

SUSTAINABLE ENVIRONMENT, ENERGY, HEALTH & SAFETY PROFESSIONAL SERVICES

June 6, 2024

Sent via email to elizabeth.fifer@kiewit.com

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Ms. Fifer,

NORTECH is pleased to present Kiewit Corporation (Kiewit) with this March 2024 Groundwater Monitoring Report. Six monitoring wells were sampled on March 19 - 27, 2024, at the former Kiewit Facility located at 2050 Peger Road, Fairbanks, Alaska (the Site). Attached are site figures, summary data tables, field notes, site photographs, and laboratory data reports.

ADEC File Number: 102.38.164 and Hazard Identification Number: 25680

Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska

Site Location and Background

Location and site maps are provided in Attachment 1 as Figures 1 and 2, respectively. The Site legal description in the Fairbanks North Star Borough (FNSB) database is Block 15A E M Jones out of Block 15 E M Jones Subdivision. In 2016, Kiewit sold the property to GGATS LLC, with Construction Machinery Industrial, LLC (CMI) currently occupying the land and buildings. CMI's primary shop is located on the adjacent parcel to the west, and CMI uses the Site parcel for additional equipment storage.

Existing soil and groundwater contamination are related to a former used oil aboveground storage tank (AST) and buried fuel delivery line (FDL) removed in 2011. Because of contamination from the AST and FDL during Kiewit's ownership, Kiewit remains the responsible party for the Site cleanup.

Two wells were decommissioned in August 2019: MW-1 and the former Tesoro investigation well G-4. Four remaining monitoring wells (MW-2, MW-3, MW-4, and MW-5) on the former Kiewit property and the adjacent parcel occupied by CMI were sampled. A fifth shallow well MW-403B, belonging to the Alaska Department of Transportation & Public Facilities (Alaska DOT&PF) in the 20th Avenue right of way (ROW), was also sampled. Adjacent Alaska DOT&PF well MW-403A is screened at a deeper depth and was the sixth well sampled. The well locations are shown in Figure 2 in Attachment 1.

Previous and Current Results Overview

Twenty rounds of groundwater samples have been collected since 2012. Eight rounds (April 2015, April 2018, April 2019, May 2020, May 2021, March 2022, March 2023, and March 2024) were collected during low and rising groundwater level conditions during late winter/early spring. Twelve rounds (October 2012, July-August 2014,



October 2014, September 2015, August 2016, September 2017, October 2018, October 2019, September 2020, October 2021, October 2022, and September 2023) were collected during transient or high groundwater conditions during late summer/early fall. Groundwater sampling was not conducted in 2013. Historical Groundwater Analytical Data from 2012 to Present are provided in Attachment 2, Table 3.

NORTECH measured and removed light non-aqueous phase liquid (LNAPL [free product]) from MW-2 in the former FDL source area monthly between October 2018 and December 2020. Free product was observed intermittently, and an estimated 0.266 gallon of free product was removed during twenty-one events. Groundwater analytical sampling of MW-2 was not implemented if more than 0.03 feet of free product was present. MW-2 was not sampled in October 2018 and April 2019 due to the presence of free product. Free product has not been detected in the other network monitoring wells.

In upgradient well MW-1, all tested analytes were below Alaska Department of Environmental Conservation (ADEC) cleanup levels (CLs) from 2014 to 2019. In MW-2 and MW-3, diesel range organics (DRO) has been detected above ADEC CL each year since 2012. In MW-4, DRO was detected above ADEC CL in 2015, 2020, 2021, 2022, and 2023. In MW-5, DRO was detected below ADEC CL in 2012 and 2016, and the analyte has not been detected in the well since 2016. In MW-403A, first sampled by Kiewit in May 2020, and in MW-403B, first sampled by Kiewit in October 2019, DRO has not been detected.

Scope of Work and Methodology

NORTECH's scope of work for the March 2024 monitoring event was to complete groundwater sampling of the existing monitoring wells in accordance with Section 9 of the ADEC-approved *Former Kiewit Facility, 2019 Remedial Action Work Plan* (GHD [July 26, 2019]). Groundwater monitoring was completed by a qualified environmental professional (QEP) as defined by 18 Alaska Administrative Code (AAC) 75, 18 AAC 78, and the ADEC January 2022 Field Sampling Guidance (2022 FSG). Methods were in general accordance with the 2022 FSG, and as further described below. This included analytical, sampling, and product recovery methods and associated quality assurance/quality control (QA/QC).

NORTECH completed groundwater sampling of the existing six monitoring wells currently present on or adjacent to the Site. MW-2 and MW-3 are on the Site. MW-4 and MW-5 are on the property to the west. MW-403A and MW-403B are located in the 20th Avenue ROW on the north edge of the Site. To be consistent with previous years, these wells were sampled at regional and Site low groundwater conditions which typically occur annually during late winter/early spring. Groundwater samples were analyzed for DRO, volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). Reported VOCs consisted of the following analytes: benzene, toluene, ethylbenzene, and xylenes (BTEX); naphthalene; 1,2,4-trimethylbenzene; and 1,3,5-trimethylbenzene.

As in Fall 2021, Spring 2022, Fall 2022, Spring 2023, and Fall 2023, Kiewit requested additional analyses during the Spring 2024 groundwater monitoring event to support a natural source zone depletion (NSZD) evaluation of biodegradation of the dissolved source zone mass. The NSZD evaluation includes sampling each of the six wells for nitrate; sulfate; total and dissolved iron and manganese; and dissolved methane/ethane/ethane.

During the Spring 2024 groundwater sampling event, depth to free product (if detected) and depth to groundwater were measured in the six network wells using an electronic oil/water



interface indicator probe (oil/water interface probe) capable of 0.01-foot accuracy and recorded in the field notes. Total well depth was also measured to calculate well volume. If free product were detected in a well, the well was not to be sampled; however, the product would be removed, and the well purged of three well volumes.

March 2024 Groundwater Sampling

Depth to groundwater and total depth were measured in each well using an oil/water interface probe. In wells without a sheen or product, water quality parameters were obtained using a flow-through cell. Where a well has historically exhibited a sheen, the flow-through cell was not used. Water clarity was evaluated by visual observation before the water entered the flow-through-cell and was recorded as clear or turbid. Field parameters measured during purging were obtained using a calibrated YSI ProDSS water quality meter.

Water quality parameters were considered stable when three successive readings, collected 3-5 minutes apart, were within a recommended limit of variance for five parameters of temperature, dissolved oxygen, conductivity, pH, and oxidation-reduction potential (ORP) or three to five well volumes had been removed from the well. The parameters and visual clarity were monitored and recorded on the groundwater sample forms presented in Attachment 3. MW-2 and MW-3 were sampled using a peristaltic pump, and the other four wells were sampled using a submersible pump, which was decontaminated between wells to avoid cross-contamination. Low-flow technique was implemented for each well to minimize turbidity and suspended solids.

In MW-2 and MW-3, a peristaltic pump and disposable tubing were used to purge and sample the wells to preclude contaminating and damaging the submersible pump and water quality meter with oily water. To minimize potential VOC loss, the peristaltic pump was operated such that air bubbles were not entrained with the water during purging and sampling efforts.

After purging, water samples were collected directly from the pump discharge tubing into laboratory-supplied sample bottles as outlined in the 2022 FSG. New disposable gloves were worn to collect samples and gloves were changed between sample locations.

Samples were collected in the order of volatility, volatiles first; containers filled and sealed, with rims cleaned before tightening the lid. Volatile samples were collected without headspace in the container. Other sample jars were filled and sealed as indicated by the laboratory for the method. Teflon-lined screw caps provided by the laboratory were used to seal the containers.

Laboratory Analysis

Groundwater samples from the six wells were submitted to SGS North America Inc. (SGS) an ADEC-approved laboratory in Anchorage, Alaska, for analysis by the following methods:



Grour	ndwater Analytical Sampling Program
Monitoring Well	Analysis
MW-2	DRO (AK102); VOCs (US Environmental Protection Agency
	[EPA] 8260D); Nitrate (EPA 300.0); Sulfate (EPA 300.0);
	Total Iron and Manganese (EPA 6020); Dissolved Iron and
	Manganese (EPA 6020); Dissolved Methane/Ethane/Ethene
	(EPA RSK-175)
MW-3 (and Field Duplicate	DRO (AK102); VOCs (EPA 8260D); PAHs (EPA 8270D SIM);
of DRO; VOCs; and PAHs,	Nitrate (EPA 300.0); Sulfate (EPA 300.0); Total Iron and
only)	Manganese (EPA 6020); Dissolved Iron and Manganese
	(EPA 6020); Dissolved Methane/Ethane/Ethene (EPA RSK-
	175)
MW-4	DRO (AK102); VOCs (EPA 8260D); Nitrate (EPA 300.0);
	Sulfate (EPA 300.0); Total Iron and Manganese (EPA 6020);
	Dissolved Iron and Manganese (EPA 6020); Dissolved
	Methane/Ethane/Ethene (EPA RSK-175)
MW-5	DRO (AK102); VOCs (EPA 8260D); Nitrate (EPA 300.0);
	Sulfate (EPA 300.0); Total Iron and Manganese (EPA 6020);
	Dissolved Iron and Manganese (EPA 6020); Dissolved
	Methane/Ethane/Ethene (EPA RSK-175)
MW-403A	DRO (AK102); VOCs (EPA 8260D); Nitrate (EPA 300.0);
	Sulfate (EPA 300.0); Total Iron and Manganese (EPA 6020);
	Dissolved Iron and Manganese (EPA 6020); Dissolved
	Methane/Ethane/Ethene (EPA RSK-175)
MW-403B	DRO (AK102); VOCs (EPA 8260D); Nitrate (EPA 300.0);
	Sulfate (EPA 300.0); Total Iron and Manganese (EPA 6020);
	Dissolved Iron and Manganese (EPA 6020); Dissolved
	Methane/Ethane/Ethene (EPA RSK-175)

Note: Reported VOCs consist of benzene, toluene, ethylbenzene, and xylenes (BTEX); naphthalene; 1,2,4-trimethylbenzene; and 1,3,5-trimethylbenzene

Quality Assurance/Quality Control

QA/QC objectives were followed as described in the 2022 FSG. Field QA/QC procedures included adherence to the 2019 Work Plan, handling samples under chain-of-custody procedures, submitting samples within specified holding times, collecting a field duplicate, and including a trip blank in the sample cooler with volatile analytes. An equipment blank was collected and submitted for analysis, as a submersible pump was used for sampling. The trip blank was transported with volatiles samples and submitted for analysis. Laboratory QA/QC procedures include analysis of method blanks; laboratory control spikes (LCS) and LCS duplicates (LCSD); and matrix spikes (MS) and MS duplicates (MSD).

Monitoring Well Survey

At the request of Kiewit, **NORTECH** contracted Design Alaska, Inc. (Design Alaska) to complete a professional monitoring well survey on November 4, 2020. Design Alaska provided well coordinates, top of casing (TOC) elevation, and top of monument elevation for the six network wells. **NORTECH** used the Design Alaska survey data and November 2020, May 2021, October 2021, March 2022, October 2022, March 2023, September 2023, and March 2024 depth to groundwater measurements to estimate inferred groundwater flow direction at the Site.



Field Activities

Field sampling was conducted from March 19 to 27, 2024. Purge water treatment and disposal were conducted on May 15, 2024. The wells were in good condition for sampling, and no repairs were necessary. Field notes and groundwater sample forms are presented in Attachment 3, and Site Photographs are provided in Attachment 4.

Groundwater Sampling

MW-2

Pre-purge depth to water was measured at 9.87 feet below TOC. The total well depth was measured at 13.90 feet below TOC. Free product was not detected using an oil/water interface probe. The well was purged and sampled from the screened section 12.0 feet below TOC. Water quality parameters were not collected due to historic elevated contaminant levels and historic sheen. Three to five well volumes of water were purged using a peristaltic pump. Approximately four gallons of water were removed and containerized. Purge water from the well did not exhibit petroleum sheen; however, the water exhibited petroleum odor. Groundwater sample MW-2 was collected. The well appeared in good condition; although, a damaged rim prevented completely sealing the monument cover.

MW-3

Pre-purge depth to water was measured at 10.22 feet below TOC. The total well depth was measured at 12.92 feet below TOC. Free product was not detected using an oil/water interface probe. The well was purged and sampled from the screened section 12.0 feet below TOC. Water quality parameters were not collected due to historic elevated contaminant levels and historic sheen. Nearly three well volumes of water were purged using a peristaltic pump. The well was purged dry and slow to recharge. Approximately two gallons of water were removed and containerized. Purge water from the well did not exhibit petroleum sheen; however, the water exhibited petroleum odor. Primary groundwater sample MW-3 and duplicate sample MW-300 (DRO, VOCs, and PAHs) were collected. The well appeared in good condition.

MW-4

Pre-purge depth to water was measured at 11.58 feet below TOC. The total well depth was measured at 13.95 feet below TOC. Free product was not detected using an oil/water interface probe. The well was purged and sampled from the screened section 13.0 feet below TOC. Water was purged from the well using a submersible pump, and water quality parameters were measured until stable. Approximately seven gallons of water were removed and containerized. Purge water from the well did not exhibit petroleum sheen or petroleum odor. Groundwater sample MW-4 was collected. The well appeared in good condition.

MW-5

Pre-purge depth to water was measured at 11.36 feet below TOC. The total well depth was measured at 34.50 feet below TOC. Free product was not detected using an oil/water interface probe. The well was purged and sampled from the screened section 33.0 feet below TOC. Water was purged from the well using a submersible pump, and water quality parameters were measured until stable. Approximately eight gallons of water were removed and containerized. Purge water from the well did not exhibit petroleum sheen or petroleum odor. Groundwater sample MW-5 was collected. The well appeared in good condition.

MW-403A

Pre-purge depth to water was measured at 9.49 feet below TOC. The total well depth was measured at 47.85 feet below TOC. Free product was not detected using an oil/water interface



probe. The well was purged and sampled from the screened section 46.0 feet below TOC. Water was purged from the well using a submersible pump, and water quality parameters were measured until stable. Approximately eight gallons of water were removed and containerized. Purge water from the well did not exhibit petroleum sheen or petroleum odor. Groundwater sample MW-403A was collected. The well appeared in good condition.

MW-403B

Pre-purge depth to water was measured at 9.45 feet below TOC. The total well depth was measured at 14.93 feet below TOC. Free product was not detected using an oil/water interface probe. The well was purged and sampled from the screened section 12.0 feet below TOC. Water was purged from the well using a submersible pump, and water quality parameters were measured until stable. Approximately eight gallons of water were removed and containerized. Purge water from the well did not exhibit petroleum sheen or petroleum odor. Groundwater sample MW-403B was collected. The well appeared in good condition.

Investigation-Derived Waste (IDW) Management

Approximately 38 gallons of purge water was generated from the six wells during sampling on March 19 to 27, 2024. The water waste was characterized based on groundwater analytical results from March 2024 and per- and polyfluoroalkyl substances (PFAS) results from late 2019.

On May 15, 2024, **NORTECH** processed and treated the purge water from each well using a portable Granular Activated Carbon (GAC) System. The treated water was disposed of on Site by pouring to the ground surface a minimum of 100 feet away from drinking water wells or surface water.

Used/disposable sampling supplies were double-bagged and disposed of with other non-hazardous waste in a trash receptacle for transport to the FNSB Landfill.

Laboratory Results and Discussion

The SGS Laboratory Reports are provided in Attachment 5. The laboratory analytical results for the March 2024 groundwater monitoring event are summarized in Attachment 2, Tables 1 (DRO and VOCs) and 2 (PAHs). Historical Groundwater Analytical Data from 2012 to Present are summarized in Attachment 2, Table 3. Laboratory results in Tables 1, 2, and 3 are compared to current ADEC 18 AAC 75 Table C Groundwater Cleanup Levels as amended through October 18, 2023.

The March 2024 monitoring event is the eleventh since 2019. The intent of these events is to identify potential seasonal trends in groundwater contaminant concentrations.

Groundwater Results

MW-2

The results for source well MW-2 were above the ADEC CL for three analytes. DRO was detected at a concentration of 3.16 milligrams per liter (mg/L) (CL of 1.5 mg/L). Other analytes with concentrations exceeding their respective CLs were 1,2,4-trimethylbenzene at 135 micrograms per liter (μ g/L) (CL of 56 μ g/L) and naphthalene at 26.7 μ g/L (CL of 1.7 μ g/L). 1.3,5-Trimethylbenzene, ethylbenzene, and total xylenes were detected at concentrations below their respective CLs. Benzene and toluene were non-detect. These results are consistent with previous results and confirm that this well is within the source area of the contaminant plume.



MW-3

The results for source well MW-3 were above the ADEC CL for two analytes. Primary and duplicate samples had DRO concentrations of 7.11 and 3.10 mg/L, respectively, both above the ADEC CL. Naphthalene by VOCs analysis was detected in the primary and duplicate samples at concentrations above the ADEC CL. The VOCs 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene; benzene; toluene; and total xylenes were detected at concentrations below their respective CLs. Ethylbenzene was non-detect. The PAHs 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, fluorene, and naphthalene were detected in the primary and duplicate samples at concentrations below their respective CLs. These results are consistent with previous results for the former AST source area well.

MW-4

The results for downgradient well MW-4 had detections of DRO and benzene at concentrations below their CLs. No other analytes were detected in MW-4. These results are consistent with previous results for DRO and benzene.

During the October 2022 sampling event, naphthalene was detected for the first time in the well since 2015 and at a concentration above CL. In 2015, naphthalene was detected below the CL. In every other sampling event, including March 2024, naphthalene has been non-detect.

