 2 – Soil Boring Assessment Analytical Results Summary
- Appendix A - Excavation Soils Laboratory Reports
- Appendix B - Waste Manifests/NMOCD Form C-138
- Appendix C – Excavation Photo Log
- Appendix D – Boring Logs
- Appendix E – Soil Boring Assessment Laboratory Reports

Figures



SOURCE: USGS 7.5 MINUTE QUAD
"HORN CANYON AND BLOOMFIELD, NEW MEXICO"

LAT/LONG: 36.6376° NORTH, 108.0038° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO WEST

Figure 1

SITE LOCATION MAP
KRAUSE WN FEDERAL #2
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

11102674-00(001)GN-DL001 JUL 22, 2016

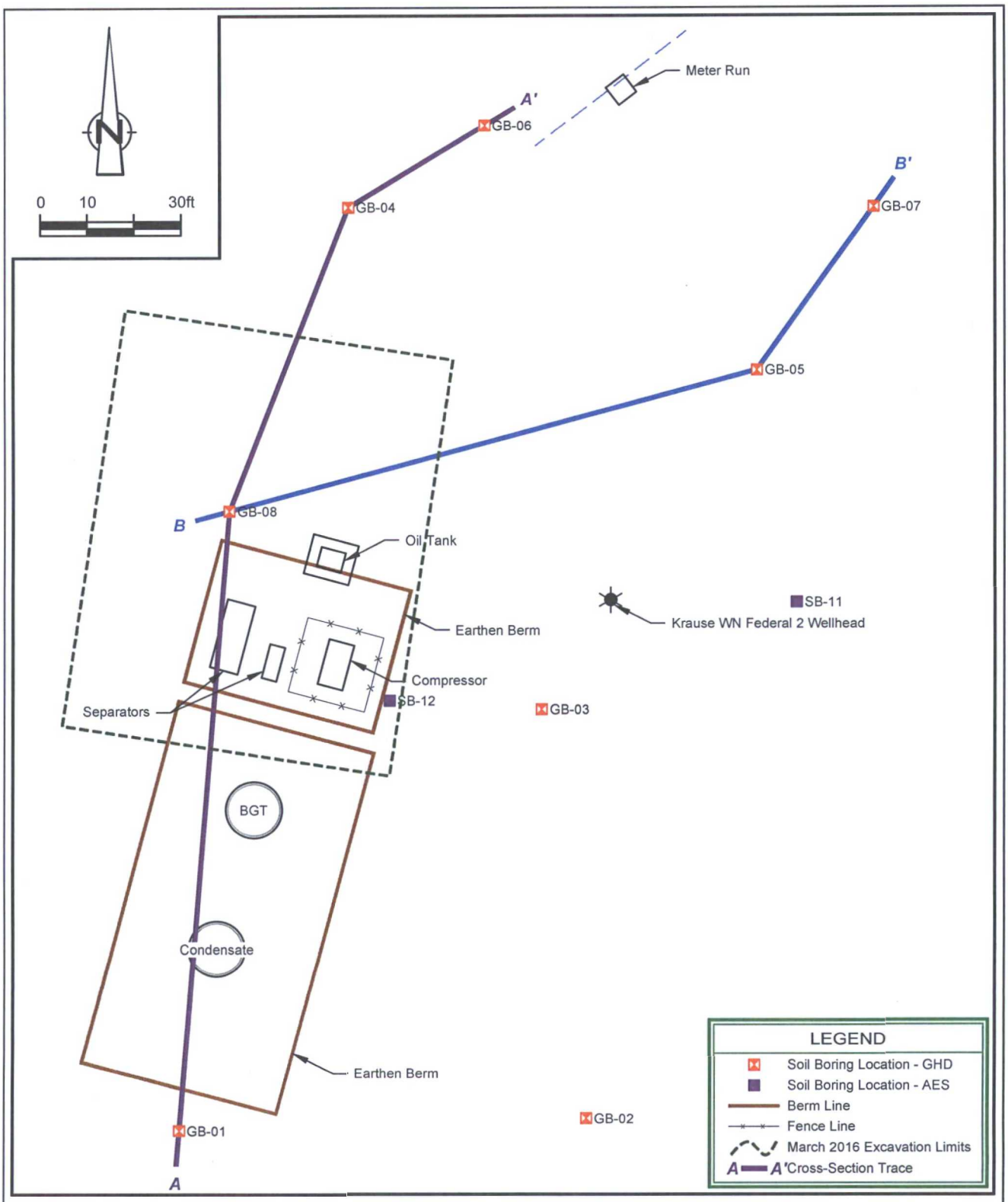


Figure 2

SITE DETAILS MAP
KRAUSE WN FEDERAL #2
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

11102674-00(001)GN-DL001 JUL 22, 2016

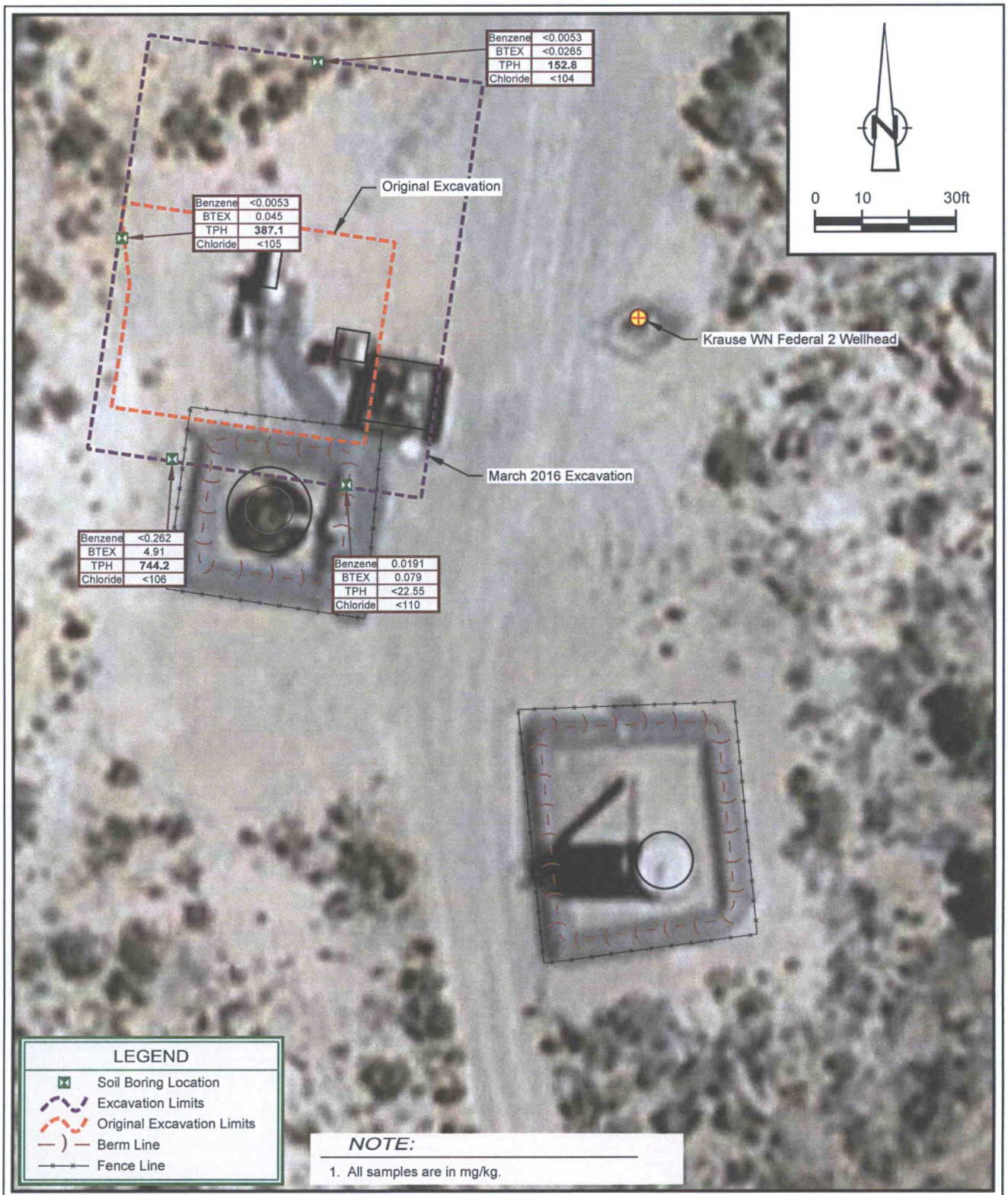


Figure 3

EXCAVATION SOIL SAMPLE MAP
KRAUSE WN FEDERAL #2
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

GHD

11102674-00(000)GN-DL001 AUG 1, 2016

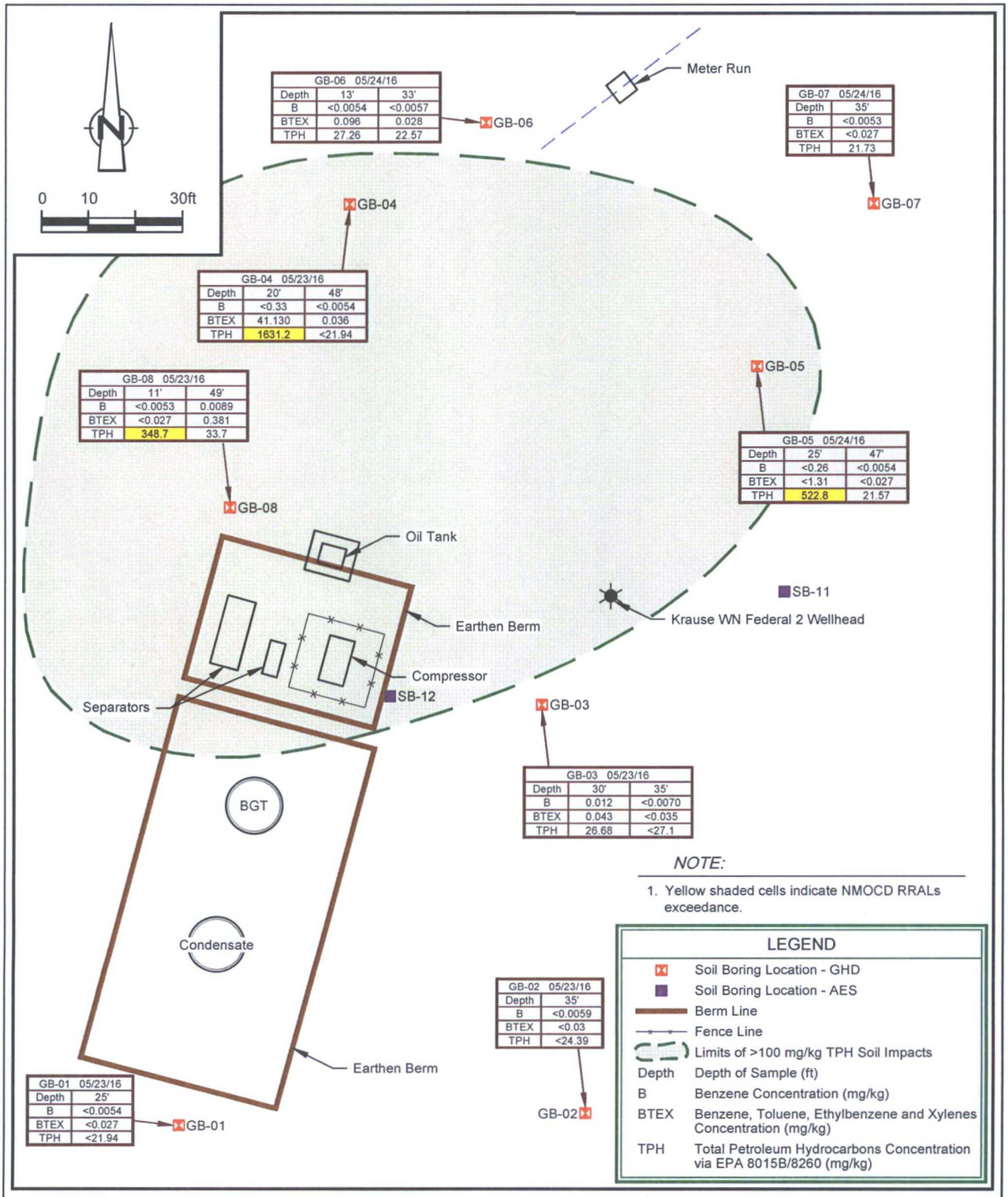
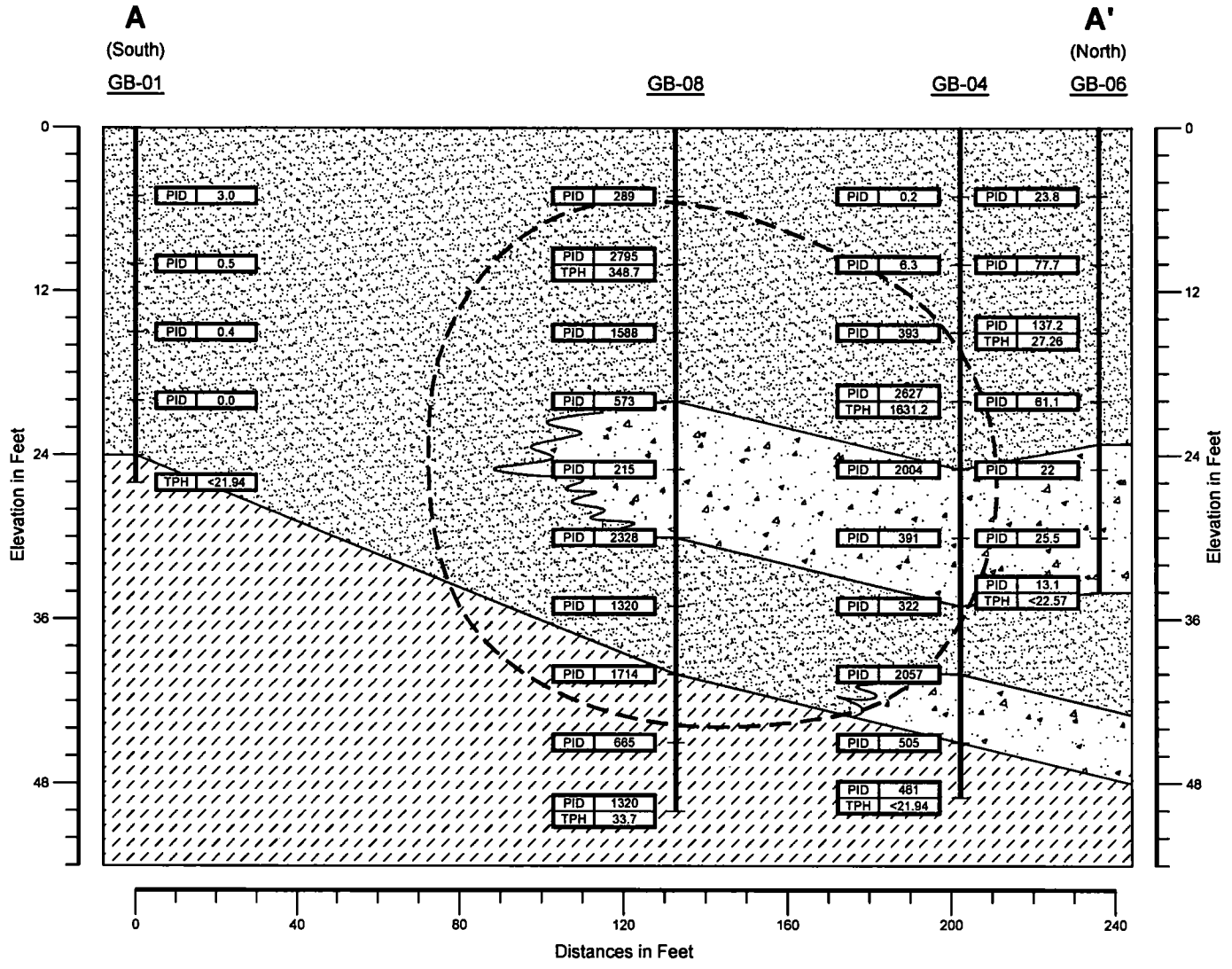


Figure 4

SOIL BORING ASSESSMENT
KRAUSE WN FEDERAL #2
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

11102674-00(001)GN-DL001 AUG 1, 2016



Horizontal Scale: 1" = 40'
Vertical Scale: 1" = 12'

SOIL LEGEND

- Sand (SP)
- Silty Sand (SM)
- Shale (Sh)

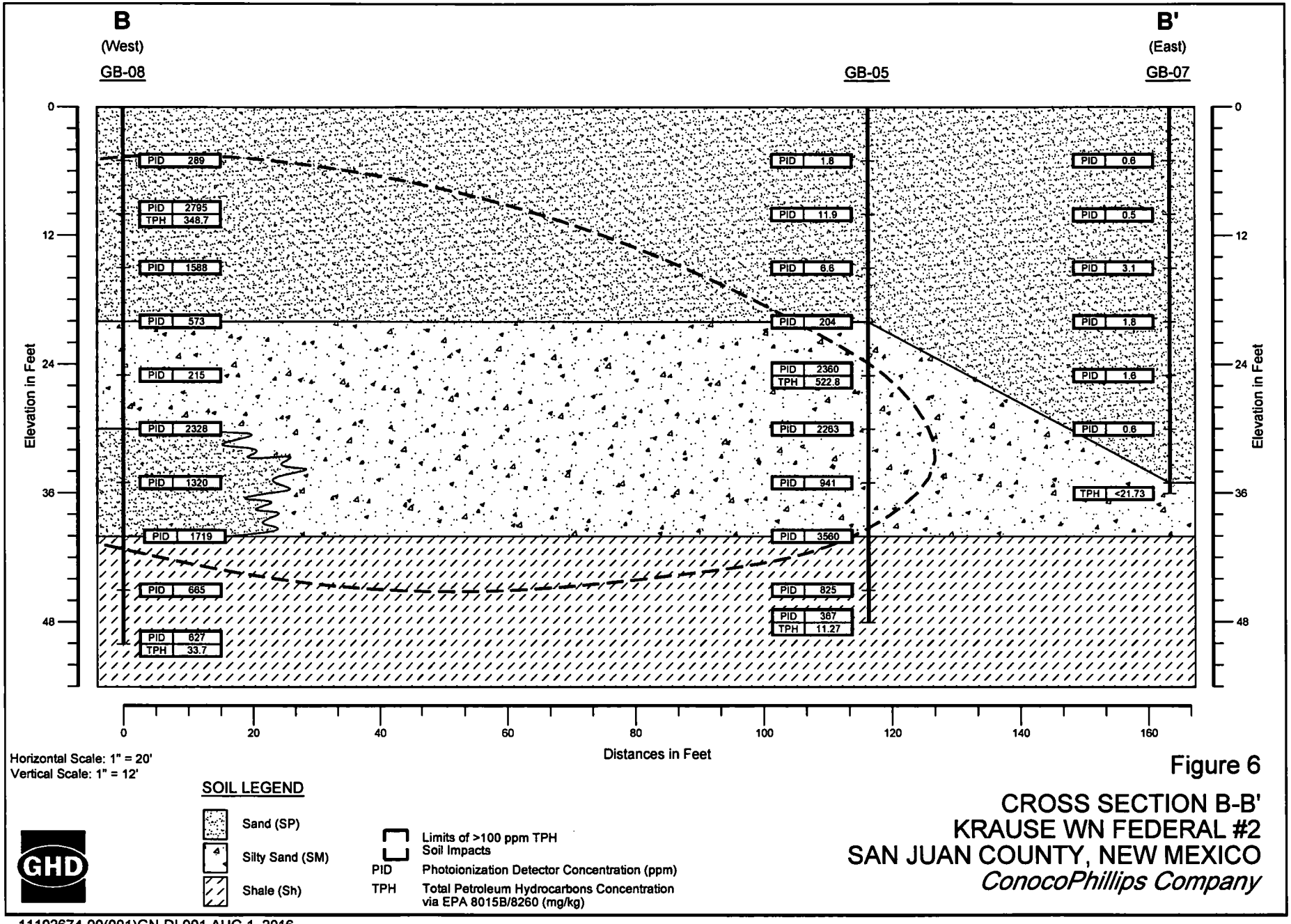
Limits of >100 ppm TPH Soil Impacts

PID Photoionization Detector Concentration (ppm)

TPH Total Petroleum Hydrocarbons Concentration via EPA 8015B/8260 (mg/kg)

Figure 5

CROSS SECTION A-A'
KRAUSE WN FEDERAL #2
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company



Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 12'

SOIL LEGEND

- Sand (SP)
- Silty Sand (SM)
- Shale (Sh)
- Limits of >100 ppm TPH Soil Impacts
- PID Photoionization Detector Concentration (ppm)
- TPH Total Petroleum Hydrocarbons Concentration via EPA 8015B/8260 (mg/kg)

Figure 6

CROSS SECTION B-B'
KRAUSE WN FEDERAL #2
SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company

11102674-00(001)GN-DL001 AUG 1, 2016

Tables

Table 1

Excavation Soil Analytical Results Summary
Krause WN Federal No. 2
ConocoPhillips Company

Sample ID	Date	Sample Type	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD RRALs (Ranking Score = 40)			*10*	*NE*	*NE*	*NE*	*50*	*NE*	*NE*	*NE*	*100*	*250*
S-11102674-030716-CK-SOUTH	3/7/2016	Composite	0.0191	0.0426	< 0.0055	0.0173	0.079	< 0.55	< 11.0	< 11.0	< 22.55	< 110
S-11102674-031016-CK-NORTH	3/10/2016	Composite	< 0.0053	< 0.0053	< 0.0053	< 0.0106	< 0.0265	< 0.53	117	35.8	**152.8**	< 104
S-11102674-031016-CK-WEST	3/10/2016	Composite	< 0.0053	< 0.0053	< 0.0053	0.045	0.045	2.5	328	56.6	**387.1**	< 105
S-11102674-031016-CK-SOUTH-WE	3/10/2016	Composite	< 0.262	< 0.262	< 0.262	4.91	4.91	279	409	56.2	**744.2**	< 106

Notes:
mg/kg = milligrams per kilogram
BTEX = benzene, toluene, ethylbenzene, and xylene
TPH = total petroleum hydrocarbons
GRO/DRO/ORO = gasoline/diesel/oil-range organics
NMOCD = New Mexico Oil Conservation Division
RRALs = Recommended Remediation Action Levels
NE = not established
< x = below laboratory detection limit of x

Table 2

Soil Analytical Results Summary
Krause WN Federal No. 2
Soil Boring Assessment
ConocoPhillips Company

Sample ID	Date	Sample Type	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Total TPH (mg/kg)
NMOCD RRALs (Ranking Score = 40)			*10*	*NE*	*NE*	*NE*	*50*	*NE*	*NE*	*NE*	*100*
GB01-25'	5/23/2016	Grab	<0.0054	<0.0054	<0.0054	<0.011	<0.027	< 0.54	< 10.7	< 10.7	< 21.94
GB02-35'	5/23/2016	Grab	< 0.0059	< 0.0059	< 0.0059	< 0.012	<0.03	< 0.59	< 11.9	< 11.9	< 24.39
GB03-30'	5/23/2016	Grab	0.012	<0.0058	<0.0058	0.031	0.043	<0.58	14.6	<11.5	26.68
GB03-35'	5/23/2016	Grab	< 0.0070	< 0.0070	< 0.0070	<0.014	<0.035	<0.070	<13.2	<13.2	<26.47
GB04-20'	5/23/2016	Grab	<0.33	7.2	2.6	31.0	41.130	832	705	94.2	**1631.2**
GB04-48'	5/23/2016	Grab	<0.0054	<0.0054	<0.0054	0.020	0.036	<0.54	<10.7	<10.7	<21.94
GB05-25'	5/24/2016	Grab	<0.26	<0.26	<0.26	<0.53	<1.31	63.3	395	64.5	**522.8**
GB05-47'	5/24/2016	Grab	<0.0054	<0.0054	<0.0054	<0.011	<0.027	0.77	10.5	<10.3	21.57
GB06-13'	5/24/2016	Grab	<0.0054	0.0082	<0.0054	<0.011	0.030	0.86	15.8	<10.6	27.26
GB06-33'	5/24/2016	Grab	<0.0057	<0.0057	<0.0057	<0.011	0.028	<0.57	11.0	11.0	22.57
GB07-35'	5/24/2016	Grab	<0.0053	<0.0053	<0.0053	<0.011	<0.027	<0.53	<10.6	<10.6	21.73
GB08-11'	5/24/2016	Grab	<0.0053	<0.0053	<0.0053	<0.011	<0.027	2	294	52.7	**348.7**
GB08-49'	5/24/2016	Grab	0.0089	0.11	0.022	0.240	0.381	2	17.2	14.5	**33.7**

Notes:
mg/kg = milligrams per kilogram
BTEX = benzene, toluene, ethylbenzene, and xylene
TPH = total petroleum hydrocarbons
GRO/DRO/ORO = gasoline/diesel/oil-range organics
NMOCD = New Mexico Oil Conservation Division
RRALs = Recommended Remediation Action Levels
NE = not established
< x = below laboratory detection limit of x

Appendix A
Excavation Soils Laboratory Reports

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

March 22, 2016

Jeffrey Walker
GHD Services, Inc
6121 Indian School Rd NE
Ste 200
Albuquerque, NM 87110

RE: Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Dear Jeffrey Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on March 11, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

Alice Flanagan
alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,
Cassie Brown, GHD Services, Inc,
Cale Kanack, GHD

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CERTIFICATIONS

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SAMPLE SUMMARY

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60214756001	S-11102674-031016-CK-North	Solid	03/10/16 09:00	03/11/16 09:45
60214756002	S-11102674-031016-CK-West	Solid	03/10/16 11:00	03/11/16 09:45
60214756003	S-11102674-031016-CK-South-WE	Solid	03/10/16 11:10	03/11/16 09:45
60214756004	Trip Blank	Solid	03/10/16 00:00	03/11/16 09:45

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SAMPLE ANALYTE COUNT

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60214756001	S-11102674-031016-CK-North	EPA 8015B	ACW	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
		EPA 300.0	RAB	1
60214756002	S-11102674-031016-CK-West	EPA 8015B	ACW	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
		EPA 300.0	RAB	1
60214756003	S-11102674-031016-CK-South-WE	EPA 8015B	ACW	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
		EPA 300.0	RAB	1
60214756004	Trip Blank	EPA 5035A/8260	JKL	7

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PROJECT NARRATIVE

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Method: EPA 8015B
Description: 8015B Diesel Range Organics
Client: GHD Services_COP NM
Date: March 22, 2016

General Information:
3 samples were analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/53470

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 1725391)
  - n-Tetracosane (S)
  - p-Terphenyl (S)
- MSD (Lab ID: 1725392)
  - n-Tetracosane (S)
  - p-Terphenyl (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: OEXT/53470

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60214858021

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1725391)
  - TPH-DRO (C10-C28)
- MSD (Lab ID: 1725392)
  - TPH-DRO (C10-C28)

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PROJECT NARRATIVE

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Method: EPA 8015B
Description: 8015B Diesel Range Organics
Client: GHD Services_COP NM
Date: March 22, 2016

Additional Comments:

Analyte Comments:

QC Batch: OEXT/53470

1e: Surrogate recovery outside laboratory control limits due to sample matrix.
- S-11102674-031016-CK-South-WE (Lab ID: 60214756003)
  - n-Tetracosane (S)

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PROJECT NARRATIVE

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Method: EPA 5035A/8260
Description: 8260 MSV GRO and Oxygenates
Client: GHD Services_COP NM
Date: March 22, 2016

General Information:
4 samples were analyzed for EPA 5035A/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Method: EPA 300.0
Description: 300.0 IC Anions 28 Days
Client: GHD Services_COP NM
Date: March 22, 2016

General Information:
3 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 300.0 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Sample: S-11102674-031016-CK-North **Lab ID: 60214756001** Collected: 03/10/16 09:00 Received: 03/11/16 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**117**	mg/kg	10.4	1	03/16/16 00:00	03/17/16 19:12		
TPH-ORO (C28-C35)	**35.8**	mg/kg	10.4	1	03/16/16 00:00	03/17/16 19:12		
Surrogates								
n-Tetracosane (S)	89	%	17-160	1	03/16/16 00:00	03/17/16 19:12	646-31-1	
p-Terphenyl (S)	80	%	68-109	1	03/16/16 00:00	03/17/16 19:12	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	ug/kg	5.3	1		03/17/16 15:58	71-43-2	
Ethylbenzene	ND	ug/kg	5.3	1		03/17/16 15:58	100-41-4	
Toluene	ND	ug/kg	5.3	1		03/17/16 15:58	108-88-3	
TPH-GRO	ND	mg/kg	0.53	1		03/17/16 15:58		
Xylene (Total)	ND	ug/kg	10.6	1		03/17/16 15:58	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		03/17/16 15:58	2037-26-5	
4-Bromofluorobenzene (S)	101	%	81-117	1		03/17/16 15:58	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	83-120	1		03/17/16 15:58	17060-07-0	
ercent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**5.9**	%	0.50	1		03/21/16 00:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Preparation Method: EPA 300.0							
Chloride	ND	mg/kg	104	10	03/14/16 09:30	03/14/16 16:27	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Sample: S-11102674-031016-CK-West **Lab ID: 60214756002** Collected: 03/10/16 11:00 Received: 03/11/16 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**328**	mg/kg	10.3	1	03/16/16 00:00	03/17/16 19:22		
TPH-ORO (C28-C35)	**56.6**	mg/kg	10.3	1	03/16/16 00:00	03/17/16 19:22		
Surrogates								
n-Tetracosane (S)	117	%	17-160	1	03/16/16 00:00	03/17/16 19:22	646-31-1	
p-Terphenyl (S)	83	%	68-109	1	03/16/16 00:00	03/17/16 19:22	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	ug/kg	5.3	1		03/17/16 16:45	71-43-2	
Ethylbenzene	ND	ug/kg	5.3	1		03/17/16 16:45	100-41-4	
Toluene	ND	ug/kg	5.3	1		03/17/16 16:45	108-88-3	
TPH-GRO	**2.5**	mg/kg	0.53	1		03/17/16 16:45		
Xylene (Total)	**45.0**	ug/kg	10.7	1		03/17/16 16:45	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		03/17/16 16:45	2037-26-5	
4-Bromofluorobenzene (S)	107	%	81-117	1		03/17/16 16:45	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	83-120	1		03/17/16 16:45	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**6.1**	%	0.50	1		03/21/16 00:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Preparation Method: EPA 300.0							
Chloride	ND	mg/kg	105	10	03/14/16 09:30	03/14/16 16:44	16887-00-6	