MW-5

No tested analytes were detected in downgradient well MW-5. This is consistent with previous sampling events. The depth of the well was measured at approximately 35 feet below ground surface (bgs). Based on absence of contamination in MW-5, which is closer to the source area than MW-4, a historical review of the well log installation was undertaken to determine the elevation of the screened interval. This information allows evaluation of the comparability of the data to other shallow wells that are screened across the water table.

In Fall 2020, the well log was obtained from Kiewit and indicates the well is screened in the interval from 30 feet to 35 feet bgs, the screened interval does not intersect the top of the groundwater table, and the well is screened approximately 20 feet below the groundwater surface. Data is flagged in the report tables to indicate that it may not represent contamination near the groundwater surface.

MW-403A

This downgradient monitoring well is located in the Alaska DOT&PF ROW immediately outside the northern property boundary. MW-403A had benzene as the only analyte detected at a concentration far below the ADEC CL. The results are consistent with the eight previous sampling events conducted by Kiewit in 2020, 2021, 2022, and 2023; however, benzene was detected for the first time in the well during the October 2022 sampling event. The monitoring well was installed as part of the Alaska DOT&PF Maintenance Facility investigation. The well is located approximately 3 feet east of MW-403B, discussed below. The depth of the well was measured at approximately 48.5 feet bgs. The well is located approximately 145 feet and 205 feet downgradient from the former AST and FDL, respectively.

In Fall 2020, a historical review of the well log installation was conducted to determine the elevation of the screened interval. The well log obtained from Alaska DOT&PF indicates the well is screened in the interval from 44 feet to 48 feet bgs, the screened interval does not intersect the top of the groundwater table, and the well is screened more than 30 feet below the



groundwater surface. MW-403A analytical data is flagged in the report tables to indicate that it may not represent contamination near the groundwater surface.

MW-403B

This downgradient monitoring well is located in the Alaska DOT&PF ROW immediately outside the northern property boundary. MW-403B had benzene as the only analyte detected at a concentration far below the ADEC CL. The results are consistent with the nine previous sampling events conducted by Kiewit in 2019, 2020, 2021, 2022, and 2023. The monitoring well was installed as part of the Alaska DOT&PF Maintenance Facility investigation. The depth of the well was measured at approximately 15.5 feet bgs. The well is located approximately 145 feet and 205 feet downgradient from the former AST and FDL, respectively.

In Fall 2020, a historical review of the well log installation was conducted to determine the elevation of the screened interval. The well log obtained from Alaska DOT&PF indicates the well is screened in the interval from about 5.5 feet to 15.5 feet bgs, and the screened interval intersects the top of the groundwater table.

Field Water Quality Parameters and NSZD Evaluation Results

Final field water quality parameters of monitoring well purge water from each well prior to groundwater sample collection are provided in Attachment 2, Table 4. The NSZD evaluation included sampling each of the six wells for nitrate; sulfate; total and dissolved iron and manganese; and dissolved methane/ethane/ethene. The NSZD analytical results are summarized in Attachment 2, Table 5. Kiewit intends to evaluate the water quality and NSZD data to determine future actions at the Site.

Quality Assurance/Quality Control

Part of the data quality objectives (DQOs) for the project were to produce data of adequate quality as outlined in the 2022 FSG for comparison to the 18 AAC 75.345 groundwater cleanup levels. The primary tool used to assess data quality was the ADEC Laboratory Data Review Checklist (LDRC). A LDRC was completed for each of the two laboratory work orders and are included with the laboratory reports in Attachment 5. The SGS laboratory report case narrative was reviewed against the ADEC LDRC for potential laboratory QC issues. The laboratory case narratives for the SGS work orders are located on Page 2 of the laboratory reports.

QA/QC procedures included adherence to the 2019 Work Plan, handling samples under chainof-custody procedures, submitting samples within specified holding times, collecting a field duplicate, and including a trip blank in the sample cooler with volatile analytes. An equipment blank was collected, as a submersible pump was used for sampling the wells. Laboratory QA/QC procedures included analysis of method blanks; laboratory control samples (LCS) and LCS duplicates (LCSD); and matrix spike samples (MS) and MS duplicates (MSD).

Comparison of LOQs to Cleanup Levels

A QA/QC check was completed to compare the laboratory limit of quantitation (LOQ) of the analytes with ADEC CLs. As shown on Attachment 2, Tables 1 and 2, the LOQs of the contaminants of concern were below the ADEC CLs, confirming the results represent Site groundwater quality.

Duplicate Pair Relative Percent Difference

Duplicate pairs are a QC check on field sampling techniques and laboratory error. Precision, expressed as the relative percent difference (RPD) between field duplicate sample results, is an



indication of consistency in sampling, sample handling, preservation, and laboratory analysis. The RPD (the difference between the field duplicate results expressed as a percentage of the average of those results) was calculated according to the 2022 FSG. For field duplicate water samples, below 30% for calculated RPDs is preferred for meeting DQOs with no impact to usability.

Tables 1 and 2 in Attachment 2 present the calculated RPDs for detected results from the field duplicate pair MW-3 / MW-300. Thirteen analytes were detected in the duplicate pair. Five analytes had RPDs greater than the 30% recommended for water ranging from 31.9% to 85.6%. The associated well was pumped dry, was slow to recharge, and purge water from the well exhibited petroleum odor. The RPD exceedances are attributed to non-homogenous sample matrix.

Data quality and usability are not adversely affected. The higher value of each detected analyte in the duplicate pair was consistent with previous sampling events and was used for decision purposes.

Equipment Blank and Trip Blank

An equipment blank sample was collected during the sampling event. The equipment blank sample was collected by running distilled water over and through the submersible pump after sampling MW-4 and decontamination. No DRO or VOCs were detected in the equipment blank sample.

Laboratory-prepared trip blank samples accompanied the volatile samples during collection through submittal to SGS. The trip blanks were non-detect for VOCs.

QA/QC Summary

The data quality review for this sampling event indicates there were no significant data quality issues associated with the laboratory reports. The data quality of the laboratory reports is adequate, and results can be used to characterize contaminant concentrations of the groundwater and to evaluate NSZD at the Site. The data quality issues associated with the laboratory reports and the issues discussed above are also reviewed in the ADEC LDRCs. The laboratory analytical data generated during the March 2024 monitoring event is usable as described in this monitoring report.

Annual Groundwater Elevation Variation

A review of monthly depth to water readings from October 2018 to December 2020 at MW-2 indicates the groundwater elevation at the Site was lowest during late winter (mid-February to mid-March) and highest during late summer (mid-August to mid-September). Annual depth to water at MW-2 ranged from approximately 10.0 feet bgs during late winter to 6.0 feet bgs during late summer. The March 2024 groundwater monitoring event during a period of low groundwater level conditions during late winter/early spring.

Groundwater Flow Direction and Gradient

The groundwater flow direction was estimated using the monitoring well survey data provided by Design Alaska on November 4, 2020, and depth to water measurements collected by *NORTECH* on March 19, 26, and 27, 2024. The survey data and well measurements are presented in Attachment 2, Table 6.



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Due to frost-jacking of the casings and the resultant change in TOC elevations since the November 4, 2020, survey associated with downgradient wells MW-4, MW-5, MW-403A, and MW-403B, the groundwater flow direction and gradient could not be accurately determined. In Fall 2021 and subsequent monitoring events, *NORTECH* repaired the four wells by trimming the casings and resetting the well monuments to ground surface. The potentiometric difference between wells MW-2 and MW-3 measurements calculated on March 27, 2024, provides limited support of past data that has determined that the inferred groundwater flow direction is to the north-northwest.

Figure 3 in Attachment 1 provides a potentiometric surface map of groundwater elevations taken during a previous monitoring event unaffected by frost-jacking conducted on May 12, 2021. The May 12, 2021, data were entered in the EPA *On-line Tools for Site Assessment Calculation* to determine groundwater flow direction and gradient. Based on the well survey and depth to water measurements, the inferred groundwater flow direction is to the north-northwest at a gradient of approximately 0.001925 foot per linear foot. Based on past data and limited March 2024 data, groundwater at the Site appears to flow similar to known regional groundwater direction and gradient. This has been consistent during all monitoring events at the Site. A new survey and continued groundwater gradient evaluation are not recommended.

Summary, Conclusions, and Recommendations

NORTECH completed March 2024 groundwater monitoring at the former Kiewit facility located at 2050 Peger Road in Fairbanks, Alaska. The March 2024 groundwater sampling event was conducted during a period of low groundwater level conditions during late winter/early spring. Based on field observations, laboratory results, and Site conditions, **NORTECH** has the following summary, conclusions, and recommendations:

Free Product Testing and Recovery and General Observations

- An oil/water interface probe was used in the field to test for free product in the six network wells
- None of the wells exhibited measurable free product, and no free product was recovered from the wells
- Based on the absence of measurable free product, the six wells underwent groundwater sampling for laboratory analysis
- No well had purge water exhibiting sheen

March 2024 Groundwater Results

- DRO
 - Remains above the ADEC CL in source area wells MW-2 and MW-3
 - o Detected below the ADEC CL in downgradient well MW-4
 - Not detected in downgradient wells MW-5, MW-403A, or MW-403B
- BTEX
 - Benzene was detected below the ADEC CL in MW-3, MW-4, MW-403A, and MW-403B consistent with previous sampling events
 - Toluene was detected below the ADEC CL in MW-3
 - $\circ~$ Ethylbenzene was detected below the ADEC CL in MW-2
 - Total xylenes was detected below the ADEC CL in MW-2 and MW-3
 - BTEX was not detected in MW-5
- 1,2,4-Trimethylbenzene
 - Detected above the ADEC CL in MW-2 and below the CL in MW-3



- Not detected in MW-4, MW-5, MW-403A, or MW-403B
- 1,3,5-Trimethylbenzene
 - Detected below the ADEC CL in MW-2 and MW-3
 - Not detected in MW-4, MW-5, MW-403A, or MW-403B
- Naphthalene (as a VOC by EPA Method 8260D)
 - Detected above the ADEC CL in MW-2 and MW-3
 - Not detected in MW-4, MW-5, MW-403A, or MW-403B
- PAHs (analyzed for MW-3 only)
 - 1-Methylnaphthalene, 2-methylnaphthalene, acenaphthene, fluorene, and naphthalene were detected below respective ADEC CLs
 - No other PAHs were detected

Field Water Quality Parameters and NSZD Evaluation Results

- NSZD evaluation included sampling each of the six wells for nitrate; sulfate; total and dissolved iron and manganese; and dissolved methane/ethane/ethene
- Kiewit intends to evaluate the water quality and NSZD data to determine future actions at the Site

Monitoring Well Observations

- The six network wells were in satisfactory condition for groundwater sampling, and no repairs were necessary
- MW-5 and MW-403A were measured at a total depth of approximately 35 and 48 feet bgs, respectively
 - Historical review of the MW-5 well log indicates the well is screened in a 5-foot interval approximately 20 feet below the top of the groundwater table
 - Historical review of the MW-403A well log indicates the well is screened in a 4-foot interval more than 30 feet below the top of the groundwater table
 - MW-5 and MW-403A analytical data is flagged in the report tables to indicate that it may not represent contamination near the groundwater surface

Monitoring Well Survey and Inferred Groundwater Flow Direction

- In November 2020, the six network monitoring wells were surveyed for well coordinates and TOC elevation by a professional engineering firm
- In November 2020 and May 2021, inferred groundwater flow at the Site was to the northnorthwest, consistent with the known regional groundwater conditions
- Based on past data and limited March 2024 data, groundwater at the Site appears to flow north-northwest similar to previous observations
- A new survey and continued groundwater gradient evaluation are not recommended

<u>IDW</u>

- Approximately 38 gallons of purge water was generated from the six monitoring wells during the March 2024 sampling event
- **NORTECH** processed and treated the purge water from each well using a portable GAC System, and the treated water was disposed of on Site by pouring to the ground surface a minimum of 100 feet away from drinking water wells or surface water
- Used/disposable sampling supplies were disposed of with other non-hazardous waste in a trash receptacle for transport to the FNSB Landfill



MW-5 and MW-403A, respectively, are screened 30 and 44 feet bgs, and the screened intervals are at least 20 feet below the top of the groundwater table. Analytical data does not represent contamination near the groundwater surface. MW-5 has been sampled since 2012, and no tested analytes have been detected above CLs. Additionally, no analytes have been detected above LOQ in MW-5 since 2016. MW-403A has been sampled nine times for this project since May 2020, and no tested analytes have been detected above CLs. *NORTECH* recommends seeking approval from ADEC to discontinue analytical sampling of these two wells.

NORTECH recommends submitting this letter report to ADEC as documentation of the March 2024 groundwater monitoring at the Site.

We trust that this information is sufficient at present. Please contact us if you have questions or comments.

Sincerely, *NORTECH*

William L. Watte

William L. Watts Environmental Project Manager

Har Good X by

Peter Beardsley, PE Principal, Environmental Engineer

List of Attachments

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Attachment 1







Attachment 2

Table 1
March 2024 Groundwater Results Summary for DRO and VOCs
Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska

Analyte	ADEC Cleanup Levels	MW-2 MW-3 MW-300 MW-4 MW-5*		MW-403A*	MW-403B	EB-1	TB-1	TB-2					
				DRO (AK101) (mg	/L)		l					
Diesel Range Organics	1.5	3.16	7.11	3.10	0.774	0.605 U	0.577 U	0.605 U	0.600 U	NA	NA		
1,2,4-Trimethylbenzene	56	135	7.26	5.70	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U		
1,3,5-Trimethylbenzene	60	55.7	3.13	2.50	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U		
Benzene	4.6	0.400 U	1.19	1.20	1.02	0.400 U	0.480	0.460	0.400 U	0.400 U	0.400 U		
Ethylbenzene	15	10.8	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U		
Naphthalene	1.7	26.7	4.72	3.42	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U		
o-Xylene	NE	43.9	1.41	1.27	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U		
P & M -Xylene	NE	72.0	2.37	2.19	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U		
Toluene	1,100	1.00 U	1.54	1.53	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U		
Xylenes (total)	190	116	3.78	3.46	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U		
* U L Shade Bold NA NE DUP	Analytical results are compared to ADEC 18 AAC 75 Table C Groundwater Cleanup Levels as amended through October 18, 2023 Data for MW-5 and MW-403A may not represent contamination near the groundwater surface, as the screened interval at each well does not intersect the top of the groundwater table Analyte not detected at the listed limit of quantitation (LOQ) Result is biased low due to low laboratory control spike (LCS) percentage recovery in the quality control sample Analyte detected in concentration below the ADEC Cleanup Level Analyte detected in concentration exceeding the ADEC 18 Cleanup Level Not applicable A regulatory cleanup level is not established												
mg/L μg/L EB TB	milligram p microgram Equipment Trip Blank	ber liter per liter Blank											

Quality Control Summary - Detected Analytes Only

Analyte	MW-3	MW-300 (DUP)	Average	Difference	RPD								
DRO (AK101) (mg/L)													
Diesel Range Organics	7.11	3.10	5.11	4.01	78.6%								
VOCs (EF	PA Method	l 8260D) (µ	ıg/L)										
1,2,4-Trimethylbenzene	7.26	5.70	6.48	1.56	24.1%								
1,3,5-Trimethylbenzene	3.13	2.50	2.82	0.63	22.4%								
Benzene	1.19	1.20	1.20	-0.01	0.8%								
Naphthalene	4.72	3.42	4.07	1.30	31.9%								
o-Xylene	1.41	1.27	1.34	0.14	10.4%								
P & M -Xylene	2.37	2.19	2.28	0.18	7.9%								
Toluene	1.54	1.53	1.535	0.01	0.7%								
Xylenes (total)	3.78	3.46	3.62	0.32	8.8%								
Netzer													

Notes:

RPDRelative Percent DifferenceDUPField Duplicate Sample

mg/L milligram per liter

μg/L microgram per liter Shade RPD exceeds recor

RPD exceeds recommended 30 percent (%) for a water sample duplicate pair 30% RPD for a water sample duplicate pair is considered within the preferred range

and meeting data quality objectives with no impact to usability

Table 2
March 2024 Groundwater Results Summary for PAHs
Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska

Analyte	ADEC Cleanup Level	MW-2	MW-3	MW-300 (DUP)	MW-4	MW-5*	MW-403A*	MW-403B	EB-1				
			PAHs (EPA	Method 8270	D SIM) (µg/L	.)							
1-Methylnaphthalene	11		0.289	0.556									
2-Methylnaphthalene	36		0.183	0.457									
Acenaphthene	530		0.322	0.276									
Acenaphthylene	260		0.0481 U	0.0490 U									
Anthracene	43		0.0481 U	0.0490 U									
Benzo(a)Anthracene	0.30		0.0481 U	0.0490 U									
Benzo[a]pyrene	0.25		0.0192 U	0.0196 U									
Benzo[b]Fluoranthene	2.5		0.0481 U	0.0490 U									
Benzo[g,h,i]perylene	0.26		0.0481 U	0.0490 U									
Benzo[k]fluoranthene	0.80		0.0481 U	0.0490 U									
Chrysene	2.0		0.0481 U	0.0490 U									
Dibenzo[a,h]anthracene	0.25		0.0192 U	0.0196 U									
Fluoranthene	260		0.0481 U	0.0490 U									
Fluorene	290		0.225	0.322									
Indeno[1,2,3-c,d] pyrene	0.19		0.0481 U	0.0490 U									
Naphthalene	1.7		0.483	0.754									
Phenanthrene	170		0.0962 U	0.0980 U									
Pyrene	120		0.0481 U	0.0490 U									
Notes:													
*	Analytical results are compared to ADEC 18 AAC 75 Table C Groundwater Cleanup Levels as amended through October 18, 2023 Data for MW-5 and MW-403A may not represent contamination near the groundwater surface, as the screened interval at each well does not intersect the top of the groundwater table.												