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ANALYTICAL RESULTS

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Sample: S-11102674-031016-CK-South-WE **Lab ID: 60214756003** Collected: 03/10/16 11:10 Received: 03/11/16 09:45 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**409**	mg/kg	10.6	1	03/16/16 00:00	03/17/16 19:31		
TPH-ORO (C28-C35)	**56.2**	mg/kg	10.6	1	03/16/16 00:00	03/17/16 19:31		
Surrogates								
n-Tetracosane (S)	178	%	17-160	1	03/16/16 00:00	03/17/16 19:31	646-31-1	1e
p-Terphenyl (S)	81	%	68-109	1	03/16/16 00:00	03/17/16 19:31	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	ug/kg	262	50		03/17/16 17:01	71-43-2	
Ethylbenzene	ND	ug/kg	262	50		03/17/16 17:01	100-41-4	
Toluene	ND	ug/kg	262	50		03/17/16 17:01	108-88-3	
TPH-GRO	**279**	mg/kg	26.2	50		03/17/16 17:01		
Xylene (Total)	**4910**	ug/kg	524	50		03/17/16 17:01	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	50		03/17/16 17:01	2037-26-5	
4-Bromofluorobenzene (S)	110	%	81-117	50		03/17/16 17:01	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	83-120	50		03/17/16 17:01	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**5.9**	%	0.50	1		03/21/16 00:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Preparation Method: EPA 300.0							
Chloride	ND	mg/kg	106	10	03/14/16 09:30	03/14/16 17:02	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Sample: Trip Blank **Lab ID: 60214756004** Collected: 03/10/16 00:00 Received: 03/11/16 09:45 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	ug/kg	5.0	1		03/17/16 12:51	71-43-2	
Ethylbenzene	ND	ug/kg	5.0	1		03/17/16 12:51	100-41-4	
Toluene	ND	ug/kg	5.0	1		03/17/16 12:51	108-88-3	
Xylene (Total)	ND	ug/kg	10.0	1		03/17/16 12:51	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		03/17/16 12:51	2037-26-5	
4-Bromofluorobenzene (S)	98	%	81-117	1		03/17/16 12:51	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	83-120	1		03/17/16 12:51	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

QC Batch: MSV/74704 Analysis Method: EPA 5035A/8260
QC Batch Method: EPA 5035A/8260 Analysis Description: 8260 MSV GRO and Oxygenates
Associated Lab Samples: 60214756001, 60214756002, 60214756003, 60214756004

METHOD BLANK: 1726127 Matrix: Solid
Associated Lab Samples: 60214756001, 60214756002, 60214756003, 60214756004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	5.0	03/17/16 10:32	
Ethylbenzene	ug/kg	ND	5.0	03/17/16 10:32	
Toluene	ug/kg	ND	5.0	03/17/16 10:32	
TPH-GRO	mg/kg	ND	0.50	03/17/16 10:32	
Xylene (Total)	ug/kg	ND	10.0	03/17/16 10:32	
1,2-Dichloroethane-d4 (S)	%	100	83-120	03/17/16 10:32	
4-Bromofluorobenzene (S)	%	98	81-117	03/17/16 10:32	
Toluene-d8 (S)	%	100	80-120	03/17/16 10:32	

LABORATORY CONTROL SAMPLE: 1726128

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	100	95.3	95	75-116	
Ethylbenzene	ug/kg	100	98.8	99	72-116	
Toluene	ug/kg	100	98.3	98	72-116	
TPH-GRO	mg/kg	4	4.8	119	76-128	
Xylene (Total)	ug/kg	300	297	99	69-116	
1,2-Dichloroethane-d4 (S)	%			96	83-120	
4-Bromofluorobenzene (S)	%			102	81-117	
Toluene-d8 (S)	%			102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1726129 1726130

Parameter	Units	60214756001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	ND	105	106	83.7	83.4	80	78	28-136	0	36	
Ethylbenzene	ug/kg	ND	105	106	61.3	65.1	59	61	10-152	6	48	
Toluene	ug/kg	ND	105	106	73.3	74.6	70	70	19-141	2	40	
Xylene (Total)	ug/kg	ND	314	319	194	199	59	60	10-149	3	50	
1,2-Dichloroethane-d4 (S)	%						110	107	83-120			
4-Bromofluorobenzene (S)	%						105	104	81-117			
Toluene-d8 (S)	%						103	103	80-120		38	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

QC Batch: OEXT/53470 Analysis Method: EPA 8015B
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B
Associated Lab Samples: 60214756001, 60214756002, 60214756003

METHOD BLANK: 1725389 Matrix: Solid
Associated Lab Samples: 60214756001, 60214756002, 60214756003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/kg	ND	9.9	03/17/16 17:04	
TPH-ORO (C28-C35)	mg/kg	ND	9.9	03/17/16 17:04	
n-Tetracosane (S)	%	83	17-160	03/17/16 17:04	
p-Terphenyl (S)	%	81	68-109	03/17/16 17:04	

LABORATORY CONTROL SAMPLE: 1725390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	83.1	86.9	105	77-122	
TPH-ORO (C28-C35)	mg/kg		ND			
n-Tetracosane (S)	%			99	17-160	
p-Terphenyl (S)	%			99	68-109	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1725391 1725392

Parameter	Units	60214858021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO (C10-C28)	mg/kg	231	88.8	88.1	184	123	-53	-122	10-242	39	85	M1
TPH-ORO (C28-C35)	mg/kg	174			46.9J	39.1J					61	
n-Tetracosane (S)	%						0	0	17-160		56	S4
p-Terphenyl (S)	%						0	0	68-109		55	S4

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

QC Batch: PMST/11599 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60214756001, 60214756002, 60214756003

METHOD BLANK: 1727736 Matrix: Solid
Associated Lab Samples: 60214756001, 60214756002, 60214756003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	03/21/16 00:00	

SAMPLE DUPLICATE: 1727737

Parameter	Units	60214751001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.5	12.3	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

QC Batch: WETA/38498 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60214756001, 60214756002, 60214756003

METHOD BLANK: 1723910 Matrix: Solid
Associated Lab Samples: 60214756001, 60214756002, 60214756003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/kg	ND	100	03/14/16 12:41	

METHOD BLANK: 1724426 Matrix: Solid
Associated Lab Samples: 60214756001, 60214756002, 60214756003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/kg	ND	100	03/15/16 09:25	

LABORATORY CONTROL SAMPLE: 1723911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	500	495	99	90-110	

LABORATORY CONTROL SAMPLE: 1724427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	500	501	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1723912 1723913

Parameter	Units	60214756003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/kg	ND	529	525	531	527	93	93	80-120	1	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1e	Surrogate recovery outside laboratory control limits due to sample matrix.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11102674 Krause Fed 2
Pace Project No.: 60214756

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60214756001	S-11102674-031016-CK-North	EPA 3546	OEXT/53470	EPA 8015B	GCSV/20689
60214756002	S-11102674-031016-CK-West	EPA 3546	OEXT/53470	EPA 8015B	GCSV/20689
60214756003	S-11102674-031016-CK-South-WE	EPA 3546	OEXT/53470	EPA 8015B	GCSV/20689
60214756001	S-11102674-031016-CK-North	EPA 5035A/8260	MSV/74704		
60214756002	S-11102674-031016-CK-West	EPA 5035A/8260	MSV/74704		
60214756003	S-11102674-031016-CK-South-WE	EPA 5035A/8260	MSV/74704		
60214756004	Trip Blank	EPA 5035A/8260	MSV/74704		
60214756001	S-11102674-031016-CK-North	ASTM D2974	PMST/11599		
60214756002	S-11102674-031016-CK-West	ASTM D2974	PMST/11599		
60214756003	S-11102674-031016-CK-South-WE	ASTM D2974	PMST/11599		
60214756001	S-11102674-031016-CK-North	EPA 300.0	WETA/38498	EPA 300.0	WETA/38502
60214756002	S-11102674-031016-CK-West	EPA 300.0	WETA/38498	EPA 300.0	WETA/38502
60214756003	S-11102674-031016-CK-South-WE	EPA 300.0	WETA/38498	EPA 300.0	WETA/38502

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Sample Condition Upon Receipt

WO#: 60214756

60214756

Client Name: GHD

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: 6508 8164 3830 Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals Intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☒ None ☐ Other ☐

Thermometer Used: CF +0.8 T-239 / CF +0.7 T-262 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 5.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JB 3/11

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC:	☒Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: SL		13.
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☐Yes ☒No	Initial when completed / Lot # of added preservative
Trip Blank present:	☒Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 101215-3		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☒No ☐N/A	17. List State: NM
Additional labels attached to 5035A vials in the field?	☐Yes ☐No ☒N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: AAT Date: 3/11/16

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 Of 1

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: GHD Services_COP NM	Report To: Jeffrey Walker	Attention:
Address: 6121 Indian School Rd NE	Copy To: Cale Kanack	Company Name:
Albuquerque, NM 87110	Angela Bown	Address:
Email: jeff.walker@ghd.com	Purchase Order #:	Pace Quote:
Phone: 505-377-3920 Fax:	Project Name: ~~11102645 Mangnum No 1~~	Pace Project Manager: alice.flanagan@pacelabs.com,
Requested Due Date:	Project #: 11102674 KRAUSE FED 2	Pace Profile #: ~~8044, 82~~

Regulatory Agency
State / Location: NM

MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

SAMPLE ID — One Character per box. (A-Z, 0-9 /, -) Sample Ids must be unique

Requested Analysis Filtered (Y/N)

6021456

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collected Start Date	Start Time	End Date	End Time	Sample Temp at Collection	# of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analyses Test Y/N	Chloride	8015 DRO	8260 GRO	8260 BTEX	8015 ORO		Residual Chlorine (Y/N)		
1	S-11102674-031016-CK-NORTH	SL	C			3-10-16	0900		2	X									X	X	X	X	X	(2) WGFH		★ STANDARD	001
2	S-11102674-031016-CK-WEST	SL	C			↓	1100		2	X									X	X	X	X	X	↓		TAT ★	002
3	S-11102674-031016-CK-SOUTH-WE	SL	C			↓	1100		2	X									X	X	X	X	X	↓			003
4	TRIP BLANK	WT	/			—	—		2		X											X		(2) VG4U			004
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
★ STD TAT ★	[signature] / GHD	3-10-16	1200	[signature]	3/10/16	1200				
	[signature] / GHD	3/10/16	1200	[signature]	3/11	0945	5.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CALE KANACK

SIGNATURE of SAMPLER: [signature] DATE Signed: 3-10-16

Pace Analytical Services, Inc.
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Lenexa, KS 66219
(913)599-5665

March 09, 2016

Jeffrey Walker
GHD Services, Inc
6121 Indian School Rd NE
Ste 200
Albuquerque, NM 87110

RE: Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Dear Jeffrey Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on March 08, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

Alice Flanagan
alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,
Cassie Brown, GHD Services, Inc,
Cale Kanack, GHD

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CERTIFICATIONS

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SAMPLE SUMMARY

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60214382001	S-11102674-030716-CK-SOUTH	Solid	03/07/16 14:35	03/08/16 08:55
60214382002	TRIP BLANK	Solid	03/07/16 14:35	03/08/16 08:55

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SAMPLE ANALYTE COUNT

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60214382001	S-11102674-030716-CK-SOUTH	EPA 8015B	ACW	4
		EPA 5035A/8260	TJT	8
		ASTM D2974	HGD	1
		EPA 300.0	RAB	1
60214382002	TRIP BLANK	EPA 5035A/8260	TJT	7

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Method: EPA 8015B
Description: 8015B Diesel Range Organics
Client: GHD Services_COP NM
Date: March 09, 2016

General Information:
1 sample was analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Method: **EPA 5035A/8260**
Description: 8260 MSV GRO and Oxygenates
Client: GHD Services_COP NM
Date: March 09, 2016

General Information:
2 samples were analyzed for EPA 5035A/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Method: EPA 300.0
Description: 300.0 IC Anions 28 Days
Client: GHD Services_COP NM
Date: March 09, 2016

General Information:
1 sample was analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 300.0 with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Sample: S-11102674-030716-CK-SOUTH **Lab ID: 60214382001** Collected: 03/07/16 14:35 Received: 03/08/16 08:55 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	ND	mg/kg	11.0	1	03/09/16 00:00	03/09/16 13:25		
TPH-ORO (C28-C35)	ND	mg/kg	11.0	1	03/09/16 00:00	03/09/16 13:25		
Surrogates								
n-Tetracosane (S)	85	%	17-160	1	03/09/16 00:00	03/09/16 13:25	646-31-1	
p-Terphenyl (S)	80	%	68-109	1	03/09/16 00:00	03/09/16 13:25	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	**19.1**	ug/kg	5.5	1		03/08/16 12:45	71-43-2	
Ethylbenzene	ND	ug/kg	5.5	1		03/08/16 12:45	100-41-4	
Toluene	**42.6**	ug/kg	5.5	1		03/08/16 12:45	108-88-3	
TPH-GRO	ND	mg/kg	0.55	1		03/08/16 12:45		
Xylene (Total)	**17.3**	ug/kg	11.0	1		03/08/16 12:45	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	1		03/08/16 12:45	2037-26-5	
4-Bromofluorobenzene (S)	97	%	81-117	1		03/08/16 12:45	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	83-120	1		03/08/16 12:45	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**10.7**	%	0.50	1		03/08/16 00:00		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Preparation Method: EPA 300.0							
Chloride	ND	mg/kg	110	10	03/08/16 10:20	03/08/16 11:55	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Sample: TRIP BLANK **Lab ID: 60214382002** Collected: 03/07/16 14:35 Received: 03/08/16 08:55 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	ug/kg	5.0	1		03/08/16 12:30	71-43-2	
Ethylbenzene	ND	ug/kg	5.0	1		03/08/16 12:30	100-41-4	
Toluene	ND	ug/kg	5.0	1		03/08/16 12:30	108-88-3	
Xylene (Total)	ND	ug/kg	10.0	1		03/08/16 12:30	1330-20-7	
Surrogates								
Toluene-d8 (S)	103	%	80-120	1		03/08/16 12:30	2037-26-5	
4-Bromofluorobenzene (S)	95	%	81-117	1		03/08/16 12:30	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	83-120	1		03/08/16 12:30	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

QC Batch: MSV/74555 Analysis Method: EPA 5035A/8260
QC Batch Method: EPA 5035A/8260 Analysis Description: 8260 MSV GRO and Oxygenates
Associated Lab Samples: 60214382001, 60214382002

METHOD BLANK: 1721144 Matrix: Solid
Associated Lab Samples: 60214382001, 60214382002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/kg	ND	5.0	03/08/16 12:15	
Ethylbenzene	ug/kg	ND	5.0	03/08/16 12:15	
Toluene	ug/kg	ND	5.0	03/08/16 12:15	
TPH-GRO	mg/kg	ND	0.50	03/08/16 12:15	
Xylene (Total)	ug/kg	ND	10.0	03/08/16 12:15	
1,2-Dichloroethane-d4 (S)	%	103	83-120	03/08/16 12:15	
4-Bromofluorobenzene (S)	%	97	81-117	03/08/16 12:15	
Toluene-d8 (S)	%	99	80-120	03/08/16 12:15	

LABORATORY CONTROL SAMPLE: 1721145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	100	103	103	75-116	
Ethylbenzene	ug/kg	100	93.5	94	72-116	
Toluene	ug/kg	100	96.6	97	72-116	
TPH-GRO	mg/kg	4	4.6	115	76-128	
Xylene (Total)	ug/kg	300	271	90	69-116	
1,2-Dichloroethane-d4 (S)	%			106	83-120	
4-Bromofluorobenzene (S)	%			99	81-117	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1721152 1721153

Parameter	Units	60214382001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/kg	19.1	112	113	92.4	99.4	65	71	28-136	7	36	
Ethylbenzene	ug/kg	ND	112	113	75.1	80.2	64	67	10-152	6	48	
Toluene	ug/kg	42.6	112	113	102	106	53	56	19-141	3	40	
Xylene (Total)	ug/kg	17.3	337	340	215	234	59	64	10-149	9	50	
1,2-Dichloroethane-d4 (S)	%						116	113	83-120			
4-Bromofluorobenzene (S)	%						99	98	81-117			
Toluene-d8 (S)	%						98	99	80-120		38	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(913)599-5665

QUALITY CONTROL DATA

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

QC Batch: OEXT/53381
QC Batch Method: EPA 3546
Analysis Method: EPA 8015B
Analysis Description: EPA 8015B
Associated Lab Samples: 60214382001

METHOD BLANK: 1721490 Matrix: Solid
Associated Lab Samples: 60214382001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/kg	ND	9.7	03/09/16 13:01	
TPH-ORO (C28-C35)	mg/kg	ND	9.7	03/09/16 13:01	
n-Tetracosane (S)	%	96	17-160	03/09/16 13:01	
p-Terphenyl (S)	%	96	68-109	03/09/16 13:01	

LABORATORY CONTROL SAMPLE: 1721491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	81.9	88.6	108	77-122	
n-Tetracosane (S)	%			105	17-160	
p-Terphenyl (S)	%			106	68-109	

MATRIX SPIKE SAMPLE: 1721492

Parameter	Units	60214382001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	ND	91.5	107	115	10-242	
n-Tetracosane (S)	%				113	17-160	
p-Terphenyl (S)	%				105	68-109	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

QC Batch: PMST/11563
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60214382001

METHOD BLANK: 1721138
Matrix: Solid
Associated Lab Samples: 60214382001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	03/08/16 00:00	

SAMPLE DUPLICATE: 1720989

Parameter	Units	40128900001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.9	9.3	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

QC Batch: WETA/38413
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 60214382001

METHOD BLANK: 1721026
Matrix: Solid
Associated Lab Samples: 60214382001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/kg	ND	100	03/08/16 11:20	

LABORATORY CONTROL SAMPLE: 1721027

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/kg	500	500	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1721028 1721029

Parameter	Units	60214382001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/kg	ND	560	552	572	565	95	95	80-120	1	15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11102674 KRAUSE WN FED #2
Pace Project No.: 60214382

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60214382001	S-11102674-030716-CK-SOUTH	EPA 3546	OEXT/53381	EPA 8015B	GCSV/20640
60214382001	S-11102674-030716-CK-SOUTH	EPA 5035A/8260	MSV/74555		
60214382002	TRIP BLANK	EPA 5035A/8260	MSV/74555		
60214382001	S-11102674-030716-CK-SOUTH	ASTM D2974	PMST/11563		
60214382001	S-11102674-030716-CK-SOUTH	EPA 300.0	WETA/38413	EPA 300.0	WETA/38414

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60214382

60214382

Client Name: GP GHD NM

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☑ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: 7825 4073 6820 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☑ Bubble Bags ☐ Foam ☐ None ☐ Other ☐

Thermometer Used: CF +1.0 T-239 / CF 0.0 T-262 Type of Ice: Wet Blue None ☐ Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 4.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JWS 3/8/16 920

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time requested:	☑Yes	☐No	☐N/A	7. 1 day TAT
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC:	☑Yes	☐No	☐N/A	
Includes date/time/ID/analyses Matrix: ~~WT~~ ~~SW~~ ~~WW~~ soils				13.
All containers needing preservation have been checked.	☐Yes	☐No	☑N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☑Yes	☐No		Initial when completed / Lot # of added preservative
Trip Blank present:	☑Yes	☐No	☐N/A	
Pace Trip Blank lot # (if purchased): 101215.2				15.
Headspace in VOA vials (>6mm):	☐Yes	☐No	☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☑No	☐N/A	17. List State: NM Albuquerque
Additional labels attached to 5035A vials in the field?	☐Yes	☐No	☑N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution: Call – 3/8/16 added 8015DRO

Project Manager Review: ADF Date: 3/8/16

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.

Start: 920	Start:
End: 925	End:
Temp:	Temp:

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GHD Services_COP NM	Report To:	Jeffrey Walker	Attention:	
Address:	6121 Indian School Rd NE	Copy To:	Cale Kanack	Company Name:	
Albuquerque, NM 87110		Angela Bown		Address:	
Email:	jeff.walker@ghd.com	Purchase Order #:		Pace Quote:	
Phone:	505-377-3920 Fax	Project Name:	~~11102646 Mangnum No 1~~	Pace Project Manager:	alice.flanagan@pacelabs.com,
Requested Due Date:		Project #:	11102674 KRAUSE WN FED #2	Pace Profile #:	~~6944, 32~~

Regulatory Agency

State / Location: NM

60214382

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Chloride	8015 DRO	8260 GRO	8260 BTEX		Residual Chlorine (Y/N)	
1	S-11102674-030716-CK-SOUTH	SL	C			3-7-16	1435		2	X									X	X	X	X	2(WETW)		* 24-HR 001
2	TRIP BLANK	WT	—			—	—		2		X											X	2(VOW)		TAT* 002
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

Matrix codes: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

SAMPLE ID: One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* 24 HR TAT *	[signature] / GHD	3-7-16	1640	[signature]	3/8/16	855	4.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: CALE KANACK

SIGNATURE of SAMPLER: [signature] DATE Signed: 3-7-16

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Appendix B
Waste Manifests/NMOCD Form C-138

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
ConocoPhillips Company – 600 N. Dairy Ashford, 2WL 11050, Houston, TX 77079

2. **Originating Site:** Krause WN Federal 2 API# 3004507225

3. **Location of Material (Street Address, City, State or ULSTR):** Unit A, Section 28, T028N, R011W, San Juan, NM

4. **Source and Description of Waste:** Impacted Soil from condensed fluids spill (produced water/condensate)

Estimated Volume 2000 cy yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd³ / bbls

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, B.K. Cox, representative or authorized agent for ConocoPhillips Company do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☒ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☒ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. **Transporter:** M&M Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

ConocoPhillips	Org. Title: Risk Management & Remediation	Rev.: 2.0
	Document Title: Waste Determination Form	Page: 1 of 8

FORM MUST BE COMPLETED BEFORE WASTE IS TRANSPORTED

» **UST Exemption: Complete Sections A and B, check "UST Exemption" box in Section B.**
» **E&P Exemption: Complete Sections A and B, check "E&P Exemption" box in Section B.**
» **All Others: Complete Sections A through G as appropriate.**
» **Indicate if analytical testing results are attached and status of the material in Section B.**

☐ **Repeat Waste Generation with Current and Applicable Waste Determination Form:** *If a Waste Determination Form was completed on this material within the last 3 years* and there have been no changes in material components or the process generating the material, complete Sections A and B only and file the completed form in the Livelink "Waste Management" folder for the subject site.*

Date of most recent complete Waste Determination Form on File: _____

☒ **All Others:** *If a Waste Determination Form (WDF) has not been completed in the last 3 years* for the material or if the material components or the material generation process has changed since this material was last generated, complete the entire Waste Determination Form. Maintain a copy of the completed form in the Livelink "Waste Management" folder for the subject site.*

**State or local regulations may require a waste determination on a more frequent interval. RM&R uses 3 years as a maximum period.*

A. MATERIAL GENERATOR INFORMATION

1. RM&R Site No.: 7041 2. Site Name: Krause WN Federal #2 3. SIC Code: 1311
4. Site Area Name: _____ 5. Site Address: NW1/4, SW1/4, Sec 27, T29N R11W
6. County: San Juan 7. State: NM
8. EPA ID No.: _____ 9. State ID No.: _____ 10. Other ID: _____
11. Project Contact Name: Keith Coffman 12. Project Contact Phone No.: (832) 486-2226
13. Material Generation Start Date (date material is contained): 03/07/2016 14. Date Form Completed: 02/25/2016

B. MATERIAL INFORMATION

1. Material Name: Soil
2. Material Generation Process: Impacted soil from condensed fluids spill (produced water/condensate)
3. Specific Location of Material at the Site: Stockpiled on-site

☐ **UST Exemption:** *Petroleum contaminated media and debris that fail the test for TCLP but are managed under a Federal/State UST Corrective Action program are solid wastes that are expressly excluded from the definition of a hazardous waste (40 CFR 261.4(b)(10)). Project file has the necessary analytical data.*

☒ **E&P Exemption:** *Petroleum contaminated media and debris generated by drilling fluids, produced waters, and other wastes associated with the exploration, development or production of crude oil, natural gas or geothermal energy are solid wastes that are expressly excluded from the definition of a hazardous waste (40 CFR 261.4(b)(5). Project file has the necessary analytical data.*

Note: Materials conforming to either of the above two hazardous waste exemptions must still be managed according to RM&R non-hazardous waste procedures.

☐ Analytical testing results on material attached.

Material is: ☐ **RCRA Hazardous** ☐ **Non-RCRA Hazardous** ☒ **Non-Hazardous**

Section A and B signatures required below:

Prepared by (name and company): Lesley Jones Digitally signed by Lesley Jones DN: cn=Lesley Jones, o=GHD Services Inc., ou, email=lesley.jones@ghd.com, c=US Date: 2016.02.25 11:20:42 -06'00'

ConocoPhillips Company Representative: B.K. Coff 2/25/16

*** Remainder of form need not be completed if the project-related waste conforms to UST or E&P Exemption criteria ***

Content Owner: RM&R Manager	Official Document Location: RM&R Livelink Retention: HE01 (Completed) AD01 (Blank)	Document Date: 2014-01-10

Appendix C
Excavation Photo Log

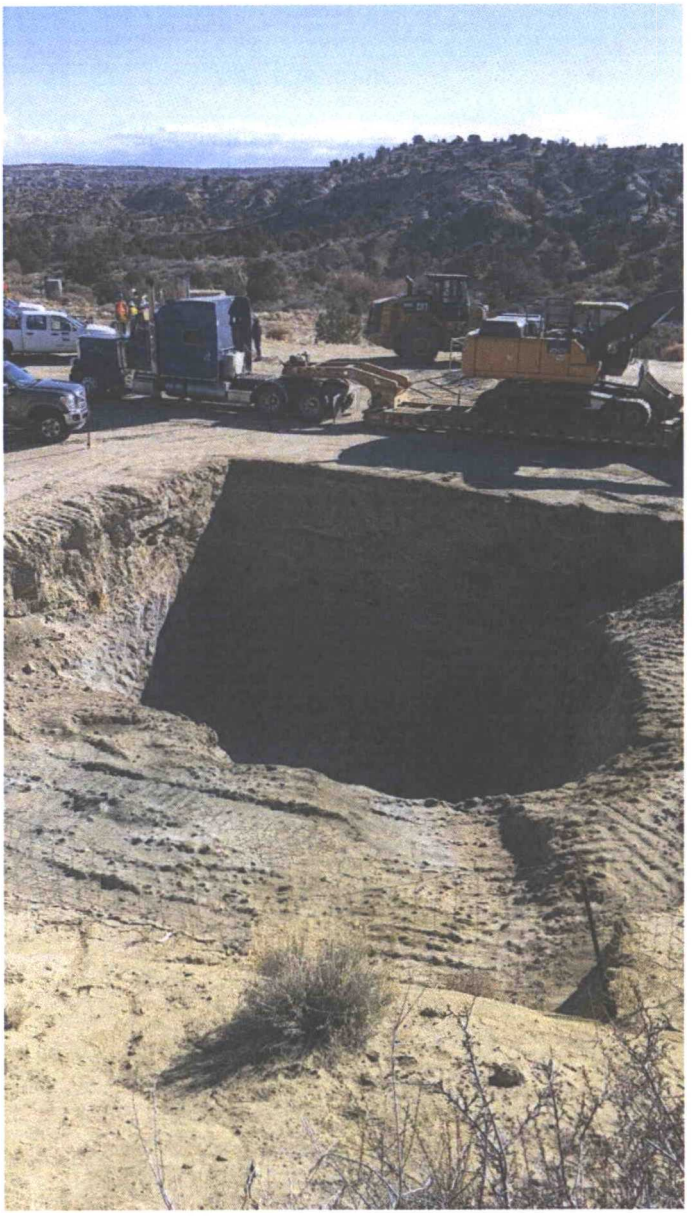


Photo 1 – Krause WN Federal 2 Existing Excavation. Looking South.

Photo 2 – Krause WN Federal 2 East Wall/SE Corner of Excavation.

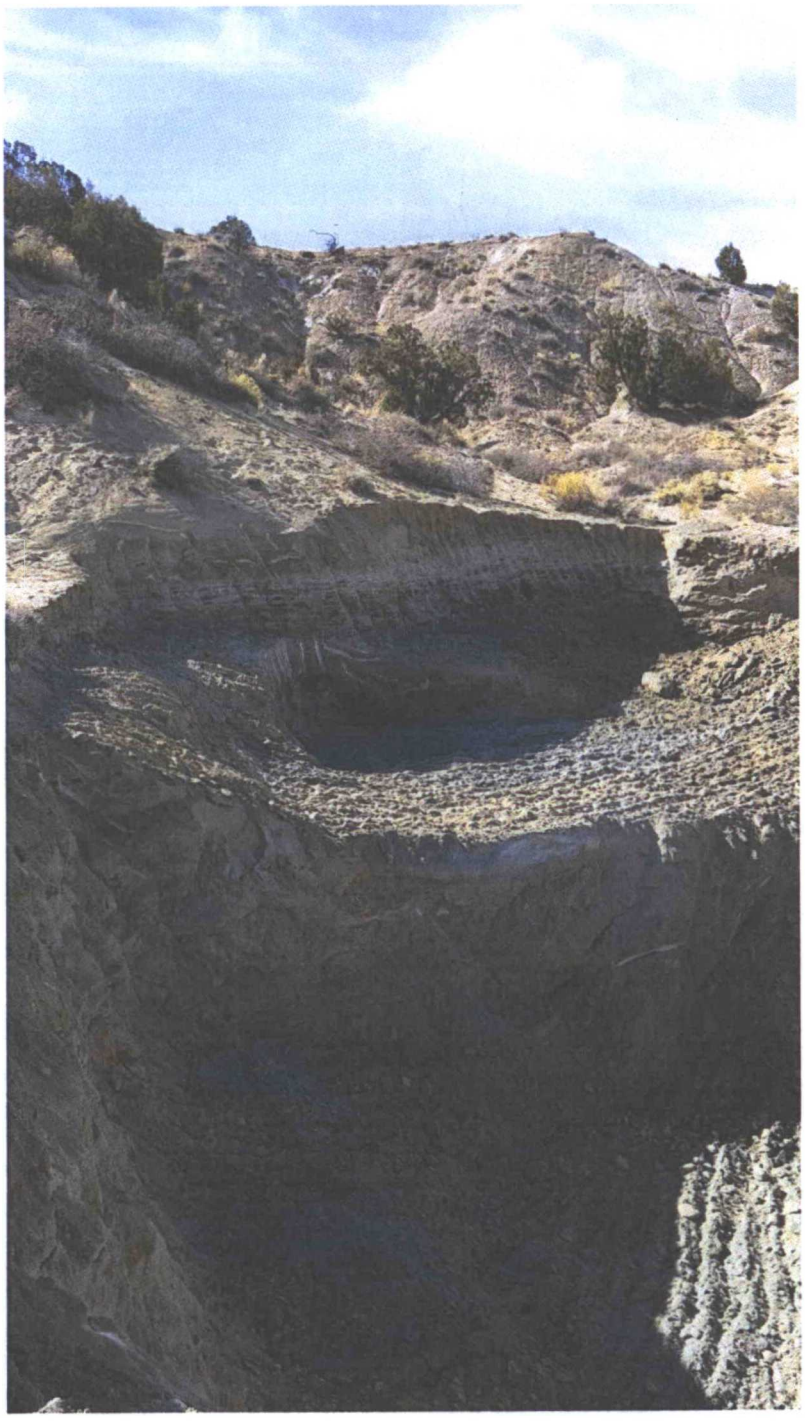


Photo 3 – Krause WN Federal 2 Steep Western Edge of Excavation.