U	Analyte not detected at the reported limit of quantitation (LOQ)
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Н	PAH data is biased low due to laboratory error. Analyte extraction occurred outside method hold time

- Shade Analyte detected in concentration below the ADEC Cleanup Level
 - Bold Analyte detected in concentration exceeding the ADEC 18 Cleanup Level
 - -- Analysis not requested for this sample
 - μg/L Microgram per Liter
 - EB Equipment Blank

Quality Control Summary - Detected Analytes Only

	Quality cont		5 20100100									
Analyte		MW-3	MW-300 (DUP)	Average	Difference	RPD						
	PAHs	(EPA Metho	d 8270D SIM) (µg/L)								
1-Methylnaphtha	alene	0.289	0.556	0.42	-0.27	63.2%						
2-Methylnaphtha	alene	0.183	0.457	0.32	-0.27	85.6%						
Acenaphther	ne	0.322	0.276	0.30	0.05	15.4%						
Fluorene		0.225	0.322	0.27	-0.10	35.5%						
Naphthalen	е	0.483	0.754	0.62	-0.27	43.8%						
Notes:						<u>.</u>						
RPD	Relative Pe	tive Percent Difference										
DUP	Field Dupli	cate Sample										
μg/L	Microgram	jram per Liter										
*	The limit of	nit of quantitation (LOQ) for non-detect Sample MW-300 was used										
	for calcula	r calculation.										
**	The LOQ	Q for non-detect Sample MW-3 was used for calculation.										
Shade	RPD excee	eds recomme	ended 30 perc	ent (%) for a	water sampl	e duplicate pa						
	30% RPD and meeti	for a water sa ng data quali	ample duplica ty objectives	ite pair is cor with no impa	nsidered withi ct to usability	n the preferre						

Table 3 Historical Groundwater Results: 2012-Present

											For	mer Kiewit Inf	rastructure V	/est Co., 2050	Peger Road,	airbanks, Al	laska																	
Analytical Parameter	Locat	tion ID:	ADEC Cleanup	MW11-1016 (MW1 Dup)	MW-1	MW-11 (MW1-Dup)	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	W MW-403A***	MW-403A***	MW-403A***	MW-403A***	MW-403A***	MW-403A***	MW-403A***	MW-403A***	MW-403A***	W MW-403B	MW-403B	MW-403B	MW-403B	MW-403B	MW-403B	MW-403B	MW-403B	MW-403B	MW-403B
Analytical Faranteter	Samp	le Date:	Level	1 16-Oct-12	02-Jul-14	24-Jul-14	16-Oct-14	27-Apr-15	02-Sep-15	25-Aug-16	26-Sep-17	26-Apr-18	11-Oct-18	17-Apr-19	16-Aug-19	0 3 06-May-20	02-Sep-20	12-May-21	06-Oct-21	23-Mar-22	10-Oct-22	21-Mar-23	18-Sep-23	19-Mar-24	0 15-Oct-19	06-May-20	02-Sep-20	12-May-21	06-Oct-21	22-Mar-22	10-Oct-22	21-Mar-23	18-Sep-23	19-Mar-24
Petroleum Range Hydrocarbons	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		A mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L I	B mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Gasoline Range Organics (GRO) Diesel Range Organics (DRO)	N/A N/A	AK 101 AK 102	2.2 1.5	3.2 21	<0.6	 <0.6	<0.6	<0.031 0.203 J	1.07	<0.031 0.407 J	<0.031 <0.176	<0.0310 0.230 J	 0.588 U	 0.588 U		 0.566 U	 0.577 U	 0.577 U	 0.600 U	 0.577 U	 0.566 U	 0.545 U	 0.577 U	 0.577 U	 0.588 U	 0.577 U	 0.577 U	 0.577 U	 0.577 U	 0.577 U	 0.577 U	 0.545 U	 0.588 U	 0.605 U
Residual Range Organics (RRO)	N/A	AK 103	1.1		<0.0004	<0.0004	<0.00012	0.162 J	<0.144	0.199 J	<0.147	0.224 J						0.0004.11					0.000460			0.000721		0.000761	0.000540	0.000544	0.000600	0.000551	0.000500	0.000460
Foluene Ethylbenzene	108-88-3 100-41-4	8260 8260	1.100 0.015	<0.004 <0.02 0.081	<0.0004 <0.001 <0.001	<0.0004 <0.001 <0.001	<0.00012 <0.00031 <0.00031	<0.00012 <0.00031 <0.00031	<0.00013 <0.00031 <0.00031	<0.00013 <0.00031 <0.00031	<0.00013 <0.00031 <0.00031	<0.00013 <0.00031 <0.00031	0.001 U 0.001 U	0.001 U 0.001 U 0.001 U		0.0004 0 0.001 U 0.001 U	0.001 U 0.001 U	0.000540 0.001 U 0.001 U	0.000421 0.001 U 0.001 U	0.000460 0.001 U 0.001 U	0.000480 0.001 U 0.001 U	0.001 U 0.001 U	0.001 U 0.001 U 0.001 U	0.000534 0.001 U 0.001 U	0.001 U 0.001 U 0.001 U	0.000540 0.001 U 0.001 U	0.000544 0.001 U 0.001 U	0.000000 0.001 U 0.001 U	0.000351 0.001 U 0.001 U	0.000 U 0.001 U 0.001 U	0.000480 0.001 U 0.001 U			
Kylenes Volatile Organic Compounds	1330-20-7	8260	0.190	<0.74	<0.003	<0.003	<0.001	<0.00093	<0.00093	<0.00093	0.00074 J	<0.00093	0.003 U	0.003 U		0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
I,1,1,2-Tetrachloroethane I,1,1-Trichloroethane	630-20-6 71-55-6 79-34-5	8260 8260 8260	0.0057 8.0 0.00076	<0.004 <0.004 <0.004	<0.0005 <0.001 <0.0005	<0.0005 <0.001 <0.0005	<0.00015 <0.00031 <0.00015								g																			
I,1,2-Trichloroethane I,1-Dichloroethane	79-00-5 75-34-3	8260 8260	0.00041 0.028	<0.004 <0.004	<0.001 <0.001	<0.001 <0.001	<0.00031 <0.00031								ione																			
I,1-Dichloroethylene I,1-Dichloropropene	75-35-4 563-58-6	8260 8260	0.280 NE	<0.004 <0.004	<0.001 <0.001	<0.001 <0.001	<0.00031 <0.00031								niss																			
I,2,3-Trichlorobenzene I,2,3-Trichloropropane	87-61-6 96-18-4 120-82-1	8260 8260 8260	0.007 0.0000075	<0.004 <0.002 <0.004	<0.001 <0.001	<0.001 <0.001	<0.00031 <0.00031								omr																			
1,2,4-Trimethylbenzene 1,2-Dibromo-3-chloropropane	95-63-6 96-12-8	8260 8260	0.056 NE	0.75 <0.02	<0.001 <0.01	<0.001 <0.001 <0.01	<0.00031 <0.0031						0.001 U	0.001 U 	Dec	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
I,2-Dibromoethane I,2-Dichlorobenzene	106-93-4 95-50-1	8260 8260	0.000075 0.300	<0.004 <0.004	<0.001 <0.001	<0.001 <0.001	<0.00031 <0.00031															=		-										
I,2-Dichloroethane I,2-Dichloropropane I 3 5-Trimethylbenzene	107-06-2 78-87-5 108-67-8	8260 8260 8260	0.0017 0.0082 0.060	<0.004 <0.004 3.5	<0.0005 <0.001	<0.0005 <0.001	<0.00015 <0.00031																											
I,3-Dichlorobenzene	541-73-1 142-28-9	8260 8260	0.300 NE	<0.004 <0.004	<0.001 <0.001 <0.0005	<0.001 <0.001 <0.0004	<0.00031 <0.00031 <0.00015																											
1,4-Dichlorobenzene 2,2-Dichloropropane	106-46-7 594-20-7	8260 8260	0.0048 NE	<0.004 <0.004	<0.0005 <0.001	<0.0005 <0.001	<0.00015 <0.00031										-							=										
2-Butanone (methyl ethyl ketone) 2-Chloroethyl vinyl ether *	78-93-3 110-75-8	8260 8260	5.6 NE	<0.1 <0.02	<0.01	< 0.01	<0.0031																											
2-Chlorotoluene 2-Hexanone 4-Chlorotoluene	591-78-6 106-43-4	8260 8260	0.038 NF	<0.004 <0.04 <0.004	<0.001 <0.01 <0.001	<0.001 <0.01 <0.001	<0.00031 <0.0031 <0.00031																											
A-Isopropyltoluene Acetone	99-87-6 67-64-1	8260 8260	NE 14	0.081	<0.001	<0.001	<0.00031																											
Benzene Bromobenzene	71-43-2 108-86-1	8260 8260	0.0046	<0.004	<0.0004 <0.001	<0.0004 <0.001	<0.00012 <0.00031	<0.00012	<0.00015	<0.00015	<0.00015	<0.00015	0.001 U 	0.001 U 		0.0004 U 	0.0004 U 	0.0004 U 	0.0004 U 	0.0004 U 	0.000540	0.000421	0.000460	0.000480	0.00049	0.000721	0.000534	0.000751	0.000540	0.000544	0.000600	0.000551	0.000500	0.000460
Bromodichloromethane Bromodichloromethane	75-27-4	8260 8260	0.0013	<0.004 <0.004 <0.02	<0.001 <0.0005 <0.001	<0.001 <0.0005 <0.001	<0.00031 <0.00015 <0.00031																											
Bromomethane Carbon disulfide	74-83-9 75-15-0	8260 8260	0.0075 0.810	<0.02 <0.004	<0.01 <0.01	<0.01 <0.01	<0.0031 <0.0031																											
Carbon tetrachloride Chlorobenzene	56-23-5 108-90-7	8260 8260	0.0046 0.078	<0.004 <0.004	<0.001 <0.0005	<0.001 <0.0005	<0.00031 <0.00015										-																	
Chlorofernane (etnyl chloride) Chloroform Chloromethane	75-00-3 67-66-3 74-87-3	8260 8260 8260	0.0022	<0.02 <0.004 <0.02	<0.001 <0.001 <0.001	<0.001 <0.001 <0.001	<0.00031 <0.0003 <0.00031																											
Volatile Organic Compounds (cont) cis-1,2-Dichloroethylene	156-59-2	8260	0.036	< 0.004	<0.001	<0.001	<0.00031																											
cis-1,3-Dichloropropene Dibromochloromethane	10061-01-5 124-48-1 74.05.2	8260 8260	0.0047 0.0087	<0.004 <0.004	<0.0005 <0.0005	<0.0005 <0.0005	<0.00015 <0.00015 <0.00021								per		-					-		-										
Dibromometnane Dichlorodifluoromethane Ethylbenzene	74-95-3 75-71-8 100-41-4	8260 8260 8260	0.0083	<0.004 <0.004	<0.001 <0.001 <0.001	<0.001 <0.001 <0.001	<0.00031 <0.00031 <0.00031	<0.00031	 <0.00031	<0.00031	 <0.00031	<0.00031	 0.001 U	 0.001 U	sion		0.001.11										0.001.11							0.00111
Freon-113 ** Hexachlorobutadiene	76-13-1 87-68-3	8260 8260	10 0.0014	<0.004	 <0.001	<0.001	 <0.00031								imis	=	-					Ξ		=	=		=	=	Ξ	=			Ξ	
odomethane * sopropylbenzene (Cumene)	74-88-4 98-82-8	8260 8260	NE 0.450	<0.04 0.041	<0.001	<0.001	<0.00031								econ																			
Vethyl isobutyl ketone " Vethyl tert-butyl ether Vethylene chloride	1634-04-4	8260 8260 8260	0.140	<0.004 <0.004 <0.02	<0.01 0.01 <0.005	<0.01 0.01 <0.005	<0.0031 <0.0031 <0.001								ă																			
Naphthalene ** n-Butylbenzene	91-20-3 104-51-8	8260 8260	0.0017 1.00	<0.004	<0.001	<0.001	<0.00031									0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U
n-Propylbenzene p-Xylene (see Xylenes) **	103-65-1 1330-20-7	8260 8260	0.660 NE	0.088	<0.001	<0.001	<0.00031									0.001 U	 0.001 U	 0.001 U	 0.001 U	 0.001 U	 0.001 U	 0.001 U	 0.001 U	0.001 U		 0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	 0.001 U	0.001 U	 0.001 U
o- & m-Xylene (see Xylenes) ** sec-Butylbenzene Sturene	1330-20-7 135-98-8 100-42-5	8260 8260 8260	NE 2.00 1.20	0.057	<0.001	<0.001	<0.00031									0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U		0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
ert-Butylbenzene Fetrachloroethylene	98-06-6 127-18-4	8260 8260	0.690	<0.004 <0.004 <0.004	<0.001 <0.001	<0.001 <0.001 <0.001	<0.00031 <0.00031 <0.00031																											
Foluene rans-1,2-Dichloroethylene	108-88-3 156-60-5	8260 8260	1.100 0.360	<0.02 <0.004	<0.001 <0.001	<0.001 <0.001	<0.00031 <0.00031	<0.00031	<0.00031	<0.00031 	<0.00031	<0.00031	0.001 U 	0.001 U 		0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U 	0.001 U
rans-1,3-Dichloropropene Frichloroethylene	10061-02-6 79-01-6	8260 8260	0.0047 0.0028	<0.004 <0.004	<0.001 <0.001	<0.001 <0.001	<0.00031 <0.00031																											
/inyl acetate /inyl chloride	108-05-4 75-01-4	8260 8260	0.410 0.00019	<0.004 <0.04 <0.004	<0.001	<0.001	<0.00031																											
Kylenes Semi-Volatile Organic Compounds	1330-20-7	8260	0.190	0.74	<0.003	<0.003	<0.001	<0.00093	<0.00093	<0.00093	0.00074 J	<0.00093	0.003 U	0.003 U		0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
I-Methylnaphthalene 2-Methylnaphthalene Acenaphthene	90-12-0 91-57-6 83-32-9	8270D/SIM 8270D/SIM 8270D/SIM	0.011 0.036 0.530	0.03 0.038 0.0013	<0.00005 <0.00005 <0.00005	<0.00005 <0.00005 <0.00005	<0.0000155 <0.0000155 <0.0000155	<0.000015 <0.000015 <0.000015	<0.00000391 <0.00000391 <0.00000391	<0.0000142 <0.0000142 <0.0000142	<0.0000147 <0.0000147 <0.0000147	<0.0000142 0.0000155 J <0.0000142																						
Acenaphthylene Anthracene	208-96-8 120-12-7	8270D/SIM 8270D/SIM	0.260 0.043	<0.00047 <0.00047	<0.00005 <0.00005	<0.00005 <0.00005	<0.0000155 <0.0000155	<0.000015 <0.000015	<0.0000391 <0.0000391	<0.0000142 <0.0000142	<0.0000147 <0.0000147	<0.0000142 <0.0000142												-										
Benzo[a]Anthracene Benzo[a]pyrene	56-55-3 50-32-8	8270D/SIM 8270D/SIM	0.00030	<0.000047 <0.000047	<0.00005 <0.00005	<0.00005 <0.00005	<0.0000155 <0.0000155	<0.000015 <0.000015	<0.00000391 <0.00000391	<0.0000142 <0.00000585	<0.0000147 <0.00000608	<0.0000142 <0.00000585																						
Benzo[b]Fluoranthene Benzo[g,h,i]perylene	205-99-2 191-24-2 207.08.0	8270D/SIM 8270D/SIM 8270D/SIM	0.0025	<0.000047 <0.000047	<0.00005 <0.00005	<0.00005 <0.00005	<0.0000155 <0.0000155	<0.000015 <0.000015	<0.00000391 <0.00000391	<0.0000142 <0.0000142	<0.0000147 <0.0000147	<0.0000142 <0.0000142																						
Chrysene Dibenzía.hlanthracene	218-01-9 53-70-3	8270D/SIM 8270D/SIM 8270D/SIM	0.002	<0.000047 <0.000047 <0.000047	<0.00005 <0.00005 <0.00005	<0.00005 <0.00005 <0.00005	<0.0000133 <0.0000155 <0.0000155	<0.000015 <0.000015 <0.000015	<0.00000391 <0.00000391 <0.00000391	<0.0000142 <0.0000142 <0.0000945	<0.0000147 <0.0000147 <0.00000608	<0.0000142 <0.0000142 <0.0000585																						
Fluoranthene Fluorene	206-44-0 86-73-7	8270D/SIM 8270D/SIM	0.260 0.290	<0.00047 0.0023	<0.00005 <0.00005	<0.00005 <0.00005	<0.0000155 <0.0000155	<0.000015 <0.000015	<0.0000391 <0.0000391	<0.0000236 <0.0000142	<0.0000147 <0.0000147	<0.0000142 <0.0000142																						
ndeno[1,2,3-c,d] pyrene Naphthalene	193-39-5 91-20-3	8270D/SIM 8270D SIM	0.00019	<0.000047 0.25	<0.00005 <0.0001	<0.00005 <0.0001	<0.0000155 <0.0031	<0.000015 <0.000031	<0.00000391 <0.00000807	<0.0000142 <0.0000292	<0.0000147 <0.0000304	<0.0000142 0.0000295 J																						
Pyrene	రం-01-8 129-00-0	8270D/SIM 8270D/SIM	0.170	<pre>0.0013 <0.00047 Notes:</pre>	<0.00005 <0.00005 Analytics	<0.00005 <0.00005 al results were i	<0.0000155 <0.0000155 imported from	<0.0000157 J <0.000015 Pastor, Behling 8	<0.0000391 <0.0000391 & Wheeler, LLC	<0.0000142 <0.0000142 which was acquir	<0.0000147 <0.0000147 red by Golder Ass	<0.0000142 <0.0000142 sociates, Inc in 20	118.																					
				<	Analytica Analyte v	al results are co was not detecte	ompared to AD ed at the specif	EC 18 AAC 75 T ied Level of Qua	Table C Groundwa Intitation (LOQ) o	ater Cleanup Lev r Detection Level	els as amended t (DL)	hrough October 1	8, 2023																					
				J/JH mg/L LI	Estimate Milligram Analyte	ed value/Estima n per liter not detected at	the reported I	ed high due to su OQ	urrogate recovery																									
				H L	Result is Result is	biased low due biased low due	e to laboratory e to low labora	error. Analyte ex tory control spike	xtraction occurred e (LCS) percentag	l outside method ge recovery in the	hold time e quality control s	ample																						
				XXXX	LOQ/Nor Analyte v	n-detected con was detected b	elow ADEC Cle	eed ADEC Clear	nup Levels Updat dated in 2023 / 2	ed in 2023 / 202 021 / 2020 / 2018	1 / 2020 / 2018 / : 8 / 2016 8 / 2016	2016																						
				*	Analyte v Analyte v Analyte i	was detected al was not analyze is not currently	ed during samp included in Me	earrup Levels Up ple event thod 8260 labors	atory analyte list	u21 / 2020 / 201	o / 2016																							
				**	Analyte v Data for	was added by I MW-403A and	NORTECH and MW-5 may no	t is included in contact the second sec	urrent Method 82 amination near th	60 analyte list e groundwater si	urface, as the scr	eened interval																						
					at each	well does not in	ntersect the top	o of the groundwa	ater table																									