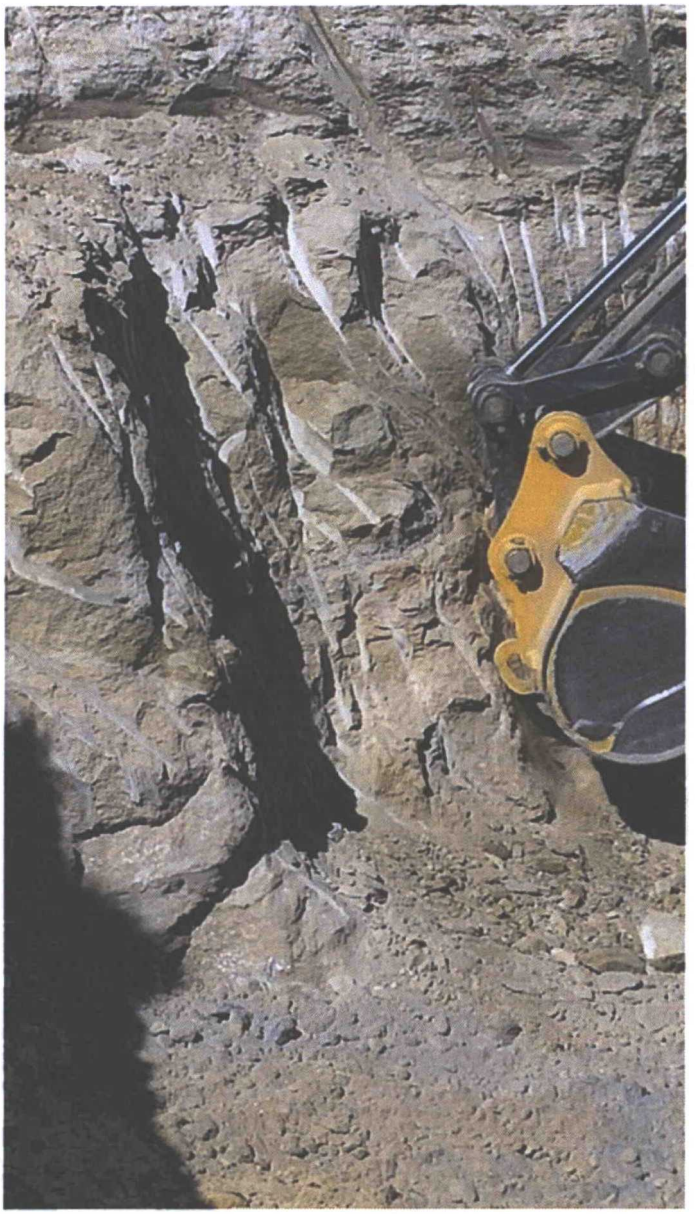


Photo 4 – Krause WN Federal 2 Excavator Teeth Marks in Western Wall.

Appendix D
Boring Logs

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: South of above ground condensate tank

COORDINATES: 36.63748, -108.00388

SOIL BORING NO: GB01
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/23/2016
DATE/TIME HOLE COMPLETED: 5/23/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: loose, tan, medium to coarse grained, dry, no odor, no staining.	3.0		
-10						0.5		
-15					dry to slightly moist.	0.4		
-20					more competent, olive to brown, moist, no odor.	0.0		
-25	X	GB01-25			Shale: hard, gray to black, no odor, no staining		<0.0272	<21.94

TD = 26 feet bgs

GHD Services Inc.

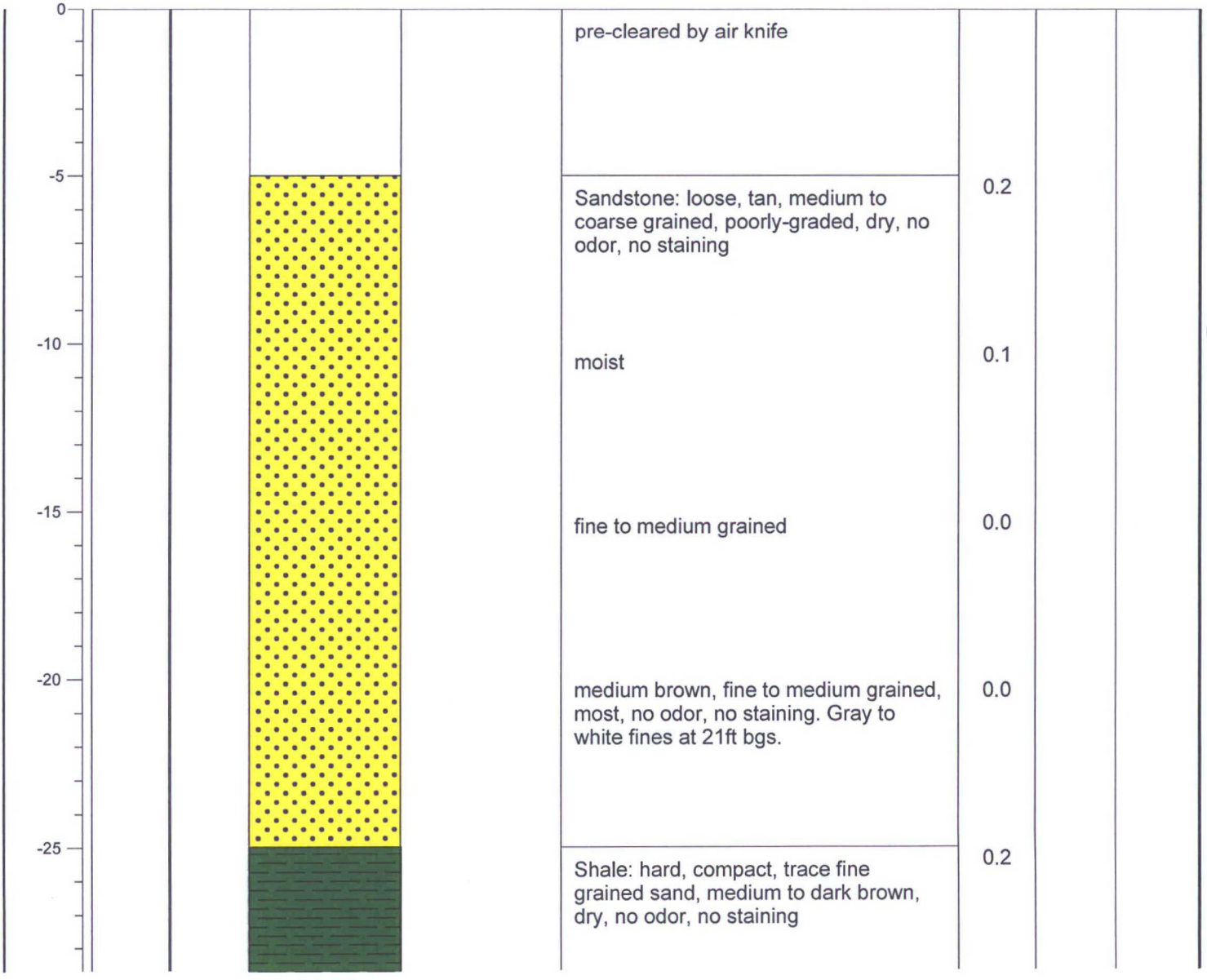
BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: West of above ground condensate tank

COORDINATES: 36.63755, -108.00362

SOIL BORING NO: GB02
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/23/2016
DATE/TIME HOLE COMPLETED: 5/23/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: loose, tan, medium to coarse grained, poorly-graded, dry, no odor, no staining	0.2		
-10					moist	0.1		
-15					fine to medium grained	0.0		
-20					medium brown, fine to medium grained, most, no odor, no staining. Gray to white fines at 21ft bgs.	0.0		
-25					Shale: hard, compact, trace fine grained sand, medium to dark brown, dry, no odor, no staining	0.2		



PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: West of above ground condensate tank

COORDINATES: 36.63755, -108.00362

SOIL BORING NO: GB02
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/23/2016
DATE/TIME HOLE COMPLETED: 5/23/2016

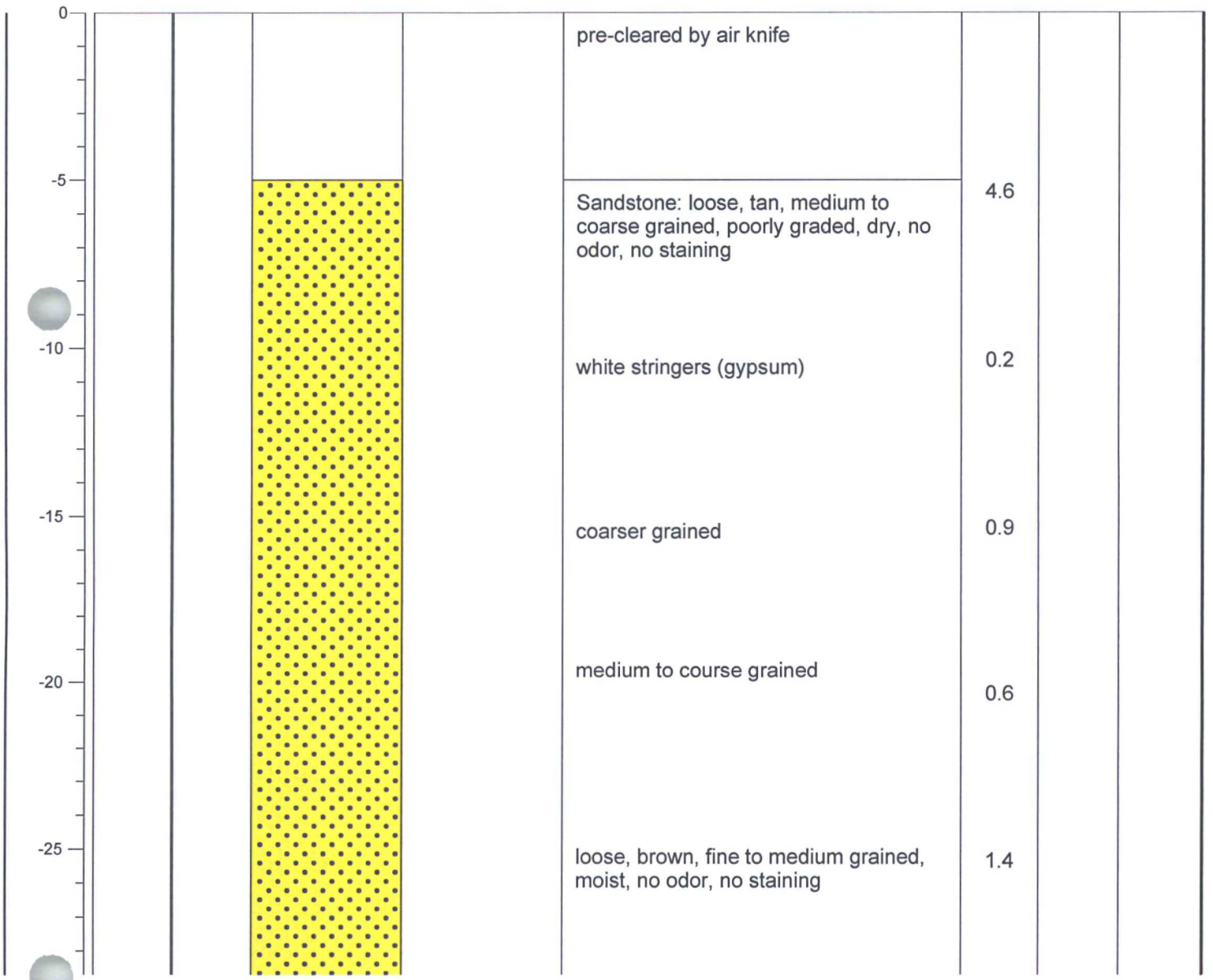
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
-30					moist, no odor, no staining	0.1		
-35	X	GB02-35				0.1	<0.0297	<24.39

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: East of compressor; South of wellhead

COORDINATES: 36.63778, -108.00366

SOIL BORING NO: GB03
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/23/2016
DATE/TIME HOLE COMPLETED: 5/23/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: loose, tan, medium to coarse grained, poorly graded, dry, no odor, no staining	4.6		
-10					white stringers (gypsum)	0.2		
-15					coarser grained	0.9		
-20					medium to course grained	0.6		
-25					loose, brown, fine to medium grained, moist, no odor, no staining	1.4		



TD = 36 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: East of compressor; South of wellhead

COORDINATES: 36.63778, -108.00366

SOIL BORING NO: GB03
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/23/2016
DATE/TIME HOLE COMPLETED: 5/23/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
-30		GB03-30			Shale: hard, gray to black, dry, slight odor, no staining	242	0.055	12.1
-35	X	GB03-35			Sandstone: trace silt, brown, dry, no odor, no staining	47.2	<0.035	<27.1

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: North of compressor

COORDINATES: 36.63802, -108.00388

SOIL BORING NO: GB04
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/23/2016
DATE/TIME HOLE COMPLETED: 5/23/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: loose, tan, medium to coarse grained, poorly graded, dry, no staining. Some white stringers from 15 to 20 ft bgs with slight to strong odor.	0.2		
-10						6.3		
-15						393		
-20	X	GB04-20				2627	31.99	1631.2
-25					loose, brown, poorly graded, fine to medium grained, moist, odor, no staining	2004		

TD = 49 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: North of compressor

COORDINATES: 36.63802, -108.00388

SOIL BORING NO: GB04
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/23/2016
DATE/TIME HOLE COMPLETED: 5/23/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
-30						391		
-35					dense, tan to light brown, meduim grained, odor, no staining	322		
-40					dense, gray to dark brown, medium grained, moist, odor, staining present	2057		
-45					Shale: dense, compact, gray to black, dry, slight odor, no staining	505		
	X	GB04-48				461	<0.0272	<21.94

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: NE of wellhead

COORDINATES: 36.63795, -108.00362

SOIL BORING NO: GB05
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: loose, tan, fine to coarse grained, poorly graded, dry, no odor, no staining	1.8		
-10						11.9		
-15					medium to course grained	6.6		
-20		GB05-25			dense, fine to medium grained, poorly graded, some silt, dry to moist, no staining, tan, no odor	204		
-25	X				trace silts, odor	2360	<1.31	522.8

TD = 48 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: NE of wellhead

COORDINATES: 36.63795, -108.00362

SOIL BORING NO: GB05
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
-30					gray to olive, slight staining, strange odor	2263		
-35					dense, medium to coarse grained, tan, moist, odor, no staining	941		
-40						3560		
-45					Shale: dense, gray, dry, slight odor, no staining At 45ft bgs; no odor	825		
	X	GB05-47				367	<0.0272	11.27

TD = 48 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS:
COORDINATES: 36.6381, -108.00379

SOIL BORING NO: GB06
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: dense, tan, fine to medium grained, poorly graded, dry to moist, no staining, no odor	23.8		
-10					coarse grained, more well-graded, dark brown	77.7		
-15	X	GB06-13			slight odor, tan, more poorly-graded	137.2	0.096	27.76
-20					less odor	61.1		
-25					dense, tan, fine to medium grained, poorly graded, dry to moist, slight odor, no staining.	22		
					less silts			

TD =34 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS:
COORDINATES: 36.6381, -108.00379

SOIL BORING NO: GB06
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

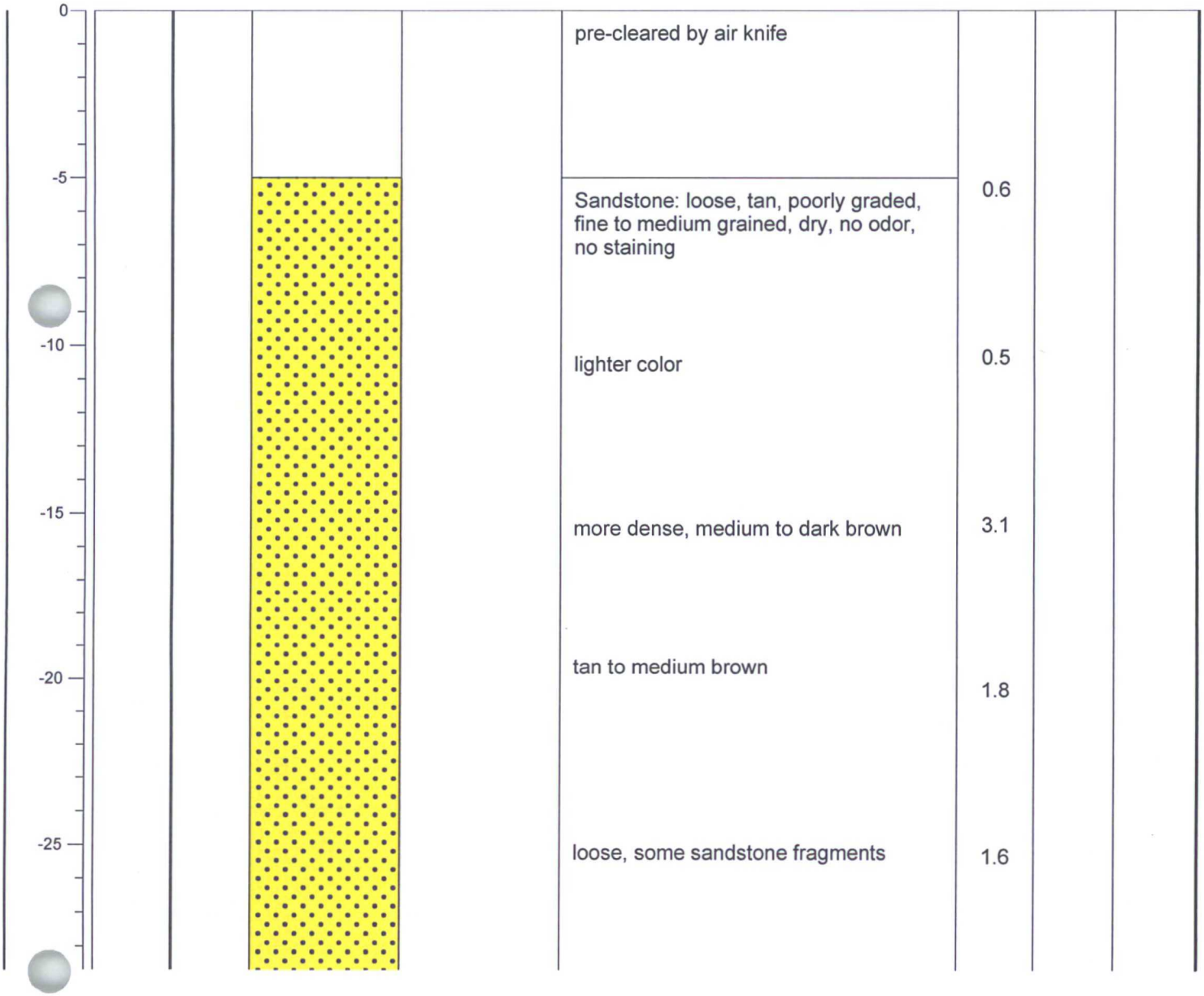
DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
-30						25.5		
	X	GB06-33				13.1	<0.0281	<22.57

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: SE of meter run

COORDINATES: 36.63807, -108.00356

SOIL BORING NO: GB07
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: loose, tan, poorly graded, fine to medium grained, dry, no odor, no staining	0.6		
-10					lighter color	0.5		
-15					more dense, medium to dark brown	3.1		
-20					tan to medium brown	1.8		
-25					loose, some sandstone fragments	1.6		



TD =36 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: SE of meter run

COORDINATES: 36.63807, -108.00356

SOIL BORING NO: GB07
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
-30						0.6		
-35	X	GB07-35			loose, brown, fine to medium grained, poorly graded, moist, no odor, no staining		<0.0269	<21.73

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: North of seperator

COORDINATES: 36.63783, -108.00396

SOIL BORING NO: GB08
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
0					pre-cleared by air knife			
-5					Sandstone: loose, redish, poorly graded, fine to medium grained, moist, no odor or staining	289		
-10	X	GB08-11			greyish olive, odor, slight staining	2795	<0.0269	348.7
-15					medium to coarse grained, strong odor, staining, blackish olive	1588		
-20					dense, gray to grayish brown, fine to medium grained, poorly graded, moist, odor, staining	573		
-25					loose	215		

TD =50 feet bgs

GHD Services Inc.

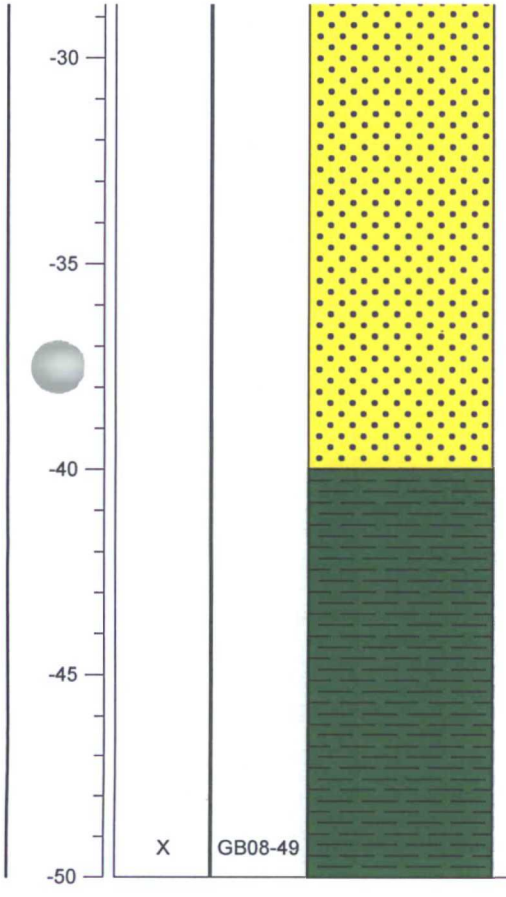
BORING LOG AND WELL COMPLETION FORM

PROJECT NAME: Krause WN Federal No. 2
LOCATION: San Juan County, New Mexico
FIELD LOGGED BY: E. Varnas
SURFACE ELEVATION (msl): No survey data available
GROUNDWATER ELEVATION (msl): NA
REMARKS: North of seperator

COORDINATES: 36.63783, -108.00396

SOIL BORING NO: GB08
DRILL TYPE: Hollow Stem Auger
CME-85
BORE HOLE DIAMETER: 7 7/8"
DRILLED BY: Yellow Jacket Drilling
DATE/TIME HOLE STARTED: 5/24/2016
DATE/TIME HOLE COMPLETED: 5/24/2016

DEPTH (bgs) - ft	SAMPLE TO LAB	SAMPLE ID	STRATAGRAPHIC SEQUENCE	COMPLETION INFORMATION	CLASSIFICATION AND DESCRIPTION	PID (ppm)	Total BTEX (mg/kg)	Total TPH (mg/kg)
-30					loose, black, fine to medium grained, poorly graded, odor, staining	2328		
-35						1320		
-40					Shale: dense, black, dry, no odor to slight odor, no staining	1719		
-45						665		
-50	X	GB08-49				627	0.3809	33.7



TD =50 feet bgs

GHD Services Inc.

BORING LOG AND WELL COMPLETION FORM

Appendix E
Soil Boring Assessment Laboratory Reports

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

June 08, 2016

Jeffrey Walker
GHD Services, Inc
6121 Indian School Rd NE
Ste 200
Albuquerque, NM 87110

RE: Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Dear Jeffrey Walker:
Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

Alice Flanagan
alice.flanagan@pacelabs.com
Project Manager

Enclosures

cc: Angela Bown, GHD Services, Inc,

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60220104001	SL-11102674-052316-EV-GB01-25'	Solid	05/23/16 10:00	05/26/16 08:40
60220104002	SL-11102674-052316-EV-GB02-35'	Solid	05/23/16 11:05	05/26/16 08:40
60220104003	SL-11102674-052316-EV-GB03-35'	Solid	05/23/16 12:45	05/26/16 08:40
60220104004	SL-11102674-052316-EV-GB04-20'	Solid	05/23/16 15:17	05/26/16 08:40
60220104005	SL-11102674-052316-EV-GB04-48'	Solid	05/23/16 16:05	05/26/16 08:40
60220104006	SL-11102674-052416-EV-GB05-25'	Solid	05/24/16 09:20	05/26/16 08:40
60220104007	SL-11102674-052416-EV-GB05-47'	Solid	05/24/16 10:40	05/26/16 08:40
60220104008	SL-11102674-052416-EV-GB06-13'	Solid	05/24/16 14:30	05/26/16 08:40
60220104009	SL-11102674-052416-EV-GB06-33'	Solid	05/24/16 14:40	05/26/16 08:40
60220104010	SL-11102674-052416-EV-GB07-35'	Solid	05/24/16 15:40	05/26/16 08:40
60220104011	SL-11102674-052416-EV-GB08-11'	Solid	05/24/16 16:40	05/26/16 08:40
60220104012	SL-11102674-052416-EV-GB08-49'	Solid	05/24/16 17:00	05/26/16 08:40
60220104013	SL-11102674-052416-EV-GB09-30'	Solid	05/24/16 12:55	05/26/16 08:40
60220104014	TRIP BLANK	Solid	05/23/16 10:00	05/26/16 08:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60220104001	SL-11102674-052316-EV-GB01-25'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104002	SL-11102674-052316-EV-GB02-35'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104003	SL-11102674-052316-EV-GB03-35'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104004	SL-11102674-052316-EV-GB04-20'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104005	SL-11102674-052316-EV-GB04-48'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104006	SL-11102674-052416-EV-GB05-25'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104007	SL-11102674-052416-EV-GB05-47'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104008	SL-11102674-052416-EV-GB06-13'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104009	SL-11102674-052416-EV-GB06-33'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104010	SL-11102674-052416-EV-GB07-35'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104011	SL-11102674-052416-EV-GB08-11'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104012	SL-11102674-052416-EV-GB08-49'	EPA 8015B	AJM	4
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1
60220104013	SL-11102674-052416-EV-GB09-30'	EPA 8015B	AJM	4

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 5035A/8260	JKL	8
		ASTM D2974	DWC	1

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Method: EPA 8015B
Description: 8015B Diesel Range Organics
Client: GHD Services_COP NM
Date: June 08, 2016

General Information:
13 samples were analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (Including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/54478

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- SL-11102674-052316-EV-GB04-20' (Lab ID: 60220104004)
  - n-Tetracosane (S)
  - p-Terphenyl (S)
- SL-11102674-052416-EV-GB05-25' (Lab ID: 60220104006)
  - n-Tetracosane (S)
  - p-Terphenyl (S)

QC Batch: OEXT/54518

S0: Surrogate recovery outside laboratory control limits.
- SL-11102674-052416-EV-GB05-47' (Lab ID: 60220104007)
  - n-Tetracosane (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Method: EPA 8015B
Description: 8015B Diesel Range Organics
Client: GHD Services_COP NM
Date: June 08, 2016

Analyte Comments:

QC Batch: OEXT/54518

1e: Surrogate recovery outside laboratory control limits, confirmed by re-extraction and reanalysis.

- SL-11102674-052416-EV-GB05-47' (Lab ID: 60220104007)
  - n-Tetracosane (S)
- SL-11102674-052416-EV-GB08-11' (Lab ID: 60220104011)
  - n-Tetracosane (S)

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

PROJECT NARRATIVE

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Method: **EPA 5035A/8260**
Description: 8260 MSV GRO and Oxygenates
Client: GHD Services_COP NM
Date: June 08, 2016