Table 3	
Historical Groundwater Results: 2012-Present	

Former Kiewit Infrastructure West Co., 2050 Peger Road, Fairbanks, Alaska																										
Analytical Parameter	Locat	ion ID:	ADEC Cleanup	MW2-1016	MW-2	MW12 (MW2 Dup)	MW-2	MW-2	MW-6 (MW-2 DUP)	MW-2	MW-2	MW-2	MW-102 (MW-2 Dup)	MW-2	MW-2	MW-2	MW-2	MW-200 (MW-2 Dup)	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
	Sampl CAS	e Date: Method	Level mg/L	2 17-Oct-12 mg/L	08-Aug-14 mg/L	08-Aug-14 mg/L	27-Apr-15 mg/L	02-Sep-15 mg/L	02-Sep-15 mg/L	25-Aug-16 mg/L	26-Sep-17 mg/L	26-Apr-18 mg/L	26-Apr-18 mg/L	11-Oct-18 mg/L	17-Apr-19 mg/L	15-Oct-19 mg/L	06-May-20 mg/L	06-May-20 mg/L	02-Sep-20 mg/L	12-May-21 mg/L	06-Oct-21 mg/L	23-Mar-22 mg/L	11-Oct-22 mg/L	22-Mar-23 mg/L	20-Sep-23 mg/L	27-Mar-24 mg/L
Petroleum Range Hydrocarbons Gasoline Range Organics (GRO)	N/A	AK 101	2.2	2.7			0.67			0.7	1.11	2.78 JH	2.93 JH	No Sample,	No Sample,											
Diesel Range Organics (DRO) Residual Range Organics (RRO) RTFX	N/A N/A	AK 102 AK 103	1.5 1.1	12	15.2 1.31	14.5 1.40	4.46 0.3 J	1.53 <0.144	1.44 <0.144	13 <0.692	6.16 0.361 J	5.86 0.472 J	6.33 0.392 J	LNAPL Present	LNAPL Present	2.12	3.03		4.80	5.05	4.07	5.27	5.21	3.54	6.28 L 	3.16
Benzene	71-43-2	8260 8260	0.0046	<0.002	0.00067	<0.0004	<0.00012	<0.00015	<0.00015	0.0003 J <0.00031	0.0004 J	0.00066 J	0.00061 J	No Sample,	No Sample,	0.0004 U 0.001 U	0.0004 U		0.0004 U	0.0004 U 0.001 U	0.0004 U 0.001 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U 0.001 U	0.0004 U 0.001 U
Ethylbenzene Xylenes	100-00-3 100-41-4 1330-20-7	8260 8260	0.015 0.190	<0.01 <0.064 0.0114	0.0409	0.0398 0.191	0.00031 0.011 0.1448	0.0251 0.202	0.0233 0.184	0.0185 0.1435	0.0155 0.388	0.106 0.837	0.118	LNAPL Present	LNAPL Present	0.0418	0.00735		0.0176	0.006	0.0132	0.0153	0.00484 0.0732	0.00694	0.00319 0.0502	0.0108
Volatile Organic Compounds 1,1,1,2-Tetrachloroethane	630-20-6	8260	0.0057	<0.002	<0.0005	<0.0005									1											
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	71-55-6 79-34-5	8260 8260	8.0 0.00076	<0.002 <0.002	<0.001 <0.001	<0.001 <0.0005																			_	
1,1,2-Trichloroethane 1,1-Dichloroethane	79-00-5 75-34-3	8260 8260	0.00041 0.028	<0.002 <0.002	<0.001 <0.001	<0.001 <0.001																			_	
1,1-Dichloroethylene 1,1-Dichloropropene	75-35-4 563-58-6	8260 8260	0.280 NE	<0.002 <0.002	<0.001 <0.001	<0.001 <0.001																				
1,2,3-Trichlorobenzene 1,2,3-Trichloropropane	87-61-6 96-18-4	8260 8260	0.007	<0.002 <0.001	<0.001 <0.001	<0.001 <0.001																				
1,2,4-1 richlorobenzene 1,2,4-Trimethylbenzene	95-63-6	8260 8260	0.004	<0.002 0.68	<0.001 0.347	<0.001 0.336										0.748	0.277		0.311	0.269	0.338	0.267	0.139	0.164	0.101	0.135
1,2-Dibromoethane	96-12-8 106-93-4 05-50-1	8260	0.000075	<0.002	<0.001	<0.001																			_	
1,2-Dichloroethane	107-06-2	8260	0.0017	<0.002	<0.001	<0.001																				
1,3-5-Trimethylbenzene	108-67-8	8260	0.060	<0.002	0.0639	0.065							-				0.0984		0.110	0.105	0.110	0.0951	0.0567	0.0629	0.0473	0.0577
1,3-Dichloropropane	142-28-9	8260 8260	NE 0.0048	<0.002	<0.0005	<0.0005								No Sample,	No Sample,											
2,2-Dichloropropane	594-20-7	8260 8260	NE 5.6	<0.002	<0.0005	<0.0005								LNAPL Present	LNAPL Present											
2-Chloroethyl vinyl ether *	110-75-8	8260	NE	<0.03					-																_	
2-Chlorotoluene 2-Hexanone 1-Chlorotoluene	591-78-6 106-43-4	8260 8260	0.038	<0.02	<0.001	<0.001																			_	
4-Isopropyltoluene	99-87-6 67-64-1	8260 8260	NE 14	0.05	0.0283	0.0284							-													
Benzene Bromobenzene	71-43-2	8260 8260	0.0046	<0.002	0.00067	<0.0004				0.0003 J	0.0004 J	0.00066 J	0.00061 J			0.0004 U	0.0004 U		0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Bromochloromethane Bromodichloromethane	74-97-5	8260 8260	NE 0.0013	<0.002	<0.001 <0.0005	<0.001 <0.001 <0.0005							-												-	
Bromoform Bromomethane	75-25-2 74-83-9	8260 8260	0.033	<0.01	<0.001	<0.001																				
Carbon disulfide Carbon tetrachloride	75-15-0 56-23-5	8260 8260	0.810	<0.002	<0.01 <0.001	<0.01 <0.001																				
Chlorobenzene Chloroethane (ethyl chloride)	108-90-7 75-00-3	8260 8260	0.078	<0.002 <0.01	<0.0005 <0.001	<0.0005 <0.001																				
Chloroform Chloromethane	67-66-3 74-87-3	8260 8260	0.0022	<0.002 <0.01	<0.001 <0.001	<0.001 <0.001																				
Volatile Organic Compounds (cont) cis-1,2-Dichloroethylene	156-59-2	8260	0.036	<0.002	<0.001	<0.001									I											
cis-1,3-Dichloropropene Dibromochloromethane	10061-01-5 124-48-1	8260 8260	0.0047 0.0087	<0.002 <0.002	<0.0005 <0.0005	<0.0005 <0.0005																				
Dibromomethane Dichlorodifluoromethane	74-95-3 75-71-8	8260 8260	0.0083 0.200	<0.002 <0.002	<0.001 <0.001	<0.001 <0.001																			_	
Ethylbenzene Freon-113 **	100-41-4 76-13-1	8260 8260	0.015 10	0.064	0.0409	0.0398				0.0185	0.0155	0.106	0.118			0.0418	0.00735		0.0176	0.006	0.0132	0.0153	0.00484	0.00694	0.00319	0.0108
Hexachlorobutadiene lodomethane *	87-68-3 74-88-4	8260 8260	0.0014 NE	<0.002 <0.02	<0.001	<0.001																				
sopropylbenzene (Cumene) Methyl isobutyl ketone *	98-82-8 108-10-1	8260 8260	0.450 6.3	0.029	0.00952 <0.01	0.00941 <0.01																			_	
Methyl tert-butyl ether Methylene chloride	1634-04-4 75-09-2	8260 8260	0.140 0.110	<0.002 <0.01	<0.01 <0.005	<0.01 <0.005																				
Naphthalene ** n-Butylbenzene	91-20-3 104-51-8	8260 8260	0.0017	<0.002	 <0.001	<0.001								No Sample, I NAPI	No Sample, I NAPI	0.203	0.0697		0.106	0.049	0.0827	0.0637	0.0238	0.0283	0.0191	0.0267
n-Propylbenzene p-Xylene (see Xylenes) **	103-65-1 1330-20-7	8260 8260	0.660 NE	0.062	0.0148	0.0147								Present	Present	0.325	0.0551		0.116	0.0454	0.0821	0.0774	0.0287	0.0382	0.0198	0.0439
p- & m-Xylene (see Xylenes) ** sec-Butylbenzene	1330-20-7 135-98-8	8260 8260	NE 2.00	0.035	0.00592	0.00602										0.668	0.105		0.206	0.0841	0.142	0.128	0.0446	0.0598	0.0304	0.072
Styrene ert-Butylbenzene	100-42-5 98-06-6	8260 8260	1.20 0.690	<0.002 0.0021	<0.001 <0.001	<0.001 <0.001																			_	
Tetrachloroethylene Toluene	127-18-4 108-88-3	8260 8260	0.041 1.100	<0.002 <0.01	<0.001 <0.001	<0.001 <0.001	 <0.00031	<0.00031	<0.00031	<0.00031	0.00402	0.00127	0.00126			0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	 0.001 U	 0.001 U	 0.001 U
trans-1,2-Dichloroethylene trans-1,3-Dichloropropene	156-60-5 10061-02-6	8260 8260	0.360 0.0047	<0.002 <0.002	<0.001 <0.001	<0.001 <0.001																			_	
Trichloroethylene Trichlorofluoromethane	79-01-6 75-69-4	8260 8260	0.0028 5.20	<0.002 <0.002	<0.001 <0.001	<0.001 <0.001																			_	
Vinyl acetate Vinyl chloride Xvlenes	108-05-4 75-01-4 1330-20-7	8260 8260 8260	0.410 0.00019 0.190	<0.02 <0.002	<0.001	<0.001				 0 1/35																
Semi-Volatile Organic Compounds	90-12-0	8270D/SIM	0.011	0.061	<0.022	<0.0154	0.0261	0.00262	0.00228	0.0119	0.0227	0.00702	0.002		і г	0.993	0.160	0.0204	0.322	0.130	0.224	0.205	0.0732	0.0980	0.0502	0.1160
2-Methylnaphthalene	91-57-6 83-32-0	8270D/SIM 8270D/SIM	0.036	0.083	<0.0232	<0.0057	0.00797	0.00248	0.00215	0.00899	0.00708	0.00035	0.0015				0.0172	0.0201								
Acenaphthylene	208-96-8	8270D/SIM	0.260	<0.0019	<0.0000515	<0.000521	<0.000785	<0.0000391	<0.00000391	<0.000142	<0.0000155	<0.000015	<0.0000588				0.000410 0.0000490 U	0.0000421 0.0000490 U								
Benzo[a]Anthracene	56-55-3	8270D/SIM	0.00030	<0.00048	<0.0000515	<0.0000521	<0.0000234	<0.00000391	<0.00000391	<0.0000142	<0.0000155	<0.000015	<0.0000588				0.0000490 U	0.0000490 U								
Benzo[a]pyrene Benzo[b]Fluoranthene Benzo[a b ilberulene	205-99-2	8270D/SIM 8270D/SIM	0.00025	<0.000048	<0.0000515	<0.0000521	<0.0000785	<0.00000391	<0.00000391	<0.0000142	<0.0000155	<0.0000062	<0.0000588	No Sample,	No Sample,		0.0000198 U 0.0000490 U	0.0000198 U 0.0000490 U								
Benzolg,n,nperviene Benzolk]fluoranthene	207-08-9	8270D/SIM 8270D/SIM	0.00020	<0.000048	<0.0000515	<0.0000521	<0.0000785	<0.00000391	<0.00000391	<0.0000142	<0.0000155	<0.000015	<0.0000588	LNAPL Present	LNAPL Present		0.0000490 U	0.0000490 U								
Dibenz[a,h]anthracene	53-70-3 206.44.0	8270D/SIM 8270D/SIM	0.002	<0.000048	<0.0000515	<0.0000521	<0.0000785	<0.00000391	<0.00000391	<0.0000142	<0.0000155	<0.000015	<0.000243				0.0000490 U	0.0000490 U								
Fluorantinene Fluorene	200-44-0 86-73-7 102 20 5	8270D/SIM 8270D/SIM	0.200	0.0037	<0.0000515	<0.0000521	0.00202	0.000268	0.000248	0.00142	0.00109	0.000698	0.000805				0.0000490 0	0.000490 0								
Naphthalene Phenanthrene	91-20-3 85-01-8	8270D SIM 8270D/SIM	0.0017	0.082	<0.0000313	<0.0202	0.00105	0.00368	0.00328	0.0010142	0.0312	0.00967	0.0182				0.0326	0.000456								
Pyrene	129-00-0	8270D/SIM	0.120	<0.0027 <0.00048 Notes:	<0.0000515 Analytical	<0.000430 <0.0000521 results were im	<0.000785	<0.0000391 stor, Behling & V	<0.00000391 Vheeler. LLC. w	<0.000142	<0.000432 <0.0000155	<0.000015 <0.000015	<0.0000588				0.0000427 0.0000490 U	0.0000490 U								
	NOTES: Analytical results are comported from Pastor, Elening & Wheeler, LLC, which was acquired by Golder Associates, Inc in 2018. Analytical results are compared to ADEC 18 AAC 75 Table C Groundwater Cleanup Levels as amended through November 18, 2021 Analytic was not detected at the socified Level of Quantitation (LOQ) or Detection Level (DL)																									
	 Analyse was not detected at the specified Level of dualitation (CC) of Detection Level (CL) J/JH Estimated value biased high due to surrogate recovery mg/L Milligram per liter 																									
				Ú H	Analyte no Result is t	ot detected at the	ne reported LOC to laboratory er) ror. Analyte extra	action occurred o	utside method h	old time															
				L XXXXX	Result is t LOQ/Non-	biased low due detected conce	to low laborator entrations excee	y control spike (l d ADEC Cleanu	LCS) percentage b Levels Updated	recovery in the o d in 2021 / 2020 /	uality control s 2018 / 2016	ample														
				XXXX XXXX	Analyte wa Analyte wa	as detected bel as detected abo	ow ADEC Clear	nup Levels Upda nup Levels Upda	ted in 2021 / 202 ted in 2021 / 202	20 / 2018 / 2016 20 / 2018 / 2016																
				*	Analyte wa Analyte is	as not analyzed not currently in	during sample cluded in Methe	event od 8260 laborato	ry analyte list	and the second																
				**	Analyte wa Data for N	as added by N IW-403A and N	IW-5 may not r	epresent contam	ent Method 8260 ination near the	analyte list groundwater surf	ace, as the scr	eened interval														
					at each w	ren aoes not int	ersect the top o	i ine groundwate	a (adié																	