General Information:
13 samples were analyzed for EPA 5035A/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052316-EV-GB01-25' **Lab ID: 60220104001** Collected: 05/23/16 10:00 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	ND	mg/kg	10.7	1	05/27/16 00:00	05/30/16 07:46		
TPH-ORO (C28-C35)	ND	mg/kg	10.7	1	05/27/16 00:00	05/30/16 07:46		
Surrogates								
n-Tetracosane (S)	94	%	17-160	1	05/27/16 00:00	05/30/16 07:46	646-31-1	
p-Terphenyl (S)	98	%	68-109	1	05/27/16 00:00	05/30/16 07:46	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0054	1		06/02/16 18:53	71-43-2	
Ethylbenzene	ND	mg/kg	0.0054	1		06/02/16 18:53	100-41-4	
Toluene	ND	mg/kg	0.0054	1		06/02/16 18:53	108-88-3	
TPH-GRO	ND	mg/kg	0.54	1		06/02/16 18:53		
Xylene (Total)	ND	mg/kg	0.011	1		06/02/16 18:53	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	1		06/02/16 18:53	2037-26-5	
4-Bromofluorobenzene (S)	100	%	81-117	1		06/02/16 18:53	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	83-120	1		06/02/16 18:53	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**8.3**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052316-EV-GB02-35' **Lab ID: 60220104002** Collected: 05/23/16 11:05 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	ND	mg/kg	11.9	1	05/27/16 00:00	05/30/16 08:10		
TPH-ORO (C28-C35)	ND	mg/kg	11.9	1	05/27/16 00:00	05/30/16 08:10		
Surrogates								
n-Tetracosane (S)	86	%	17-160	1	05/27/16 00:00	05/30/16 08:10	646-31-1	
p-Terphenyl (S)	90	%	68-109	1	05/27/16 00:00	05/30/16 08:10	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0059	1		06/02/16 19:40	71-43-2	
Ethylbenzene	ND	mg/kg	0.0059	1		06/02/16 19:40	100-41-4	
Toluene	ND	mg/kg	0.0059	1		06/02/16 19:40	108-88-3	
TPH-GRO	ND	mg/kg	0.59	1		06/02/16 19:40		
Xylene (Total)	ND	mg/kg	0.012	1		06/02/16 19:40	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		06/02/16 19:40	2037-26-5	
4-Bromofluorobenzene (S)	99	%	81-117	1		06/02/16 19:40	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	83-120	1		06/02/16 19:40	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**16.9**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052316-EV-GB03-35' **Lab ID: 60220104003** Collected: 05/23/16 12:45 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	ND	mg/kg	13.2	1	05/27/16 00:00	05/30/16 08:18		
TPH-ORO (C28-C35)	ND	mg/kg	13.2	1	05/27/16 00:00	05/30/16 08:18		
Surrogates								
n-Tetracosane (S)	87	%	17-160	1	05/27/16 00:00	05/30/16 08:18	646-31-1	
p-Terphenyl (S)	88	%	68-109	1	05/27/16 00:00	05/30/16 08:18	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0070	1		06/02/16 19:56	71-43-2	
Ethylbenzene	ND	mg/kg	0.0070	1		06/02/16 19:56	100-41-4	
Toluene	ND	mg/kg	0.0070	1		06/02/16 19:56	108-88-3	
TPH-GRO	ND	mg/kg	0.70	1		06/02/16 19:56		
Xylene (Total)	ND	mg/kg	0.014	1		06/02/16 19:56	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		06/02/16 19:56	2037-26-5	
4-Bromofluorobenzene (S)	100	%	81-117	1		06/02/16 19:56	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	83-120	1		06/02/16 19:56	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**27.8**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052316-EV-GB04-20' **Lab ID: 60220104004** Collected: 05/23/16 15:17 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**705**	mg/kg	64.5	5	05/27/16 00:00	06/04/16 05:42		
TPH-ORO (C28-C35)	**94.2**	mg/kg	64.5	5	05/27/16 00:00	06/04/16 05:42		
Surrogates								
n-Tetracosane (S)	0	%	49-133	5	05/27/16 00:00	06/04/16 05:42	646-31-1	S4
p-Terphenyl (S)	0	%	57-108	5	05/27/16 00:00	06/04/16 05:42	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.33	50		06/02/16 20:11	71-43-2	
Ethylbenzene	**2.6**	mg/kg	0.33	50		06/02/16 20:11	100-41-4	
Toluene	**7.2**	mg/kg	0.33	50		06/02/16 20:11	108-88-3	
TPH-GRO	**832**	mg/kg	33.3	50		06/02/16 20:11		
Xylene (Total)	**31.0**	mg/kg	0.67	50		06/02/16 20:11	1330-20-7	
Surrogates								
Toluene-d8 (S)	101	%	80-120	50		06/02/16 20:11	2037-26-5	
4-Bromofluorobenzene (S)	104	%	81-117	50		06/02/16 20:11	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	83-120	50		06/02/16 20:11	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**26.0**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052316-EV-GB04-48' **Lab ID: 60220104005** Collected: 05/23/16 16:05 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	ND	mg/kg	10.7	1	05/27/16 00:00	05/30/16 08:35		
TPH-ORO (C28-C35)	ND	mg/kg	10.7	1	05/27/16 00:00	05/30/16 08:35		
Surrogates								
n-Tetracosane (S)	91	%	17-160	1	05/27/16 00:00	05/30/16 08:35	646-31-1	
p-Terphenyl (S)	94	%	68-109	1	05/27/16 00:00	05/30/16 08:35	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0054	1		06/03/16 15:40	71-43-2	
Ethylbenzene	ND	mg/kg	0.0054	1		06/03/16 15:40	100-41-4	
Toluene	ND	mg/kg	0.0054	1		06/03/16 15:40	108-88-3	
TPH-GRO	ND	mg/kg	0.54	1		06/03/16 15:40		
Xylene (Total)	**0.020**	mg/kg	0.011	1		06/03/16 15:40	1330-20-7	
Surrogates								
Toluene-d8 (S)	100	%	80-120	1		06/03/16 15:40	2037-26-5	
4-Bromofluorobenzene (S)	99	%	81-117	1		06/03/16 15:40	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	83-120	1		06/03/16 15:40	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**8.5**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB05-25' **Lab ID: 60220104006** Collected: 05/24/16 09:20 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**395**	mg/kg	52.7	5	05/27/16 00:00	05/31/16 14:04		
TPH-ORO (C28-C35)	**64.5**	mg/kg	52.7	5	05/27/16 00:00	05/31/16 14:04		
Surrogates								
n-Tetracosane (S)	0	%	49-133	5	05/27/16 00:00	05/31/16 14:04	646-31-1	S4
p-Terphenyl (S)	0	%	57-108	5	05/27/16 00:00	05/31/16 14:04	92-94-4	S4
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.26	50		06/06/16 13:59	71-43-2	
Ethylbenzene	ND	mg/kg	0.26	50		06/06/16 13:59	100-41-4	
Toluene	ND	mg/kg	0.26	50		06/06/16 13:59	108-88-3	
TPH-GRO	**63.3**	mg/kg	26.4	50		06/06/16 13:59		
Xylene (Total)	ND	mg/kg	0.53	50		06/06/16 13:59	1330-20-7	
Surrogates								
Toluene-d8 (S)	99	%	80-120	50		06/06/16 13:59	2037-26-5	
4-Bromofluorobenzene (S)	101	%	81-117	50		06/06/16 13:59	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	83-120	50		06/06/16 13:59	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**5.8**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB05-47' **Lab ID: 60220104007** Collected: 05/24/16 10:40 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**10.5**	mg/kg	10.3	1	06/01/16 00:00	06/06/16 13:35		
TPH-ORO (C28-C35)	ND	mg/kg	10.3	1	06/01/16 00:00	06/06/16 13:35		
Surrogates								
n-Tetracosane (S)	179	%	49-133	1	06/01/16 00:00	06/06/16 13:35	646-31-1	1e,S0
p-Terphenyl (S)	96	%	57-108	1	06/01/16 00:00	06/06/16 13:35	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0054	1		06/06/16 14:45	71-43-2	
Ethylbenzene	ND	mg/kg	0.0054	1		06/06/16 14:45	100-41-4	
Toluene	ND	mg/kg	0.0054	1		06/06/16 14:45	108-88-3	
TPH-GRO	**0.77**	mg/kg	0.54	1		06/06/16 14:45		
Xylene (Total)	ND	mg/kg	0.011	1		06/06/16 14:45	1330-20-7	
Surrogates								
Toluene-d8 (S)	96	%	80-120	1		06/06/16 14:45	2037-26-5	
4-Bromofluorobenzene (S)	98	%	81-117	1		06/06/16 14:45	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	83-120	1		06/06/16 14:45	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**8.2**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB06-13' **Lab ID: 60220104008** Collected: 05/24/16 14:30 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**15.8**	mg/kg	10.6	1	05/27/16 00:00	05/30/16 08:59		
TPH-ORO (C28-C35)	ND	mg/kg	10.6	1	05/27/16 00:00	05/30/16 08:59		
Surrogates								
n-Tetracosane (S)	91	%	17-160	1	05/27/16 00:00	05/30/16 08:59	646-31-1	
p-Terphenyl (S)	90	%	68-109	1	05/27/16 00:00	05/30/16 08:59	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0054	1		06/06/16 15:01	71-43-2	
Ethylbenzene	ND	mg/kg	0.0054	1		06/06/16 15:01	100-41-4	
Toluene	**0.0082**	mg/kg	0.0054	1		06/06/16 15:01	108-88-3	
TPH-GRO	**0.86**	mg/kg	0.54	1		06/06/16 15:01		
Xylene (Total)	**0.077**	mg/kg	0.011	1		06/06/16 15:01	1330-20-7	
Surrogates								
Toluene-d8 (S)	97	%	80-120	1		06/06/16 15:01	2037-26-5	
4-Bromofluorobenzene (S)	98	%	81-117	1		06/06/16 15:01	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	83-120	1		06/06/16 15:01	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**6.6**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB06-33' **Lab ID: 60220104009** Collected: 05/24/16 14:40 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	ND	mg/kg	11.0	1	05/27/16 00:00	05/30/16 09:07		
TPH-ORO (C28-C35)	ND	mg/kg	11.0	1	05/27/16 00:00	05/30/16 09:07		
Surrogates								
n-Tetracosane (S)	95	%	17-160	1	05/27/16 00:00	05/30/16 09:07	646-31-1	
p-Terphenyl (S)	100	%	68-109	1	05/27/16 00:00	05/30/16 09:07	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0057	1		06/06/16 15:16	71-43-2	
Ethylbenzene	ND	mg/kg	0.0057	1		06/06/16 15:16	100-41-4	
Toluene	ND	mg/kg	0.0057	1		06/06/16 15:16	108-88-3	
TPH-GRO	ND	mg/kg	0.57	1		06/06/16 15:16		
Xylene (Total)	ND	mg/kg	0.011	1		06/06/16 15:16	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	1		06/06/16 15:16	2037-26-5	
4-Bromofluorobenzene (S)	98	%	81-117	1		06/06/16 15:16	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	83-120	1		06/06/16 15:16	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**11.5**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB07-35' **Lab ID: 60220104010** Collected: 05/24/16 15:40 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	ND	mg/kg	10.6	1	05/27/16 00:00	05/30/16 09:15		
TPH-ORO (C28-C35)	ND	mg/kg	10.6	1	05/27/16 00:00	05/30/16 09:15		
Surrogates								
n-Tetracosane (S)	89	%	17-160	1	05/27/16 00:00	05/30/16 09:15	646-31-1	
p-Terphenyl (S)	91	%	68-109	1	05/27/16 00:00	05/30/16 09:15	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0053	1		06/06/16 15:31	71-43-2	
Ethylbenzene	ND	mg/kg	0.0053	1		06/06/16 15:31	100-41-4	
Toluene	ND	mg/kg	0.0053	1		06/06/16 15:31	108-88-3	
TPH-GRO	ND	mg/kg	0.53	1		06/06/16 15:31		
Xylene (Total)	ND	mg/kg	0.011	1		06/06/16 15:31	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	1		06/06/16 15:31	2037-26-5	
4-Bromofluorobenzene (S)	97	%	81-117	1		06/06/16 15:31	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	83-120	1		06/06/16 15:31	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**6.7**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB08-11' **Lab ID: 60220104011** Collected: 05/24/16 16:40 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**294**	mg/kg	10.4	1	06/01/16 00:00	06/06/16 13:43		
TPH-ORO (C28-C35)	**52.7**	mg/kg	10.4	1	06/01/16 00:00	06/06/16 13:43		
Surrogates								
n-Tetracosane (S)	173	%	49-133	1	06/01/16 00:00	06/06/16 13:43	646-31-1	1e
p-Terphenyl (S)	70	%	57-108	1	06/01/16 00:00	06/06/16 13:43	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	ND	mg/kg	0.0053	1		06/06/16 15:47	71-43-2	
Ethylbenzene	ND	mg/kg	0.0053	1		06/06/16 15:47	100-41-4	
Toluene	ND	mg/kg	0.0053	1		06/06/16 15:47	108-88-3	
TPH-GRO	**2.0**	mg/kg	0.53	1		06/06/16 15:47		
Xylene (Total)	ND	mg/kg	0.011	1		06/06/16 15:47	1330-20-7	
Surrogates								
Toluene-d8 (S)	97	%	80-120	1		06/06/16 15:47	2037-26-5	
4-Bromofluorobenzene (S)	97	%	81-117	1		06/06/16 15:47	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	83-120	1		06/06/16 15:47	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**5.8**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB08-49' **Lab ID: 60220104012** Collected: 05/24/16 17:00 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**17.2**	mg/kg	11.0	1	05/27/16 00:00	05/30/16 09:31		
TPH-ORO (C28-C35)	**14.5**	mg/kg	11.0	1	05/27/16 00:00	05/30/16 09:31		
Surrogates								
n-Tetracosane (S)	105	%	17-160	1	05/27/16 00:00	05/30/16 09:31	646-31-1	
p-Terphenyl (S)	107	%	68-109	1	05/27/16 00:00	05/30/16 09:31	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	**0.0089**	mg/kg	0.0057	1		06/06/16 16:02	71-43-2	
Ethylbenzene	**0.022**	mg/kg	0.0057	1		06/06/16 16:02	100-41-4	
Toluene	**0.11**	mg/kg	0.0057	1		06/06/16 16:02	108-88-3	
TPH-GRO	**2.0**	mg/kg	0.57	1		06/06/16 16:02		
Xylene (Total)	**0.24**	mg/kg	0.011	1		06/06/16 16:02	1330-20-7	
Surrogates								
Toluene-d8 (S)	98	%	80-120	1		06/06/16 16:02	2037-26-5	
4-Bromofluorobenzene (S)	97	%	81-117	1		06/06/16 16:02	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	83-120	1		06/06/16 16:02	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**11.0**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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(913)599-5665

ANALYTICAL RESULTS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Sample: SL-11102674-052416-EV-GB09-30' **Lab ID: 60220104013** Collected: 05/24/16 12:55 Received: 05/26/16 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546							
TPH-DRO (C10-C28)	**14.6**	mg/kg	11.5	1	05/27/16 00:00	05/30/16 09:39		
TPH-ORO (C28-C35)	ND	mg/kg	11.5	1	05/27/16 00:00	05/30/16 09:39		
Surrogates								
n-Tetracosane (S)	96	%	17-160	1	05/27/16 00:00	05/30/16 09:39	646-31-1	
p-Terphenyl (S)	97	%	68-109	1	05/27/16 00:00	05/30/16 09:39	92-94-4	
8260 MSV GRO and Oxygenates	Analytical Method: EPA 5035A/8260							
Benzene	**0.012**	mg/kg	0.0058	1		06/06/16 16:18	71-43-2	
Ethylbenzene	ND	mg/kg	0.0058	1		06/06/16 16:18	100-41-4	
Toluene	ND	mg/kg	0.0058	1		06/06/16 16:18	108-88-3	
TPH-GRO	ND	mg/kg	0.58	1		06/06/16 16:18		
Xylene (Total)	**0.031**	mg/kg	0.012	1		06/06/16 16:18	1330-20-7	
Surrogates								
Toluene-d8 (S)	97	%	80-120	1		06/06/16 16:18	2037-26-5	
4-Bromofluorobenzene (S)	97	%	81-117	1		06/06/16 16:18	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	83-120	1		06/06/16 16:18	17060-07-0	
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**13.5**	%	0.50	1		06/02/16 00:00		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

QC Batch: MSV/76190 Analysis Method: EPA 5035A/8260
QC Batch Method: EPA 5035A/8260 Analysis Description: 8260 MSV GRO and Oxygenates
Associated Lab Samples: 60220104001, 60220104002, 60220104003, 60220104004

METHOD BLANK: 1769595 Matrix: Solid
Associated Lab Samples: 60220104001, 60220104002, 60220104003, 60220104004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.0050	06/02/16 17:51	
Ethylbenzene	mg/kg	ND	0.0050	06/02/16 17:51	
Toluene	mg/kg	ND	0.0050	06/02/16 17:51	
TPH-GRO	mg/kg	ND	0.50	06/02/16 17:51	
Xylene (Total)	mg/kg	ND	0.010	06/02/16 17:51	
1,2-Dichloroethane-d4 (S)	%	95	83-120	06/02/16 17:51	
4-Bromofluorobenzene (S)	%	100	81-117	06/02/16 17:51	
Toluene-d8 (S)	%	101	80-120	06/02/16 17:51	