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	Table 3 Historical Groundwater Results: 2012-Present Former Kiewit Infrastructure West Co., 2050 Peger Road, Fairbanks, Alaska																																		
Analytical Parameter	Locat	tion ID:	ADEC Cleanup	MW3-1016	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-33 (MW-3 Dup)	MW-3	MW-33 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)	MW-3	MW-300 (MW-3 Dup)
	Samp CAS	le Date: Method	Level	3 16-Oct-12	02-Jul-14 mg/l	16-Oct-14	27-Apr-15 mg/l	02-Sep-15	25-Aug-16	26-Sep-17	26-Apr-18	11-Oct-18 ma/l	11-Oct-18 ma/l	17-Apr-19 ma/l	17-Apr-19 mg/l	15-Oct-19	15-Oct-19 ma/l	06-May-20	06-May-20	02-Sep-20	02-Sep-20	12-May-21	12-May-21	06-Oct-21	06-Oct-21	23-Mar-22	23-Mar-22	11-Oct-22	11-Oct-22	22-Mar-23	22-Mar-23	20-Sep-23	20-Sep-23	27-Mar-24 mg/l	27-Mar-24
Petroleum Range Hydrocarbons Gasoline Range Organics (GRO) Diesel Range Organics (DRO)	N/A N/A	AK 101 AK 102	2.2 1.5	0.58			0.104	4.04	0.136	0.164	0.0795 J 1.29	 14.9	11.9	2.51	2.96	4.1		7.31	6.72	22.5									8.32		4.69	 14.0 L	 14.2 L	 7.11	3.10
Residual Range Organics (RRO) BTEX Benzene	N/A	AK 103	0.0046		2.53	3.04	0.242 J	<0.144	0.413 J	0.462 J	0.215 J		0.00243	0.0147	0.0157							0.00437	0.00497	0.00316								0.0004.11		0.00119	0.00120
Toluene Ethylbenzene Xylenes	108-88-3 100-41-4 1330-20-7	8260 8260 8260	1.100 0.015 0.190	<0.002 0.011 0.08	<0.001 0.00299 0.00618	0.0192 0.00315 0.037	0.00041 J 0.00128 <0.00767	<0.00200 <0.00031 0.00165 0.00893	0.00054 J 0.00212 0.00951	0.00035 J 0.00282 0.01497	<0.00031 0.00115 0.00637	0.0016 0.00173 0.00904	0.00148 0.00164 0.00831	0.001 U 0.00617 0.0311	0.001 U 0.00660 0.0326	0.0025 0.00217 0.0109	0.00263 0.00223 0.0104	0.001 U 0.00245 0.0121	0.001 U 0.00308 0.0150	0.00103 0.0112 0.001 U 0.00358	0.0109 0.001 U 0.00368	0.00437	0.00655 0.00494 0.0258	0.00645 0.00329 0.0170	0.00200 0.00603 0.00295 0.0156	0.00343 0.00169 0.00811	0.00399 0.00194 0.00921	0.00513 0.00196 0.0117	0.00537 0.00164 0.00932	0.00150 0.00139 0.00798	0.001 U 0.00125 0.00673	0.00286 0.001 U 0.003 U	0.00286 0.001 U 0.003 U	0.00113 0.00154 0.001 U 0.00378	0.00120 0.00153 0.001 U 0.00346
Volatile Organic Compounds 1,1,1,2-Tetrachloroethane 1,1 - Trichloroethane	630-20-6 71-55-6	8260 8260	0.0057	<0.0004	<0.0005 <0.001	<0.00015 <0.00031																													
1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	79-34-5 79-00-5 75-34-3	8260 8260 8260	0.00076 0.00041 0.028	<0.0004 <0.0004 <0.0004	<0.0005 <0.001 <0.001	<0.00015 <0.00031 <0.00031																													
1,1-Dichloroethylene 1,1-Dichloropropene	75-35-4 563-58-6	8260 8260	0.280 NE	<0.0004 <0.0004	<0.001 <0.001	<0.00015 <0.00031																													
1,2,3-Trichloropropane 1,2,4-Trichlorobenzene	96-18-4 120-82-1	8260 8260	0.0000075	<0.0004 <0.0002 <0.0004	<0.001 <0.001 <0.001	<0.00031 <0.00031 <0.00031																													
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane	96-12-8 106-93-4	8260 8260	NE 0.000075	<0.002 <0.0004	<0.01 <0.001 <0.001	<0.00318 <0.00031 <0.00031						<0.0157	0.0141 	0.0281		0.0149	0.0136	0.0127	0.0156 		0.00496		0.0257			0.0123	0.0131		0.0166 				0.00141 		
1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane	95-50-1 107-06-2 78-87-5	8260 8260 8260	0.300 0.0017 0.0082	<0.0004 <0.0004 <0.0004	<0.001 <0.0005 <0.001	<0.00031 <0.00031 <0.00031																													
1,3,5-Trimethylbenzene 1,3-Dichlorobenzene 1,3-Dichloropropane	108-67-8 541-73-1 142-28-9	8260 8260 8260	0.060 0.300 NF	0.035 <0.0004 <0.0004	0.0123 <0.001 <0.0004	0.0314 <0.00031 <0.00015												0.00724	0.00799	0.00927	0.00797	0.00983	0.0104	0.0103	0.00921	0.00542	0.00567	0.00797	0.00642	0.00376	0.00321	0.00161	0.00163	0.00313	0.00250
1,4-Dichlorobenzene 2,2-Dichloropropane	106-46-7 594-20-7	8260 8260	0.0048 NE	<0.0004 <0.0004	<0.0005 <0.001	<0.00015 <0.00031																													
2-Chlorotoluene	110-75-8 95-49-8	8260 8260	NE NE	<0.002 <0.0004	<0.001	<0.0267 <0.00031																													
2-Hexanone 4-Chlorotoluene 4-Isopropyltoluene	591-78-6 106-43-4 99-87-6	8260 8260 8260	0.038 NE NE	<0.004 <0.0004 0.0079	<0.01 <0.001 <0.001	<0.0031 <0.00031 0.00721																													
Acetone Benzene Bromobenzene	67-64-1 71-43-2 108-86-1	8260 8260 8260	14 0.0046 0.062	<0.01 0.0031 <0.0004	 0.00147 <0.001	 0.00653 <0.00031			0.00364	0.00477	0.00229	0.00261	0.00243	0.0147	0.0157	0.00206	0.00207	0.00498	0.00603	0.00105	0.00118	0.00437	0.00497	0.00316	0.00286	0.00288	0.00314	0.00105	0.00111	0.00209	0.00187	 0.0004 U 	 0.0004 U 	 0.00119 	0.00120
Bromochloromethane Bromodichloromethane Bromoform	74-97-5 75-27-4 75-25-2	8260 8260 8260	NE 0.0013 0.033	<0.0004 <0.0004 <0.002	<0.001 <0.0005 <0.001	<0.00031 <0.00015 <0.00031																													
Bromomethane Carbon disulfide	74-83-9 75-15-0	8260 8260	0.0075	<0.002 <0.002 <0.0004	<0.01 <0.01	<0.0001 <0.0031 <0.0031																													
Chloroethane (ethyl chloride)	108-90-7 75-00-3	8260 8260	0.0046 0.078 21	<0.0004 <0.0004 <0.002	<0.001 <0.0005 <0.001	<0.00031 <0.00015 <0.00031																													
Chloroform Chloromethane Volatile Organic Compounds (cont)	67-66-3 74-87-3	8260 8260	0.0022 0.190	<0.0004 <0.002	<0.001 <0.001	<0.0003 <0.00031																													
cis-1,2-Dichloroethylene cis-1,3-Dichloropropene Dibromochloromethane	156-59-2 10061-01-5 124-48-1	8260 8260 8260	0.036 0.0047 0.0087	<0.0004 <0.0004 <0.0004	<0.001 <0.0005 <0.0005	<0.00031 <0.00015 <0.00015																													
Dibromomethane Dichlorodifluoromethane Ethylbenzene	74-95-3 75-71-8	8260 8260 8260	0.0083 0.200 0.015	<0.0004 <0.0004	<0.001 <0.001	<0.00031 <0.00031																													
Freon-113 ** Hexachlorobutadiene	76-13-1 87-68-3	8260 8260	10 0.0014	<0.0004	<0.00233	<0.00031																													
Isopropylbenzene (Cumene) Methyl isobutyl ketone *	98-82-8 108-10-1	8260 8260 8260	0.450 6.3	<0.004 0.0041 <0.004	<0.001 <0.01	<0.00031 <0.0031																													
Methyl tert-butyl ether Methylene chloride Naphthalene **	1634-04-4 75-09-2 91-20-3	8260 8260 8260	0.140 0.110 0.0017	<0.0004 <0.002 	<0.01 <0.005 	<0.0031 <0.001 										0.0132	0.015	0.0102	 0.0136	0.00565	0.00568	0.0173	0.0216	0.0223	0.0212	0.0122	0.0124	0.0172	 0.0133	0.00853	0.00669	 0.00110	0.00108	0.00472	0.00342
n-Butylbenzene n-Propylbenzene o-Xylene (see Xylenes) **	104-51-8 103-65-1 1330-20-7	8260 8260 8260	1.00 0.660	<0.0004 0.0068	<0.001 <0.001	<0.00031 <0.00031																													
p- & m-Xylene (see Xylenes) ** sec-Butylbenzene	1330-20-7 135-98-8	8260 8260	NE 2.00	0.0037	<0.001	<0.00031												0.00707	0.00875	0.00222	0.00226	0.0133	0.0156	0.0108	0.00987	0.00505	0.00567	0.00742	0.00593	0.00483	0.00408	0.002 U	0.002 U	0.00237	0.00219
Styrene tert-Butylbenzene Tetrachloroethylene	100-42-5 98-06-6 127-18-4	8260 8260 8260	1.20 0.690 0.041	<0.0004 <0.0004 <0.0004	<0.001 <0.001 <0.001	<0.00031 <0.00031 <0.00031																													
Toluene trans-1,2-Dichloroethylene trans-1,3-Dichloropropene	108-88-3 156-60-5 10061-02-6	8260 8260 8260	1.100 0.360 0.0047	<0.002 <0.0004 <0.0004	<0.001 <0.001 <0.001	0.0192 <0.00031 <0.00031	0.00041 J	<0.00031	0.00054 J	0.00035 J	<0.00031	0.0016	0.00148	0.001 U 	0.001 U 	0.0025	0.00263	0.001 U 	0.001 U 	0.0112	0.0109	0.00698	0.00655	0.00645	0.00603	0.00343	0.00399	0.00513	0.00537	0.00150	0.001 U 	0.00286	0.00286	0.00154	0.00153
Trichloroethylene Trichlorofluoromethane	79-01-6 75-69-4	8260 8260	0.0028	<0.0004 <0.0004	<0.001 <0.001	<0.00031 <0.00031																													
Vinyl acetate Vinyl chloride Xylenes	108-05-4 75-01-4 1330-20-7	8260 8260 8260	0.410 0.00019 0.190	<0.004 <0.0004 0.08	<0.001 0.00618	<0.00031 0.037	0.00767	1.00767	0.00951	0.01497	0.00637	0.00904	0.00831	0.0311	0.0326	0.0109	0.0104	0.0121	 0.0150	0.00358	0.00368	0.0220	0.0258	0.0170	0.0156	0.00811	0.00921	0.0117	0.00932	0.00798	0.00673	 0.003 U	 0.003 U	0.00378	0.00346
Semi-Volatile Organic Compounds 1-Methylnaphthalene 2-Methylnaphthalene	90-12-0 91-57-6	8270D/SIM 8270D/SIM	0.011 0.036	<0.057 <0.088	<0.000725 <0.0005	<0.00628 <0.00447	0.0013 0.000247	0.000028 0.0000164	<0.0000147 <0.0000147	<0.0000154 <0.0000154	0.00319 0.00270	0.00005 U 0.00005 U	0.00374 0.00441	0.00443 0.00432	0.00413 0.00381					0.0000463 U 0.0000463 U	0.0000463 U 0.0000463 U	0.000227 U 0.000227 U	0.000231 U 0.000231 U	0.00330 0.00205	0.00452 0.00297	0.00326 0.00285	0.00387 0.00351	0.0000463 U 0.0000463 U	0.0000463 U 0.0000463 U	0.00131 0.00121	0.00164 0.00164	0.0000481 UH 0.0000481 UH	0.0000481 UH 0.0000481 UH	0.000289 0.000183	0.000556 0.000457
Acenaphthene Acenaphthylene Anthracene	83-32-9 208-96-8 120-12-7	8270D/SIM 8270D/SIM 8270D/SIM	0.530 0.260 0.043	<0.0027 <0.00054 <0.0005	<0.000528 <0.0005 <0.0005	<0.000306 <0.000306 <0.000306	0.000339 <0.0000155 0.0000582	0.0000401 <0.00000391 <0.00000391	0.000402 <0.0000147 <0.0000147	<0.0000154 <0.0000154 <0.0000154	0.000322 <0.0000144 <0.0000144	0.000417 0.00005 U 0.00005 U	0.00112 0.000049 U 0.000049 U	0.000294 0.000049 U 0.000049 U	0.000298 0.000049 U 0.000049 U					0.0000463 U 0.0000463 U 0.0000463 U	0.0000463 U 0.0000463 U 0.0000463 U	0.00115 0.000227 U 0.000227 U	0.00146 0.000231 U 0.000231 U	0.000315 0.0000481 U 0.0000481 U	0.000426 0.0000472 U 0.0000472 U	0.000295 0.0000528 0.0000867	0.000346 0.0000655 0.0000481 U	0.000124 0.0000463 U 0.0000463 U	0.000133 0.0000463 U 0.0000463 U	0.000139 0.0000455 U 0.0000455 U	0.000135 0.0000463 U 0.0000463 U	0.0000481 UH 0.0000481 UH 0.0000481 UH	0.0000481 UH 0.0000481 UH 0.0000481 UH	0.000322 0.0000481 U 0.0000481 U	0.000276 0.0000490 U 0.0000490 U
Benzo[a]Anthracene Benzo[a]pyrene Benzo[b]Eluoranthene	56-55-3 50-32-8 205-99-2	8270D/SIM 8270D/SIM 8270D/SIM	0.00030 0.00025 0.0025	<0.000052 <0.00005 <0.00005	<0.00005 <0.00005 <0.00005	<0.0000153 <0.0000153 <0.0000153	<0.0000155 <0.0000155 <0.0000155	<0.00000391 <0.00000391 <0.00000391	<0.0000147 <0.00000608 <0.0000147	<0.0000154 <0.00000635 <0.0000154	<0.0000144 <0.00000596 <0.0000144	0.00005 U 0.00002 U 0.00005 U	0.000049 U 0.0000196 U 0.000049 U	0.000049 U 0.0000196 U 0.000049 U	0.000049 U 0.0000196 U 0.000049 U					0.0000463 U 0.0000185 U 0.0000463 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000455 U 0.0000182 U 0.0000455 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000481 U 0.0000192 U 0.0000481 U	0.0000472 U 0.0000189 U 0.0000472 U	0.0000481 U 0.0000192 U 0.0000481 U	0.0000481 U 0.0000192 U 0.0000481 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000455 U 0.0000182 U 0.0000455 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000481 UH 0.0000192 UH 0.0000481 UH	0.0000481 UH 0.0000192 UH 0.0000481 UH	0.0000481 U 0.0000192 U 0.0000481 U	0.0000490 U 0.0000196 U 0.0000490 U
Benzo[g,h,i]perylene Benzo[k]fluoranthene	191-24-2 207-08-9	8270D/SIM 8270D/SIM	0.00026	<0.00005 <0.00005	<0.00005 <0.00005	<0.0000153 <0.0000153	<0.0000155 <0.0000155	<0.00000391 <0.00000391	<0.0000147 <0.0000147	<0.0000154 <0.0000154	<0.0000144 <0.0000144	0.00005 U 0.00005 U	0.000049 U 0.000049 U	0.000049 U 0.000049 U	0.000049 U 0.000049 U					0.0000463 U 0.0000463 U	0.0000463 U 0.0000463 U	0.0000455 U 0.0000455 U	0.0000463 U 0.0000463 U	0.0000481 U 0.0000481 U	0.0000472 U 0.0000472 U	0.0000481 U 0.0000481 U	0.0000481 U 0.0000481 U	0.0000463 U 0.0000463 U	0.0000463 U 0.0000463 U	0.0000455 U 0.0000455 U	0.0000463 U 0.0000463 U	0.0000481 UH 0.0000481 UH	0.0000481 UH 0.0000481 UH	0.0000481 U 0.0000481 U	0.0000490 U 0.0000490 U
Chrysene Dibenz[a,h]anthracene Fluoranthene	218-01-9 53-70-3 206-44-0	8270D/SIM 8270D/SIM 8270D/SIM	0.002 0.00025 0.260	<0.00005 <0.00005 <0.0005	<0.00005 <0.00005 <0.00005	<0.0000153 <0.0000153 <0.0000153	<0.0000155 <0.0000155 <0.0000155	<0.00000391 <0.00000391 <0.00000391	<0.0000147 <0.00000608 <0.0000147	<0.0000154 <0.0000635 <0.0000154	<0.0000144 <0.00000596 <0.0000144	0.00005 U 0.00002 U 0.00005 U	0.000049 U 0.0000196 U 0.000049 U	0.000049 U 0.0000196 L 0.000049 U	0.000049 U 0.0000196 U 0.000049 U					0.0000463 U 0.0000185 U 0.0000463 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000455 U 0.0000182 U 0.0000455 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000481 U 0.0000192 U 0.0000481 U	0.0000472 U 0.0000189 U 0.0000472 U	0.0000481 U 0.0000192 U 0.0000481 U	0.0000481 U 0.0000192 U 0.0000481 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000455 U 0.0000182 U 0.0000463 U	0.0000463 U 0.0000185 U 0.0000463 U	0.0000481 UH 0.0000192 UH 0.0000481 UH	0.0000481 UH 0.0000192 UH 0.0000481 UH	0.0000481 U 0.0000192 U 0.0000481 U	0.0000490 U 0.0000196 U 0.0000490 U
Fluorene Indeno[1,2,3-c,d] pyrene Naphthalene	86-73-7 193-39-5 91-20-3	8270D/SIM 8270D/SIM 8270D SIM	0.290 0.00019 0.0017	<0.0071 <0.00005 <0.12	<0.000562 <0.00005 <0.00438	<0.00148 <0.0000153 <0.0391	0.000747 <0.0000155 0.00166	<0.00000391 <0.00000391 0.000193	<0.0000147 <0.0000147 0.000195	<0.0000154 <0.0000154 <0.0000318	0.000961 <0.0000144 0.003330	0.00005 U 0.00005 U 0.000938	0.00097 0.000049 U 0.00598	0.00103 0.000049 U 0.00870	0.00101 0.000049 U 0.00822					0.0000463 U 0.0000463 U 0.000471	0.0000463 U 0.0000463 U 0.000620	0.000227 U 0.0000455 U 0.00121	0.000231 U 0.0000463 U 0.00151	0.000776 0.0000481 U 0.00646	0.000990 0.0000472 U 0.00853	0.00092 0.0000481 U 0.00369	0.00114 0.0000481 U 0.00421	0.0000463 U 0.0000463 U 0.0000926 U	0.0000463 U 0.0000463 U 0.0000926 U	0.000385 0.0000463 U 0.00212	0.000385 0.0000463 U 0.00254	0.0000481 UH 0.0000481 UH 0.0000962 UH	0.0000481 UH 0.0000481 UH 0.0000962 UH	0.000225 0.0000481 U 0.000483	0.000322 0.0000490 U 0.000754
Phenanthrene Pyrene	85-01-8 129-00-0	8270D/SIM 8270D/SIM	0.170 0.120	<0.0044 <0.0005	<0.0005 <0.000057	<0.000306 <0.0000153	0.0000769 0.0000277 J	<0.00000391 <0.0000391	<0.0000147 <0.0000515	<0.0000154 <0.0000154	0.000334 <0.0000144	0.00005 U 0.0000732	0.000504 0.0000490 U	0.000295 0.000049 U	0.000273 0.000049 U					0.0000463 U 0.000156	0.0000463 U 0.000161	0.000227 U 0.0000455 U	0.000231 U 0.0000871	0.000185 0.0000481 U	0.000253 0.0000472 U	0.000422 0.0000481 U	0.000599 0.0000481 U	0.0000926 U 0.0000463 U	0.0000926 U 0.0000463 U	0.0000909 U 0.0000463 U	0.0000969 0.0000463 U	0.0000962 UH 0.0000481 UH	0.0000962 UH 0.0000481 UH	0.0000962 U 0.0000481 U	0.0000980 U 0.0000490 U
				<u>Notes</u> . <	Analytica Analytica Analyte w	l results were in l results are co vas not detecter	mported from P mpared to ADE d at the specifie	C 18 AAC 75 Tab Level of Quanti	ble C Groundwate itation (LOQ) or I	nich was acquire er Cleanup Level Detection Level (d by Golder As s as amended DL)	sociates, inc in through Noven	iber 18, 2021																						
				J/JH mg/L U	Estimateo Milligram Analyte n	d value/Estimat per liter ot detected at t	ted value biased	d high due to surr Q	rogate recovery																										
				H L XXXX	Result is Result is LOQ/Non	biased low due biased low due -detected conc	e to laboratory e to low laborato centrations exce	error. Analyte extra ory control spike (eed ADEC Cleanu	action occurred o (LCS) percentage p Levels Updated	outside method h e recovery in the d in 2021 / 2020	old time quality control : / 2018 / 2016	sample																							
				XXXX XXXX	Analyte w Analyte w	as detected be as detected ab	elow ADEC Clea	anup Levels Upda anup Levels Upda e event	ated in 2021 / 202 ated in 2021 / 202	20 / 2018 / 2016 20 / 2018 / 2016																									
				* **	Analyte is Analyte w	anot currently i as added by N	included in Meth	nod 8260 laborate	ory analyte list rent Method 8260) analyte list	faan *	manual last of																							
	*** Data for MW-403A and MW-5 may not represent contamination near the groundwater surface, as the screened interval at each well does not intersect the top of the groundwater table																																		

	Former Kiewit Infrastructure West Co., 2050 Peger Road, Fairbanks, Alaska																			
	Location ID: ADEC M MW4-1016 MW-4 MW-4 MW-4 MW-4 MW-4 MW-4 MW-4 MW-4																			
Analytical Parameter			Cleanup	w																
	Samp	le Date:		4 16-Oct-12	03-Jul-14	16-Oct-14	27-Apr-15	02-Sep-15	25-Aug-16	26-Sep-17	26-Apr-18	11-Oct-18	17-Apr-19	15-Oct-19	06-May-20	02-Sep-20	12-May-21	06-Oct-21	22-Mar-22	1
Petroleum Pange Hydrocarbons	CAS	Method	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	1
Gasoline Range Organics (GRO)	N/A	AK 101	2.2	<0.1			0.0318 J		0.0326 J	< 0.031	< 0.031									
Diesel Range Organics (DRO) Residual Range Organics (RRO)	N/A N/A	AK 102 AK 103	1.5 1.1	0.59	<0.6	1.12 0.947	1.72 0.371 J	0.994 <0.144	1.15 0.25 J	0.769 0.316 J	0.786 0.331 J	0.667	0.951	0.826	0.968	1.69	1.63	1.33	1.77	
BTEX	71-43-2	8260	0.0046	L <0.0002	0.0008	<0.00012	0.0003 1	<0.00015	0.00023.1	0.00051	0.00065	0.00056	0.00102	93000.0	0.00122	0.000914	0.00122	0.00000	0.00124	
Toluene	108-88-3	8260	1.100	<0.001	< 0.001	<0.00031	< 0.00031	<0.00031	< 0.00031	0.00055 J	< 0.00031	0.001 U	0.001 U	< 0.00031	0.00123	0.0001 U	0.00123	0.001 U	0.00134 0.001 U	
Ethylbenzene Xylenes	100-41-4 1330-20-7	8260 8260	0.015 0.190	<0.0002 <0.0004	<0.001 0.0036	<0.00031 <0.001	<0.00031 <0.00093	<0.00031 <0.00093	<0.00031 <0.00093	0.00036 J 0.00171 J	<0.00031 <0.00093	0.001 U 0.003 U	0.001 U 0.003 U	<0.00031 <0.001	0.001 U 0.003 U					
Volatile Organic Compounds	630-20-6	8260	0.0057	<0.0002	<0.0005	<0.00015									1				1	_
1,1,1-Trichloroethane	71-55-6	8260	8.0	<0.0002	<0.001	<0.00031														
1,1,2,2-Trichloroethane	79-34-5	8260	0.00076	<0.0002	<0.0005	<0.00015 <0.00031														
1,1-Dichloroethane 1.1-Dichloroethylene	75-34-3 75-35-4	8260 8260	0.028	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00015														
1,1-Dichloropropene	563-58-6	8260	NE 0.007	<0.0002	< 0.001	< 0.00031														
1,2,3-Trichloropropane	96-18-4	8260	0.0000075	<0.0002	<0.001	<0.00031														
1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene	120-82-1 95-63-6	8260 8260	0.004	<0.0002	<0.001	<0.00031 <0.00031						0.001 U	0.001 U	<0.00031	0.001 U	0.001 U	0.001 U	 0.001 U	0.001 U	1
1,2-Dibromo-3-chloropropane 1.2-Dibromoethane	96-12-8 106-93-4	8260 8260	NE 0.000075	<0.001 <0.0002	<0.01 <0.001	<0.0031 <0.00031														
1,2-Dichlorobenzene	95-50-1	8260	0.300	< 0.0002	<0.001	<0.00031														
1,2-Dichloropropane	78-87-5	8260	0.0017	<0.0002	<0.001	<0.00031														
1,3,5-Trimethylbenzene 1,3-Dichlorobenzene	108-67-8 541-73-1	8260 8260	0.060	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00031									0.001 U	1				
1,3-Dichloropropane	142-28-9	8260 8260	NE 0.0048	<0.0002	<0.0004	<0.00015														
2,2-Dichloropropane	594-20-7	8260	NE	<0.0002	<0.001	<0.00031														
2-Butanone (methyl ethyl ketone) 2-Chloroethyl vinyl ether *	78-93-3 110-75-8	8260 8260	5.6 NE	<0.005	<0.01	<0.0031														
2-Chlorotoluene 2-Hexanone	95-49-8 591-78-6	8260 8260	NE 0.038	<0.0002 <0.002	<0.001 <0.01	<0.00031 <0.0031														
4-Chlorotoluene	106-43-4	8260	NE	< 0.0002	< 0.001	< 0.00031														
Acetone	99-87-6 67-64-1	8260	NE 14	<0.0002 <0.005	<0.001	<0.00031														
Benzene Bromobenzene	71-43-2 108-86-1	8260 8260	0.0046	<0.0002 <0.0002	0.00083	<0.00012 <0.00031			0.00023 J	0.00051	0.00065	0.00056	0.00102	0.00068	0.00123	0.000814	0.00123	0.00090	0.00134	0
Bromochloromethane	74-97-5	8260 8260	NE 0.0012	<0.0002	<0.001	<0.00031														
Bromoform	75-25-2	8260	0.033	<0.001	<0.001	<0.00013														
Bromomethane Carbon disulfide	74-83-9 75-15-0	8260 8260	0.0075 0.810	<0.001 <0.0002	<0.01 <0.01	<0.0031 <0.0031														
Carbon tetrachloride	56-23-5 108-90-7	8260 8260	0.0046	<0.0002	<0.001	<0.00031														
Chloroethane (ethyl chloride)	75-00-3	8260	21	<0.001	<0.001	<0.00031														
Chloromethane	67-66-3 74-87-3	8260 8260	0.0022	<0.0002 <0.001	<0.001 <0.001	<0.0003														
Volatile Organic Compounds (cont) cis-1,2-Dichloroethylene	156-59-2	8260	0.036	<0.0002	<0.001	< 0.00031														_
cis-1,3-Dichloropropene Dibromochloromethane	10061-01-5 124-48-1	8260 8260	0.0047	<0.0002 <0.0002	<0.0005 <0.0005	<0.00015 <0.00015														
Dibromomethane	74-95-3	8260	0.0083	< 0.0002	< 0.001	< 0.00031														
Ethylbenzene	75-71-8 100-41-4	8260 8260	0.200	<0.0002 <0.0002	<0.001	<0.00031 <0.00031			<0.00031	0.00036 J	<0.00031	0.001 U	0.001 U	<0.00031	0.001 U					
Freon-113 ** Hexachlorobutadiene	76-13-1 87-68-3	8260 8260	10 0.0014	<0.0002	<0.001	<0.00031														
lodomethane *	74-88-4	8260	NE	<0.002																
Methyl isobutyl ketone *	108-10-1	8260	6.3	<0.002	<0.01	<0.00031														
Methyl tert-butyl ether Methylene chloride	1634-04-4 75-09-2	8260 8260	0.140 0.110	<0.0002 <0.001	<0.01 <0.005	<0.0031 <0.001														
Naphthalene **	91-20-3 104-51-8	8260 8260	0.0017	<	 <0.001	 <0.00031								<0.00031	0.001 U					
n-Propylbenzene	103-65-1	8260	0.660	<0.0002	<0.001	<0.00031														
p- & m-Xylene (see Xylenes) **	1330-20-7 1330-20-7	8260 8260	NE NE												0.001 U 0.002 U					
sec-Butylbenzene Styrene	135-98-8 100-42-5	8260 8260	2.00	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00031														
tert-Butylbenzene	98-06-6	8260	0.690	< 0.0002	< 0.001	< 0.00031														
Toluene	127-18-4 108-88-3	8260	1.100	<0.0002	<0.001	<0.00031	<0.00031	<0.00031	<0.00031	0.00055 J	<0.00031	0.001 U	0.001 U	<0.00031	0.001 U					
trans-1,2-Dichloroethylene trans-1,3-Dichloropropene	156-60-5 10061-02-6	8260 8260	0.360 0.0047	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00031														
Trichloroethylene	79-01-6	8260	0.0028	<0.0002	< 0.001	<0.00031														
Vinyl acetate	108-05-4	8260	0.410	<0.002																
Vinyl chloride Xylenes	75-01-4 1330-20-7	8260 8260	0.00019 0.190	<0.0002 <0.0004	<0.001 0.0036	<0.00031 <0.001	<0.00093	<0.00093	<0.00093	0.00171 J	<0.00093	 0.003 U	0.003 U	 <0.001	0.003 U	 0.003 U	 0.003 U	 0.003 U	 0.003 U	
Semi-Volatile Organic Compounds 1-Methylnaphthalene	90-12-0	8270D/SIM	0.011	<0.00028	<0.0000954	< 0.0000153	0.0000371.J	<0.00000391	0.0000259	<0.0000144	< 0.0000147	<0.0000144	<0.0000144							
2-Methylnaphthalene	91-57-6	8270D/SIM	0.036	<0.00036	<0.0000524	<0.0000153	0.0000174 J	< 0.0000391	0.0000284	< 0.0000144	<0.0000147	< 0.0000144	< 0.0000144							
Acenaphthylene	208-96-8	8270D/SIM	0.260	<0.00014	<0.0000524	<0.0000153	< 0.000129	< 0.0000391	<0.000211	<0.0000387	<0.000115 <0.000147	< 0.0000144	< 0.0000394							
Anthracene BenzolalAnthracene	120-12-7 56-55-3	8270D/SIM 8270D/SIM	0.043	<0.0001 <0.00005	<0.0000524 <0.0000524	<0.0000153 <0.0000153	<0.0000155 <0.0000155	<0.0000391 <0.0000391	<0.0000142 <0.0000142	<0.0000144 <0.0000144	<0.0000147 <0.0000147	<0.0000144 <0.0000144	<0.0000144 <0.0000144							
Benzo[a]pyrene	50-32-8	8270D/SIM	0.00025	<0.00005	0.0000524	< 0.0000153	<0.0000155	<0.00000391	<0.00000585	<0.00000596	<0.00000608	<0.00000596	<0.00000596							
Benzo[g,h,i]perylene	191-24-2	8270D/SIM	0.0025	<0.00005	<0.0000524	<0.0000153	<0.0000155	<0.00000391	<0.0000142	<0.0000144	<0.0000147 <0.0000147	<0.0000144	<0.0000144							
Benzo[k]fluoranthene Chrysene	207-08-9 218-01-9	8270D/SIM 8270D/SIM	0.00080 0.002	<0.00005 <0.00005	<0.0000524 <0.0000524	<0.0000153 <0.0000153	<0.0000155 <0.0000155	<0.00000391 <0.00000391	<0.0000142 <0.0000142	<0.0000144 <0.0000144	<0.0000147 <0.0000147	<0.0000144 <0.0000144	<0.0000144 <0.0000144							
Dibenz[a,h]anthracene	53-70-3	8270D/SIM	0.00025	<0.00005	<0.0000524	<0.0000153	<0.0000155	<0.00000391	<0.0000585	<0.00000596	<0.00000608	<0.00000596	<0.00000596							
Fluorene	86-73-7	8270D/SIM	0.290	<0.0001	<0.0000324	<0.0000876	0.000213	0.0000613	0.000203	0.000117	0.000159	0.000122	0.000172							
Indeno[1,2,3-c,d] pyrene Naphthalene	193-39-5 91-20-3	8270D/SIM 8270D SIM	0.00019 0.0017	<0.00005 <0.00022	<0.0000524 <0.000231	<0.0000153 <0.0031	<0.0000155 0.000192	<0.00000391 <0.00000807	<0.0000142 <0.0000292	<0.0000144 <0.0000298	<0.0000147 <0.0000304	<0.0000144 <0.0000298	<0.0000144 <0.0000298							
Phenanthrene Pyrene	85-01-8 129-00-0	8270D/SIM 8270D/SIM	0.170	<0.0001 <0.0001	<0.0000524 <0.0000524	<0.0000153	<0.0000155	<0.00000391	<0.0000142 <0.0000142	<0.0000144 <0.0000144	<0.0000147 <0.0000147	<0.0000144	<0.0000144 <0.0000144							
ر <u>م</u>				Notes:	Analytical	results were im	ported from Pas	tor, Behling & Wi 18 AAC 75 Table	heeler, LLC, white C Groundwater	ch was acquired Cleanun I evele	by Golder Asso as amended the	ciates, Inc in 201	8. 18. 2021							
				<	Analyte wa	is not detected	at the specified	Level of Quantita	tion (LOQ) or De	etection Level (D	L)	ougintoronibol	10, 2021							
				J/JH mg/L	Estimated Milligram	value/Estimate per liter	u value biased h	ngh due to surrog	ate recovery											
				U H	Analyte no Result is b	t detected at the iased low due to	e reported LOQ o laboratory erro	or. Analyte extrac	tion occurred out	tside method hol	ld time									
				L	Result is b LOQ/Non-	iased low due to detected concer	o low laboratory ntrations exceed	control spike (LO	CS) percentage n Levels Updated i	ecovery in the qu n 2021 / 2020 / 1	uality control sa 2018 / 2016	mple								
				XXXX	Analyte wa	is detected belo	W ADEC Clean	up Levels Update	d in 2021 / 2020	/ 2018 / 2016										
					Analyte wa	is unlected abo	during sample	event	u iii 2021 / 2020	/ 2016/ 2016										
				*	Analyte is Analyte wa	not currently ind is added by NO	RTECH and is	a 8260 laboratory included in currer	anaiyte list nt Method 8260 a	analyte list										
	*** Data for MW-403A and MW-5 may not represent contamination near the groundwater surface, as the screened interval at each well does not intersect the top of the groundwater table																			
	at each well does not intersect the top of the groundwater table																			

Table 3 Historical Groundwater Results: 2012-Present

	MW-4	MW-4	MW-4	MW-4
2	10-Oct-22	21-Mar-23	19-Sep-23	26-Mar-24
	mg/L	mg/L	mg/L	mg/L
	1.10	1.56	1.32 L	0.774
1	0.00108 0.001 U	0.000875 0.001 U	0.000840 0.001 U	0.00102 0.001 U
	0.001 U 0.003 U	0.001 U 0.003 U	0.001 U 0.003 U	0.001 U 0.003 U
	0.001 U	0.001 U	0.001 U	 0.001 U
	0.001 U	0.001 U	0.001 U	0.001 U
	0.00108	0.000875	0.000840	0.00102
	0.00216	0.001 U	 0.001 U	 0.001 U
	0.001 U	0.001 U	0.001 U	0.001 U
	0.002 0	0.002 0	0.002 0	0.002 0
_	0.003 U	0.003 U	0.003 U	0.003 U