LABORATORY CONTROL SAMPLE: 1769596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	.1	0.096	96	75-116	
Ethylbenzene	mg/kg	.1	0.097	97	72-116	
Toluene	mg/kg	.1	0.098	98	72-116	
TPH-GRO	mg/kg	4	4.0	101	76-128	
Xylene (Total)	mg/kg	.3	0.29	97	69-116	
1,2-Dichloroethane-d4 (S)	%			97	83-120	
4-Bromofluorobenzene (S)	%			97	81-117	
Toluene-d8 (S)	%			102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1769597 1769598

Parameter	Units	60220104001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	mg/kg	ND	.11	.11	0.099	0.097	92	89	28-136	2	36	
Ethylbenzene	mg/kg	ND	.11	.11	0.098	0.096	91	89	10-152	2	48	
Toluene	mg/kg	ND	.11	.11	0.10	0.097	92	89	19-141	3	40	
Xylene (Total)	mg/kg	ND	.33	.33	0.29	0.29	90	88	10-149	2	50	
1,2-Dichloroethane-d4 (S)	%						97	98	83-120			
4-Bromofluorobenzene (S)	%						97	98	81-117			
Toluene-d8 (S)	%						101	101	80-120		38	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

QC Batch: MSV/76224
QC Batch Method: EPA 5035A/8260
Analysis Method: EPA 5035A/8260
Analysis Description: 8260 MSV GRO and Oxygenates
Associated Lab Samples: 60220104005

METHOD BLANK: 1770533
Matrix: Solid
Associated Lab Samples: 60220104005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.0050	06/03/16 15:25	
Ethylbenzene	mg/kg	ND	0.0050	06/03/16 15:25	
Toluene	mg/kg	ND	0.0050	06/03/16 15:25	
TPH-GRO	mg/kg	ND	0.50	06/03/16 15:25	
Xylene (Total)	mg/kg	ND	0.010	06/03/16 15:25	
1,2-Dichloroethane-d4 (S)	%	96	83-120	06/03/16 15:25	
4-Bromofluorobenzene (S)	%	98	81-117	06/03/16 15:25	
Toluene-d8 (S)	%	100	80-120	06/03/16 15:25	

LABORATORY CONTROL SAMPLE: 1770534

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	.1	0.10	100	75-116	
Ethylbenzene	mg/kg	.1	0.10	105	72-116	
Toluene	mg/kg	.1	0.10	102	72-116	
TPH-GRO	mg/kg	4	5.0	125	76-128	
Xylene (Total)	mg/kg	.3	0.31	102	69-116	
1,2-Dichloroethane-d4 (S)	%			95	83-120	
4-Bromofluorobenzene (S)	%			98	81-117	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1770535 1770536

Parameter	Units	60220104005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	mg/kg	ND	.11	.11	0.074	0.10	68	94	28-136	33	36	
Ethylbenzene	mg/kg	ND	.11	.11	0.076	0.11	68	99	10-152	37	48	
Toluene	mg/kg	ND	.11	.11	0.077	0.11	67	96	19-141	34	40	
Xylene (Total)	mg/kg	0.020	.33	.33	0.24	0.33	66	93	10-149	32	50	
1,2-Dichloroethane-d4 (S)	%						99	96	83-120			
4-Bromofluorobenzene (S)	%						99	99	81-117			
Toluene-d8 (S)	%						101	101	80-120		38	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

QC Batch: MSV/76238 Analysis Method: EPA 5035A/8260
QC Batch Method: EPA 5035A/8260 Analysis Description: 8260 MSV GRO and Oxygenates
Associated Lab Samples: 60220104006, 60220104007, 60220104008, 60220104009, 60220104010, 60220104011, 60220104012, 60220104013

METHOD BLANK: 1771176 Matrix: Solid
Associated Lab Samples: 60220104006, 60220104007, 60220104008, 60220104009, 60220104010, 60220104011, 60220104012, 60220104013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.0050	06/06/16 10:38	
Ethylbenzene	mg/kg	ND	0.0050	06/06/16 10:38	
Toluene	mg/kg	ND	0.0050	06/06/16 10:38	
TPH-GRO	mg/kg	ND	0.50	06/06/16 10:38	
Xylene (Total)	mg/kg	ND	0.010	06/06/16 10:38	
1,2-Dichloroethane-d4 (S)	%	96	83-120	06/06/16 10:38	
4-Bromofluorobenzene (S)	%	99	81-117	06/06/16 10:38	
Toluene-d8 (S)	%	98	80-120	06/06/16 10:38	

LABORATORY CONTROL SAMPLE: 1771177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/kg	.1	0.097	97	75-116	
Ethylbenzene	mg/kg	.1	0.099	99	72-116	
Toluene	mg/kg	.1	0.098	98	72-116	
TPH-GRO	mg/kg	4	4.4	109	76-128	
Xylene (Total)	mg/kg	.3	0.29	97	69-116	
1,2-Dichloroethane-d4 (S)	%			97	83-120	
4-Bromofluorobenzene (S)	%			98	81-117	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1771178 1771179

Parameter	Units	60220104006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	mg/kg	ND	5.3	5.3	4.9	5.3	93	101	28-136	8	36	
Ethylbenzene	mg/kg	ND	5.3	5.3	4.9	5.2	93	99	10-152	7	48	
Toluene	mg/kg	ND	5.3	5.3	4.9	5.2	92	98	19-141	6	40	
Xylene (Total)	mg/kg	ND	15.8	15.8	14.8	16.0	92	99	10-149	7	50	
1,2-Dichloroethane-d4 (S)	%						96	96	83-120			
4-Bromofluorobenzene (S)	%						100	100	81-117			
Toluene-d8 (S)	%						100	99	80-120		38	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

QC Batch: OEXT/54478 Analysis Method: EPA 8015B
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B
Associated Lab Samples: 60220104001, 60220104002, 60220104003, 60220104004, 60220104005, 60220104006, 60220104008, 60220104009, 60220104010, 60220104012, 60220104013

METHOD BLANK: 1766780 Matrix: Solid
Associated Lab Samples: 60220104001, 60220104002, 60220104003, 60220104004, 60220104005, 60220104006, 60220104008, 60220104009, 60220104010, 60220104012, 60220104013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/kg	ND	9.8	05/30/16 07:30	
TPH-ORO (C28-C35)	mg/kg	ND	9.8	05/30/16 07:30	
n-Tetracosane (S)	%	101	17-160	05/30/16 07:30	
p-Terphenyl (S)	%	104	68-109	05/30/16 07:30	

LABORATORY CONTROL SAMPLE: 1766781

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	82.5	78.0	95	77-122	
n-Tetracosane (S)	%			101	17-160	
p-Terphenyl (S)	%			106	68-109	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1766782 1766783

Parameter	Units	60220104001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO (C10-C28)	mg/kg	ND	90.3	90.4	85.2	86.0	92	93	10-242	1	85	
n-Tetracosane (S)	%						96	98	17-160		56	
p-Terphenyl (S)	%						102	103	68-109		55	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

QC Batch: OEXT/54518 Analysis Method: EPA 8015B
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B
Associated Lab Samples: 60220104007, 60220104011

METHOD BLANK: 1768836 Matrix: Solid
Associated Lab Samples: 60220104007, 60220104011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/kg	ND	9.7	06/06/16 12:56	
TPH-ORO (C28-C35)	mg/kg	ND	9.7	06/06/16 12:56	
n-Tetracosane (S)	%	95	49-133	06/06/16 12:56	
p-Terphenyl (S)	%	94	57-108	06/06/16 12:56	

LABORATORY CONTROL SAMPLE: 1768837

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	80.4	80.9	101	79-124	
n-Tetracosane (S)	%			100	49-133	
p-Terphenyl (S)	%			102	57-108	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1768838 1768839

Parameter	Units	60220092001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO (C10-C28)	mg/kg	ND	101	101	117	120	114	116	10-209	3	72	
n-Tetracosane (S)	%						105	109	49-133		58	
p-Terphenyl (S)	%						106	102	57-108		56	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

QC Batch: PMST/11816 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 60220104001, 60220104002, 60220104003, 60220104004, 60220104005, 60220104006, 60220104007, 60220104008, 60220104009, 60220104010, 60220104011, 60220104012, 60220104013

METHOD BLANK: 1769245 Matrix: Solid
Associated Lab Samples: 60220104001, 60220104002, 60220104003, 60220104004, 60220104005, 60220104006, 60220104007, 60220104008, 60220104009, 60220104010, 60220104011, 60220104012, 60220104013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	06/02/16 00:00	

SAMPLE DUPLICATE: 1769246

Parameter	Units	60220104001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	8.3	8.5	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1e	Surrogate recovery outside laboratory control limits, confirmed by re-extraction and reanalysis.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 11102674 Krause WN Federal No2
Pace Project No.: 60220104

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60220104001	SL-11102674-052316-EV-GB01-25'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104002	SL-11102674-052316-EV-GB02-35'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104003	SL-11102674-052316-EV-GB03-35'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104004	SL-11102674-052316-EV-GB04-20'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104005	SL-11102674-052316-EV-GB04-48'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104006	SL-11102674-052416-EV-GB05-25'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104007	SL-11102674-052416-EV-GB05-47'	EPA 3546	OEXT/54518	EPA 8015B	GCSV/21184
60220104008	SL-11102674-052416-EV-GB06-13'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104009	SL-11102674-052416-EV-GB06-33'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104010	SL-11102674-052416-EV-GB07-35'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104011	SL-11102674-052416-EV-GB08-11'	EPA 3546	OEXT/54518	EPA 8015B	GCSV/21184
60220104012	SL-11102674-052416-EV-GB08-49'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104013	SL-11102674-052416-EV-GB09-30'	EPA 3546	OEXT/54478	EPA 8015B	GCSV/21161
60220104001	SL-11102674-052316-EV-GB01-25'	EPA 5035A/8260	MSV/76190		
60220104002	SL-11102674-052316-EV-GB02-35'	EPA 5035A/8260	MSV/76190		
60220104003	SL-11102674-052316-EV-GB03-35'	EPA 5035A/8260	MSV/76190		
60220104004	SL-11102674-052316-EV-GB04-20'	EPA 5035A/8260	MSV/76190		
60220104005	SL-11102674-052316-EV-GB04-48'	EPA 5035A/8260	MSV/76224		
60220104006	SL-11102674-052416-EV-GB05-25'	EPA 5035A/8260	MSV/76238		
60220104007	SL-11102674-052416-EV-GB05-47'	EPA 5035A/8260	MSV/76238		
60220104008	SL-11102674-052416-EV-GB06-13'	EPA 5035A/8260	MSV/76238		
60220104009	SL-11102674-052416-EV-GB06-33'	EPA 5035A/8260	MSV/76238		
60220104010	SL-11102674-052416-EV-GB07-35'	EPA 5035A/8260	MSV/76238		
60220104011	SL-11102674-052416-EV-GB08-11'	EPA 5035A/8260	MSV/76238		
60220104012	SL-11102674-052416-EV-GB08-49'	EPA 5035A/8260	MSV/76238		
60220104013	SL-11102674-052416-EV-GB09-30'	EPA 5035A/8260	MSV/76238		
60220104001	SL-11102674-052316-EV-GB01-25'	ASTM D2974	PMST/11816		
60220104002	SL-11102674-052316-EV-GB02-35'	ASTM D2974	PMST/11816		
60220104003	SL-11102674-052316-EV-GB03-35'	ASTM D2974	PMST/11816		
60220104004	SL-11102674-052316-EV-GB04-20'	ASTM D2974	PMST/11816		
60220104005	SL-11102674-052316-EV-GB04-48'	ASTM D2974	PMST/11816		
60220104006	SL-11102674-052416-EV-GB05-25'	ASTM D2974	PMST/11816		
60220104007	SL-11102674-052416-EV-GB05-47'	ASTM D2974	PMST/11816		
60220104008	SL-11102674-052416-EV-GB06-13'	ASTM D2974	PMST/11816		
60220104009	SL-11102674-052416-EV-GB06-33'	ASTM D2974	PMST/11816		
60220104010	SL-11102674-052416-EV-GB07-35'	ASTM D2974	PMST/11816		
60220104011	SL-11102674-052416-EV-GB08-11'	ASTM D2974	PMST/11816		
60220104012	SL-11102674-052416-EV-GB08-49'	ASTM D2974	PMST/11816		
60220104013	SL-11102674-052416-EV-GB09-30'	ASTM D2974	PMST/11816		

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Sample Condition Upon Receipt
ESI Tech Spec Client

WO# : 60220104

60220104

Client Name: GHD Services

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☑ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: 7832 0867 1295 Pace Shipping Label Used? Yes ☐ No ☑

Custody Seal on Cooler/Box Present: Yes ☑ No ☐ Seals intact: Yes ☑ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☑ Foam ☑ None ☐ Other ☐

Thermometer Used: CF +1.0 / CF 0.0 T-239 / T-262 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 3.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: BB 5/26/16

Chain of Custody present:	☑Yes ☐No ☐N/A	1. 13th Sample in Comments Section
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: SL		13.
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	14.
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☐Yes ☑No	Initial when completed / Lot # of added preservative
Trip Blank present:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 102615-3		15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☑No ☐N/A	17. List State:
Additional labels attached to 5035A vials in the field?	☐Yes ☐No ☑N/A	18.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start:	Start:
End:	End:
Temp:	Temp:

Project Manager Review: AAF Date: 05/26/16

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GHD Services_COP NM	Report To:	Jeffrey Walker	Attention:	
Address:	6121 Indian School Rd NE	Copy To:		Company Name:	
Albuquerque, NM 87110				Address:	
Email:	jeff.walker@ghd.com	Purchase Order #:		Pace Quote:	
Phone:	505-377-3920 Fax	Project Name:	11102674 Krause WN Federal No2	Pace Project Manager:	alice.flanagan@pacelabs.com,
Requested Due Date:		Project #:	11102674	Pace Profile #:	

Regulatory Agency:

State / Location: NM

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

SAMPLE ID — One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique

Requested Analysis Filtered (Y/N)

60220104

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	8260 BTEX,GRO	DRO by 8015B	Residual Chlorine (Y/N)	
1	SL-11102674-052316-EV-GB01-25'			5/23/16	1000	—	—												X	X		2WGFU 001
2	SL-11102674-052316-EV-GB02-35'			5/23/16	1105	—	—												X	X		002
3	SL-11102674-052316-EV-GB03-35'			5/23/16	1245	—	—												X	X		003
4	SL-11102674-052316-EV-GB04-20'			5/23/16	1517	—	—												X	X		004
5	SL-11102674-052316-EV-GB04-45'			5/23/16	1605	—	—												X	X		005
6	SL-11102674-052416-EV-GB05-25'			5/24/16	0920	—	—												X	X		006
7	SL-11102674-052416-EV-GB05-47'			5/24/16	1040	—	—												X	X		007
8	SL-11102674-052416-EV-GB06-13'			5/24/16	1430	—	—												X	X		008
9	SL-11102674-052416-EV-GB06-33'			5/24/16	1440	—	—												X	X		009
10	SL-11102674-052416-EV-GB07-35			5/16/24	1540	—	—												X	X		010
11	SL-11102674-052416-EV-GB08-11'			5/24/16	1640	—	—												X	X		011
12	SL-11102674-052416-EV-GB08-49'			5/24/16	1700	—	—												X	X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Standard TAT	J Walker / GHD	5/25/16	1415	[signature]	5/26/16	0840	3.2	Y	Y	Y
13 SL-11102674-052416-EV-GB03-30	5/24/16 1255			X X				↓		
013										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Evan Varness

SIGNATURE of SAMPLER: JWalker for EV DATE Signed: 5/25/16

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)