	Table 3 Historical Groundwater Results: 2012-Present Former Kiewit Infrastructure West Co., 2050 Peger Road, Fairbanks, Alaska																				
Analytical Parameter	Loca	tion ID:	ADEC Cleanup	MW5-1016***	MW-5***	MW-5***	MW-5***	MW-52*** (MW5 DUP)	MW-5***	MW-5***	MW-5***	MW-55*** (MW-5 DUP)	MW-5***	MW-5***	MW-5***	MW-5***	MW-5***	MW-5***	MW-5***	MW-5***	MW-
-	Samp CAS	le Date: Method	Level ma/L	5 16-Oct-12 mg/L	02-Jul-14 ma/L	16-Oct-14 mg/L	27-Apr-15 ma/L	27-Apr-15 mg/L	02-Sep-15 mg/L	25-Aug-16 ma/L	26-Sep-17 mg/L	27-Sep-17 mg/L	26-Apr-18 mg/L	11-Oct-18 ma/L	17-Apr-19 ma/L	15-Oct-19 ma/L	06-May-20 mg/L	02-Sep-20 mg/L	12-May-21 mg/L	06-Oct-21 mg/L	22-Ma ma
etroleum Range Hydrocarbons asoline Range Organics (GRO) esel Range Organics (DRO) esidual Range Organics (RRO)	N/A N/A N/A	AK 101 AK 102 AK 103	2.2 1.5 1.1	<0.1 0.24 	 <0.6 <0.5	 <0.6 <0.5	<0.031 <0.18 <0.15	0.0449 J <0.18 <0.15	 <0.173 <0.144	<0.031 0.277 <0.144	<0.031 <0.176 <0.147	<0.031 <0.170 <0.142	<0.031 <0.173 <0.144	 <0.173 	 <0.180 	 <0.000167 	 0.566 U 	 0.556 U 	0.577 U 	 0.566 U 	0.62
IEX enzene oluene hylbenzene /lenes	71-43-2 108-88-3 100-41-4 1330-20-7	8260 8260 8260 8260	0.0046 1.100 0.015 0.190	<0.0002 <0.001 <0.0002 <0.0004	<0.0004 <0.001 <0.001 <0.003	<0.00012 <0.00031 <0.00031 <0.001	<0.00012 <0.00031 <0.00031 <0.00093	<0.00012 <0.00031 <0.00031 <0.00093	<0.00015 <0.00031 <0.00031 <0.00093	<0.00015 <0.00031 <0.00031 <0.00093	<0.00015 <0.00031 <0.00031 0.00093 J	<0.00015 <0.00031 <0.00031 0.00107 J	<0.00015 <0.00031 <0.00031 <0.00093	0.001 U 0.001 U 0.001 U 0.003 U	0.001 U 0.001 U 0.001 U 0.003 U	<0.00012 <0.00031 <0.00031 <0.001	0.0004 U 0.001 U 0.001 U 0.003 U	0.000			
Datile Organic Compounds	630-20-6	8260	0.0057	<0.0002	<0.0005	< 0.00015															
1,2,2-Tetrachloroethane	79-34-5 79-00-5	8260 8260	0.00076	<0.0002 <0.0002 <0.0002	<0.001 <0.0005 <0.001	<0.00031 <0.00015 <0.00031											-				-
1-Dichloroethane 1-Dichloroethylene	75-34-3 75-35-4	8260 8260	0.028 0.280	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00015						-									
1-Dichloropropene 2,3-Trichlorobenzene	563-58-6 87-61-6	8260 8260	NE 0.007	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00031						_					=				-
2,3-Trichloropropane 2,4-Trichlorobenzene	96-18-4 120-82-1	8260 8260	0.0000075 0.004	<0.0001 <0.0002	<0.001 <0.001	<0.00031 <0.00031						-									-
2,4-Trimethylbenzene 2-Dibromo-3-chloropropane	95-63-6 96-12-8	8260 8260	0.056 NE	<0.0002 <0.001	<0.001 <0.01	<0.00031 <0.0031						-		0.001 U 	0.001 U 	<0.00031	0.001 U	0.001 U	0.001 U	0.001 U	0.00
2-Dibromoethane 2-Dichlorobenzene	106-93-4 95-50-1	8260 8260	0.000075 0.300	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00031															-
2-Dichloroethane 2-Dichloropropane	107-06-2 78-87-5	8260 8260	0.0017 0.0082	<0.0002 <0.0002	<0.0005 <0.001	<0.00031 <0.00031															-
3,5-Trimethylbenzene 3-Dichlorobenzene	108-67-8 541-73-1	8260 8260	0.060 0.300	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00031											0.001 U	0.001 U	0.001 U	0.001 U	0.00
3-Dichloropropane 4-Dichlorobenzene	142-28-9 106-46-7	8260 8260	NE 0.0048	<0.0002 <0.0002	<0.0004 <0.0005	<0.00015 <0.00015											=		-	_	
2-Dichloropropane Butanone (methyl ethyl ketone)	594-20-7 78-93-3	8260 8260	NE 5.6	<0.0002 <0.005	<0.001 <0.01	<0.00031 <0.0031						-									
Chloroethyl vinyl ether * Chlorotoluene	110-75-8 95-49-8	8260 8260	NE NE	<0.001 <0.0002	 <0.001	 <0.00031						-									-
Hexanone Chlorotoluene	591-78-6 106-43-4	8260 8260	0.038 NF	<0.0002 <0.0002	<0.01 <0.001	<0.0031 <0.00031															
Isopropyltoluene	99-87-6 67-64-1	8260 8260	NE 14	<0.002 <0.005	<0.001	<0.00031															
enzene romobenzene	71-43-2 108-86-1	8260 8260	0.0046	<0.0002	<0.0004 <0.001	<0.00012 <0.00031				<0.00015	<0.00015	<0.00015	<0.00015	0.001 U	0.001 U	<0.00012	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.000
omochloromethane	74-97-5 75-27-4	8260 8260	NE 0.0013	<0.0002 <0.0002	<0.001 <0.0005	<0.00031											-				
omoform comomethane	75-25-2 74-83-9	8260 8260	0.033	<0.001 <0.001	<0.001 <0.01	<0.00031 <0.0031															
arbon disulfide arbon tetrachloride	75-15-0 56-23-5	8260 8260	0.810	<0.0002 <0.0002	<0.01 <0.001	<0.0031											-				
hlorobenzene hloroethane (ethyl chloride)	108-90-7 75-00-3	8260 8260	0.078	<0.0002 <0.001	<0.0005 <0.001	<0.00015											-				
hloroform	67-66-3 74-87-3	8260 8260	0.0022	<0.00037 <0.001	<0.001 <0.001	<0.0003 <0.00031															-
platile Organic Compounds (cont) s-1.2-Dichloroethylene	156-59-2	8260	0.036	<0.0002	<0.001	<0.00031															-
s-1,3-Dichloropropene bromochloromethane	10061-01-5 124-48-1	8260 8260	0.0047	<0.0002 <0.0002	<0.0005 <0.0005	<0.00015 <0.00015															
bromomethane chlorodifluoromethane	74-95-3 75-71-8	8260 8260	0.0083	<0.0002 <0.0002	<0.001 <0.001	<0.00031 <0.00031															-
hylbenzene eon-113 **	100-41-4 76-13-1	8260 8260	0.015	<0.0002	<0.001	<0.00031					<0.00031	<0.00031	<0.00031	0.001 U	0.001 U	<0.00031	0.001 U	0.001 U	0.001 U	0.001 U	0.00
exachlorobutadiene	87-68-3 74-88-4	8260 8260	0.0014 NF	<0.0002 <0.002	<0.001	<0.00031															-
opropylbenzene (Cumene) ethyl isobutyl ketone *	98-82-8 108-10-1	8260 8260	0.450	<0.002 <0.002	<0.001 <0.01	<0.00031 <0.0031															-
ethyl tert-butyl ether ethylene chloride	1634-04-4 75-09-2	8260 8260	0.140	<0.0002	<0.01 <0.005	<0.0031 <0.001						-									
aphthalene ** Butylbenzene	91-20-3 104-51-8	8260 8260	0.0017	<0.0002	<0.001	<0.00031										<0.00031	0.001 U	0.001 U	0.001 U	0.001 U	0.00
Propylbenzene Xvlene (see Xvlenes) **	103-65-1	8260	0.660	<0.0002	<0.001	<0.00031						-	-				0.001.11			0.001.11	
& m-Xylene (see Xylenes) **	1330-20-7	8260	NE 2.00									-					0.002 U	0.002 U	0.002 U	0.002 U	0.00
yrene t Butulbenzene	100-42-5	8260	1.20	<0.0002	<0.001	<0.00031						-									
etrachloroethylene	127-18-4	8260	0.041	<0.0002	<0.001	<0.00031															
ans-1,2-Dichloroethylene	156-60-5	8260	0.360	<0.0002	<0.001	<0.00031															0.00
ichloroethylene	79-01-6	8260	0.0047	<0.0002	<0.001	<0.00031						-					-				
nyl acetate	75-69-4 108-05-4	8260	0.410	<0.002	<0.001	<0.00031											-				
/lenes	1330-20-7	8260	0.190	<0.0002 <0.0004	<0.007	<0.001	<0.00093	<0.00093	<0.00093	<0.00093	0.00093 J	0.00107 J	<0.00093	0.003 U	0.003 U	<0.001	0.003 U	0.003 U	0.003 U	0.003 U	0.00
Methylnaphthalene Methylnaphthalene	90-12-0 91-57-6	8270D/SIM 8270D/SIM	0.011	<0.000097	<0.00005	<0.000015	<0.0000153	<0.0000153	<0.0000391	<0.0000139	<0.0000147	<0.000015	<0.0000144								
cenaphthene	83-32-9	8270D/SIM 8270D/SIM	0.530	<0.000097	<0.00005	<0.000015	<0.0000153	<0.0000153	<0.00000391	<0.0000139	<0.0000147	<0.000015	<0.0000144	-			-		-	-	-
nthracene	120-12-7	8270D/SIM	0.043	<0.000097	<0.00005	<0.000015	<0.0000153	<0.0000153	<0.00000391	<0.0000139	<0.0000147	<0.000015	<0.0000144								
enzo[a]pyrene	50-32-8 205-00-2	8270D/SIM 8270D/SIM	0.00025	<0.0000097	<0.00005	<0.000015	<0.0000153	<0.0000153	<0.00000391	<0.0000139	<0.0000147	<0.000015	<0.0000144								
enzo[g,h,i]perylene	191-24-2	8270D/SIM 8270D/SIM	0.0025	<0.0000097	< 0.00005	< 0.000015	<0.0000153	<0.0000153	<0.00000391	<0.0000139	<0.0000147	<0.000015	< 0.0000144								
hrysene	218-01-9	8270D/SIM 8270D/SIM	0.002	<0.0000097	< 0.00005	< 0.000015	<0.0000153	<0.0000153	<0.00000391	< 0.0000139	<0.0000147	<0.000015	< 0.0000144								
uoranthene	206-44-0	8270D/SIM 8270D/SIM	0.260	<0.000097	<0.00005	<0.000015	<0.0000153	<0.0000153	<0.00000391	<0.00000574	<0.0000147	<0.000062	<0.0000144								
deno[1,2,3-c,d] pyrene	193-39-5	8270D/SIM 8270D/SIM	0.00019	<0.000097	< 0.00005	<0.000015	<0.0000153	<0.0000153	<0.00000391	<0.0000139	<0.0000147	<0.000015	<0.0000144								
henanthrene	85-01-8	8270D/SIM 8270D/SIM	0.170	<0.000097	<0.00005	<0.00015	<0.0000153	<0.0000153	<0.00000391	<0.0000287	<0.0000304	<0.000031	<0.0000298 0.0000193 J								
rene	129-00-0	8270D/SIM	0.120	<u>Notes</u> :	<0.00005 Analytica	<0.000015 al results were	<0.0000153 imported from P	 <0.0000153 astor, Behling & C 18 AAC 75 To 	Vheeler, LLC, v	<0.0000139 which was acquir	<0.0000147 red by Golder As	<0.000015 ssociates, Inc in through Neuron	2018.								
				<	Analytica Analyte v	al results are o was not detected	ompared to ADE ed at the specifie	C 18 AAC 75 Ta d Level of Quan	ititation (LOQ) or	Detection Level	els as amended (DL)	through Novem	iber 18, 2021								
				J/JH mg/L	Estimate Milligram	d value/Estima per liter	ated value blase	d high due to su	rrogate recovery												
				H	Result is	biased low du	e to laboratory e	error. Analyte ext	raction occurred	outside method	hold time	sample									
				XXXX	LOQ/Nor	n-detected con	centrations exce	ed ADEC Clean	up Levels Update	ed in 2021 / 2020	0 / 2018 / 2016	Sample									
				XXXX	Analyte v Analyte v	was detected b	bove ADEC Clea	anup Levels Upd	lated in 2021 / 20	020 / 2018 / 2016	6										
				*	Analyte is Analyte is	s not currently	included in Meth	o event hod 8260 labora is included in ou	tory analyte list	0 analyte liet											
				***	Data for l	MW-403A and well does not i	MW-5 may not	represent contai	mination near the	e groundwater su	urface, as the so	creened interval									
	at each well does not intersect the top of the groundwater table																				

Page 5 of 5

V-5***	MW-5***	MW-5***	MW-5***	MW-5***
Mar-22	10-Oct-22	21-Mar-23	19-Sep-23	26-Mar-24
ng/L	mg/L	mg/L	mg/L	mg/L
 25 U	 0.566 U 	 0.566 U 	 0.588 U 	 0.605 U
00411	0.0004.11	0.000411	0.0004.11	0.0004.11
01 U	0.0004 0	0.0004 0	0.0004 0	0.0004 0
01 U 03 U	0.001 U 0.003 U	0.001 U 0.003 U	0.001 U 0.003 U	0.001 U 0.003 U
001 U	0.001 U	0.001 U	0.001 U	0.001 U
0111	0.001.11	0.001.11	0.001.11	0.001.11
01 U	0.001 U	0.001 U	0.001 U	0.001 U
	0.001 0	0.001 0	0.001 0	
 01 U	 0.001 U	 0.001 U	 0.001 U	 0.001 U
02 U	0.002 U	0.002 U	0.002 U	0.002 U
01 U	0.001 U	0.001 U	0.001 U	0.001 U
03 U	0.003 U	0.003 U	0.003 U	0.003 U

Table 4
March 2024 Final Field Water Quality Parameter Measurements
Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska

Monitoring	Temperature	Dissolved O ₂	Conductivity	рН	ORP	Visual Clarity	Odor	Sheen
Well	(°C)	(mg/L)	(µS/cm)	(pH unit)	(mV)	(observed)	(Y / N)	(Y / N)
MW-2	NM	NM	NM	NM	NM	Clear	Y	N
MW-3	NM	NM	NM	NM	NM	Slight Yellow Tint	Y	N
MW-4	1.6	0.35	698	6.79	-98.1	Slight Yellow Tint	N	N
MW-5	1.6	0.31	432	6.86	-81.7	Clear	N	N
MW-403A	0.7	0.50	869	6.97	-92.4	Clear	N	N
MW-403B	0.9	0.50	987	7.11	-61.3	Clear	N	N

Notes:

°C Degree centigrade

mg/L Milligram per liter

μS/cm Microsiemen per centimeter

pH unit Potential of hydrogen defined as the decimal logarithm of the reciprocal of the hydrogen ion activity on a scale used to specify the acidity or basicity of an aqueous solution

mV Millivolt

Y / N Yes / No

NM Not measured

Table 5
March 2024 Natural Source Zone Depletion Evaluation Results Summary
Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska

Monitoring Well	Nitrate (mg/L)	Sulfate (mg/L)	Total Iron (mg/L)	Dissolved Iron (mg/L)	Total Manganese (mg/L)	Dissolved Manganese (mg/L)	Methane (µg/L)	Ethane (μg/L)	Ethene (μg/L)
MW-2	0.200 U	0.200 U	50.9	49.1	2.98	2.88	3450	1.0 U	1.0 U
MW-3	0.200 U	3.39	57.8	44.9	2.77	2.55	1460	1.0 U	1.0 U
MW-4	0.200 U	0.259	99.5	102	2.42	2.41	735	1.0 U	1.0 U
MW-5	0.200 U	20.8	16.0	17.1	1.55	1.56	251	1.0 U	1.0 U
MW-403A	0.200 U	20.3	17.3	17.1	1.45	1.49	308	1.0 U	1.0 U
MW-403B	0.200 U	23.7	24.0	24.1	1.35	1.41	293	1.0 U	1.0 U

Notes:

mg/L milligram per liter

µg/L microgram per liter

U Analyte not detected at the listed limit of quantitation (LOQ) or reporting limit (RL), as applicable

Table 6Monitoring Well Survey and Groundwater MeasurementsFormer Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska

Well ID	Northing	Easting	Top of Casing Elevation (ft)	Ground Elevation (ft)	Depth to Water (ft BTOC)	Groundwater Elevation (ft)
MW-2	3961474.8	1362999.2	436.08	436.5	9.87	426.21
MW-3	3961533.4	1363031.6	436.34	436.8	10.22	426.12
MW-4	3961674.5	1362920.6	NS	437.8	11.58	NC
MW-5	3961614.6	1362948.3	NS	437.9	11.36	NC
MW-403A	3961682.0	1363033.7	NS	436.0	9.49	NC
MW-403B	3961681.3	1363031.1	NS	436.0	9.45	NC

Alaska State Plane NAD83, Zone 3, NAD88 Elevation

TBM: 6" spike, south side first power pole south of 20th Ave. Elev. = 437.17 ft Surveyed November 4, 2020

Depth to water and groundwater elevation measurements were obtained on March 19, 26, and 27, 2024

MW-4, MW-5, MW-403A, and MW-403B exhibited frost jacking of well casings that occurred subsequent to the November 4, 2020 survey. The top of casing elevations of the wells have not been re-surveyed.

Notes:

ft Feet

TBM Temporary benchmark

BTOC Below top of casing

NS Not surveyed

NC Not calculated

Attachment 3

23-1007 24-1000 50 Thursday Former Kiewir-Peyer Red 215ep 2023 Tuesday Formor Kiewit - Pegea RI 19Mar 2024 0915 - Sample ingrit + mobe 0730 - Mobe for ground word for punge waren theorment monireang 1400 - Deliver groundwaren samples To 0900 - Anne Si Te SGS-EAT Nonzich Prascanel: William Waits 1120 - Anere SITA Wes Thin; MOSTIN Clean, ZOF Call FI NORTECH Personal: William Watts Apprix 2.0' Show on sponsed Weather Mestly Cloudy, 35°F, calm Cocare all Six wells Set up punge water 55-gal Ser ap GIte mearment 5957in draum on west side of 4-13mg at punge waren duan **FR** 1140- Begin GAC TREETMENT of Bldg. E930 - Calibrare VST meren purque water Collect Samples From MW-403A Treated all 38 gallous & parga Warm, Poaked to pround Statace +mw-403B 1345- De (1200 Samples to 565near mu-3 Fainbarks lab office for Mismare Coad empty 55-gel deam and Scrowt hold, De formed that 565 -Truck ANC and 57 For Nitnere will 1325 - Depart Sire 1342 - RETURN TO NORTECH OFFICE be gone Thrusslay ward next weak Demobe Themform, nomeroung if marg Will be Sampled next weak 1500 - Done when maly 57 back on dury. Sas ANC had been nori fied Las I week + again y estendary neganding Nithate samples 565 ander 57 having an plained WLW. absence. hra Rite in the Rain.



24-1008 24-1008 54 55 Wednesdy Former kiewir-Pegm Bd. 27 Maa Wednesday Former Kicair-Pegeafed 15 May 2024 0800 - Mobe for quandar ren Sampling 1300 - 10062 for Pringe Water Treamin 0845 - Anonce Site WITZ POTTON GAC Syster NORTECH Personnel: William Watis 1330 - Annu Sira Weartum - Puns 19 Cloudy BOF, Calm Begin water Theorem Appass list Suce on fround - yand Pricessor ~ 38 fallins of pary lince been schaped waren. Poursel to gunnerlow for Collected Samples from mw-2 near mW 3. Coar Simper and ma - 3. Collected duplicat 53-gd. dram onto much mw -300 from mw - 3 153 - Depart 5.72 1310 - Depart Sire Samph mynus 1500 - Annale & file 1400 - Delever samples to SES-Faraband Demoke necerving Facility 1845 - Done 1450 - Reman TO NoutECH OFFice Nortech pensonnel-William Watts Demos Jacob Ferrill -1545-Done Weather: Clean 60"F Call -wen wen Rite in the Rain



Project:	Former Kiev	wit Facility -	2050 Peger Rd		Site Location:	Fairbanks, Alaska	•		
Project #:	24-1008				Well Number:	MW-2			
Water Col	umn	Pre-Purge	Post-Purge: (onl)	/ need to be coli	ected if field staff ha	ve sufficient belief these me	asurements h	ave chang	ed)
Total Depth o	イブラアスシンデ f Weli (fl):	73.90			Water Level Measu	rement Date:	3/2-	7/24	Ë
Depth to Proc	luct from TOC (ft)	ND			Water Level Measu	rement Time:	112	<u>-5</u>	
Depth to Wat	er from TOC (ft):	9,87			WL Meter & S/N:	Solinst SN 484936			
Column of W	ater in Well (ft):	4.03			TOM-GS (ft):	Flush	TOC-TOM (ft): <u>0</u> 1	<u> <</u>
Purae Info	ormation		Well Diameter (in)	Volume (gal/ft)	Depth Pump Deplo	yed (ft): <u>/ Z</u>	Tubing Used	i (ft): _Z	20
Column of W	ater in Well (ft):	4.03	1 3/4 "	0.13	Purge Method:	Pereissich	IL PRO	m	
Gailons/foot (of Well Casing:	X 0.17	2"	0.17	Est. Flow Rate (I	iters/min): D, H Develo	opment Tot. V	'ol (gal):	4.0 *
Vol. of Water	in Well (gal):	= 0.7	4 "	0.66	Purge Water Dispo	sal: Processed through G	AC and disp	osal on site	<u>e</u>
Field Param	eters	Purge Start Tim	ne: 1145	Purge End time	375	Total Purge Volume Remo	ved (gal):	3,2	
Time	Temperature	Dissolved O ₂	Conductivity	pН	ORP	Visual Clarity	Odor	Sheen	Removed
(24-hr)	[±0.5 °C]	[± 0.1 mg/L]	(±3% µS/cm)	(± 0.1 pH units)	[±10 mV]	(observed)	(Y/N)	(Y/N)	Vol (gal)
1150	War	in gu	Sin pu	appare th	25	Tint		\sim	0.5
1155	hot	a clear	al der to	hispan	۷	11	Y	\overline{N}_{π}	1.0
1700	54220	and or	wared co	manne	non.	11	Γy Ι	N_{\downarrow}	1.5
1205	-					Clear	4	\mathcal{N}	2,0
1210						Clean	61	\mathcal{N}	2,5-
1215						Clean		\sim	3.0
						· · ·			
		-		M					
							<u> </u>		<u>, E</u>
Water Qualit	y Meter & S/N:				Purge Notes:				al Dusand
Sample Ir	$\frac{1000}{2}$	n la it			Sample Unteria (ci	rcie one): Stable parame			77()
Sample Dat	e: <u>2/ /</u>	107			Sample ID:	THU - h		11me: / 4	
Sampler(s):		<u>w</u>			Field Dup ID:		•	Time:	
Sample Met	hod: <u>Fe</u> R	1572 (1)	- pump		Equip Blank ID:		-	Time:	
Well Condit	ion Notes:		······································	······					
Casing N	otes: (Good						<u></u>	
Monumer	it Notes: 10	n var	- Banke	n/07	her ea	ie threads	Stiri	pper	/
Alditional	Notes & Commer	nts: 51	non Pe	Thelen	in odoi	· to plum.	e w	. Tor	
						·			

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 $M_{\rm e}^{\rm Max}$



Project:	Former Kie	wit Facility -	2050 Peger Rd		Site Location:	Fairbanks, Alaska				
Project #:	24-1008				Well Number:	mw-3				
Water Col	umn	Pre-Purge	Post-Purge: (on	ly need to be col	lected if field staff ha	ave sufficient belief these me	asurements	have chang	ed)	
/ Total Depth o	f Well (ft):	12.92			Water Level Measu	rement Date:	3/27	7/24		
Depth to Prod	luct from TOC (fi	ND_			Water Level Measu	rement Time:	092	0		
Depth to Wat	er from TOC (ft):	10,22			WL Meter & S/N:	Solinst SN 484936				
Column of Wa	ater in Well (ft):	2.70			TOM-GS (ft):	Flug	тос-том	(ft): 01	<u> </u>	
Purge Info	ormation		Well Diameter (in)	Volume (gal/ft)	Depth Pump Deplo	vyed (ft): 17	Tubing Use	ed (ft):	8	
Column of Wa	ater in Well (ft):	2,70	1 3/4 "	0.13	Purge Method:	Pinisalt	c Pur	w w		mn
Gallons/foot o	of Well Casing:	X 0.17	2"	0.17	Est. Flow Rate (liters/min): 0.15 Develo	opment Tot.	Vol (gal): 🔁	501.	75
Vol. of Water	in Weil (gal):	= 0,46	4	0.66	Purge Water Dispo	osal: Processed through G	AC and dis	oosal on sit	<u>e</u>	
Field Param	eters	Purge Start Tim	ne: 0900	Purge End time	0940	Total Purge Volume Remo	oved (gal): _	1.8	5	_
Time	Temperature	Dissolved O ₂	Conductivity	рН	ORP	Visual Clarity	Odor	Sheen	Removed	
(24-hr)	[±0,5 °C]	[± 0.1 mg/L]	[±3%µS/cm]	[± 0.1 pH units]	[±10 mV]	(observed) Sligat ye (low	(Y/N)	(Y/N)	Voi (gal)	
0905	Waz	for gui	City pur	SMATLE		print	Y		0.5	
6915	INOT	collected	due to	historic			<u> </u>		0,75	
0925	Shee	n and -	etword c	ontanin	utton,		17		1.0	
0735						11	<u>Y</u> _		1.25	inu
								-N	1.5	Support States
					-					
					· · · · · · · · · · · · · · · · · · ·					
						-				
					2					
Water Qualit	v Meter & S/N:				Purge Notes:					_
Sample Ir	formation				Sample Criteria (c	ircle one): Stable parame	ters or	> 3 Well V	ol. Purged	
Sample Date	: 3127	1/24			Sample ID:	mw - 3		Time: 🔇	2950	6
Sampter(s):	m	\mathcal{V}^{\prime}			Field Dup ID:	mw-30	0	Time: /	ے ہگ	2
Sample Met	hod: P-212	isalt	K Pumo		Equip Blank ID:			Time:		-
					• •					- 2
Well Condit	ion Notes:									-
Casing No	otes:	Orver				•				_
Monumen	t Notes:	0,00	d							_
Additional N	lotes & Comme	nts: P.	rachun	Olor	to pa	nge wate	~ t~~~~			-
	Pur	m pred	well d're	5,5	low To	Re chan	ie.		······	_
<u> </u>		·		/	· · · ·	C)			-

New.



Project:	Former Kiev	vit Facility - :	2050 Peger Rd		Site Location:	Fairbanks, Alaska				
Project #:	24-1008				Well Number:	MW-4	۷			
Water Column Pre-Purge Post-Purge: (only need to be collected if field staff have sufficient belief these measurements have changed)										
Total Depth of Well (ft): 13.95				Water Level Measurement Date: <u>3126124</u>						
Depth to Prod	uct from TOC (ft)	ND_			Water Level Measurement Time: 1210					
Depth to Wate	er from TOC (ft):	11.58			WL, Meter & S/N:	Solinst SN 484936	······			
Column of Wa	ater in Well (ft):	2.37	<i></i>		TOM-GS (ft):	Flush	TOC-TOM ((ft):/	<u>K</u>	
Purge Info	rmation		Well Diameter (in)	Volume (gal/ft)	Depth Pump Deployed (fl): 12,5 Tubing Used (fl): 18					
Column of Wa	ater in Well (ft):	2.37	1 3/4 "	0.13	Purge Method:	Submusib	k P	imp		
Gailons/foot o	f Well Casing:	X 0.17	2"	0.17	Est. Flow Rate (I	v Rate (liters/min): 0.7 Development Tot. Vol (gal): 7.0				
Vol. of Water	in Well (gal):	= 0,41	4	0.66	Purge Water Dispo	sal: Processed through G/	AC and disp	osal on site	2	
Field Parame	ters	Purge Start Tim	e:1220	Purge End time	1252	Total Purge Volume Remo	ved (gal):	5.5	<u></u>	
Time	Temperature	Dissolved O ₂	Conductivity	pH	ORP	Visual Clarity	Odor	Sheen	Removed	
(24-hr)	[±0.5 °C]	[± 0.1 mg/L]	[±3%μS/cm]	[± 0.1 pH units]	[±10 mV]	(observed)	(Y/N)	<u>(Y/N)</u>	Voi (gai)	
1223	<u> </u>	043	1391/2,2	6,10	-50,7	Pale		<u> </u>	<i>L</i> , 3	
1226	1.5	0,79	1341	0.11	-62.7	gerlow			1.0	
1229	1,5	0,82	13-151	6.12	-60.5	Light Pale		$\frac{V}{n}$		
1232	1.5	0.59	13091	0,71	- 13, 3	getteer-			7.0	
1235	1.5	0,50	12841	6,17	- 80,6	Licher Dale			2:5	
1238	1.5	0,45	12701	6.76	-8517	GerlowThe			5,0	
1241	1,5	0.40	1901	6.77	-91.4	SIMMERIA		$\frac{n}{1}$	5.5	
1244	1.6	0,38	500/ 702	6,78	-92,9	Gellow The			7.0	
1247	1.6	0.37	12000	6.78	- 94, 8	Gelline That			4.5	
1250	1.6	0.35	698	6,79	-98,1	genow The			5.0	
				<u> </u>						
Water Quality	y Meter & S/N:				_ Purge Notes:					
Sample In	formation	e la c			Sample Criteria (ci	rcle one Stable paramet	ters of	> 3 Well V	ol. Purged	
Sample Date: 3/26/24					Sample ID:	D: MW-4. Time: 130				
Sampler(s):					Field Dup ID:	Time:				
Sample Met	hod: <u>S W</u>	binensi	ste Pun	Equip Blank ID:	EB-1		Time: <u>/</u> 3	345		
Wall Condition Notes:										
Casing Notes: Q. D.D./										
Monumen	Monument Notes: Grand									
Additional	lofes & Commer	<u>1. U.C.C.</u>							_	
Automotial N	otes a sounder									



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Groundwater Sample Form

Project:	Former Kie	wit Facility -	2050 Peger Rd		Site Location:	Fairbanks, Alaska					
Project #:	24-1008	- 			Well Number:						
Water Column Pre-Purge Post-Purge: (only need to be collected if field staff have sufficient belief these measurements have changed)											
Total Depth of Well (ft): <u>34,50</u> Water Le						urement Date: <u>3/26/24</u>					
Depth to Product from TOC (ft) <u>ND</u> Water Level Measurement Time: <u>D955</u>											
Depth to Water from TOC (ft): 11.36 WL Meter & S/N: Solinst SN 484936											
Column of Water in Well (ft): <u>Z3,14</u> TOC-TOM (ft): <u>DK</u>									<u>×K_</u>		
Purge Info	rmation		Well Diameter (in)	Volume (gal/ft)	Depth Pump Deploy	yed (ft): <u>33</u>	3 Tubing Used (ft): 40				
- Column of Wa	ater in Well (ft):	23,14	1 3/4 "	1 3/4" 0.13 Purge Method: Submensible					pamp		
Gallons/foot c	f Well Casing:	X 0.17	2"	0.17	Est. Flow Rate (I	iters/min): 0,6 Develo	pment Tot. V	/ol (gal):	7.5		
Vol. of Water	in Well (gal):	= 3,94	4"	0.66	Purge Water Dispo	sal: Processed through G	AC and dist	osal on site	2		
Field Parame	ters	Purge Start Tim	e: 1015	Purge End time:	1050	Total Purge Volume Remo	wed (gal): _	5.5	•		
Time	Temperature	Dissolved O ₂	Conductivity	рН	ORP	Visual Clarity	Odor	Sheen	Removed		
(24-hr)	[±0.5 °C]	[± 0.1 mg/L]	[±3%µS/cm]	[± 0.1 pH units]	[±10 mV]	(observed)	(Y/N)	(Y/N)	Vol (gal)		
1018	1.5	0,90	785/431,	96.63	3,3	Clean	$ \mathcal{N} $	\mathcal{N}_{\cdot}	0,5-		
1021	1.5	0,68	184/432,0	6.70	- 13,4	Clean		N	1,0		
1024	1.6	0,62	782/432.4	6,14	-28,5	Clear	$ \ \ $	N	1.5		
1027	1.6	0,60	182/432,8	6.76	-36,4	Clean	$\lfloor \mathcal{N} \rfloor$	\underline{N}	0,2		
1030	1.6	0,51	781/432.9	,6.80	-51.5	Clean		$\underline{\mathcal{N}}$	2.5		
1033	1.7	0.43	181/432.6	6.82	-58,3	Clean		\mathcal{N}	3.0		
10:37	1.6	0.37	782/431.8	6,83	-6617	Clean	$ \sim$	\sim	3.5		
1041	1.6	0.34	782/431,9	6,85	-74.2	Clean	$ $ \sim	\mathcal{N}	4,0		
1045	1,6	0,32	783/431.9	6,86	-80,3	Clean		\overline{N}	4,5		
1049	1.6	0.31	183/432.0	6.86	-81.7	Clean		$'N_{\cdot}$	5.0		
Water Quality	/ Meter & S/N:				Purge Notes:						
Sample In	formation				Sample Criteria (ci	rcle one) Stable parame	ters	> 3 Well Vo	ol, Purged		
Sample Date	: 3/26	124			Sample ID:	MW-5		Time: / /	100		
Sampler(s): WLW Field Dup ID: Time:											
Sample Method: Submarsible pump					Equip Blank ID: Time:						
Well Conditi	on Notes:										
Casing Notes: Good											
Monument Notes: Coud											
Additional N	otes & Comme	nts:							<u> </u>		



Project:	roject: Former Kiewit Facility - 2050 Peger Rd				Site Location: Fairbanks, Alaska						
- Project #:	24-1008				Well Number:	mw-40	3A				
Water Colu	ımn .	Pre-Purge	Post-Purge: (on	ly need to be col	lected if field staff ha	ve sufficient belief these me	asurements	have change	ed)	:	
Total Depth of Weil (ff): 47.85					Water Level Measurement Date: 3/19/24						
Depth to Prod	uct from TOC (ft	9.49			Water Level Measurement Time: 1030						
Depth to Wate	Depth to Water from TOC (ft):					WL Meter & S/N: Solinst SN 484936					
Column of Water in Well (ft): 38,36					TOM-GS (ft):	Flugh	тос-том	(ft):	-ok	7 	
Purge Information Well Diameter (in) Volume (gal/ft)					Depth Pump Deployed (ft):						
Column of Water in Well (ft): 38,36		1 3/4 " 0.13		Purge Method: Shib mensiole Prempe					lere		
Gallons/foot o	f Well Casing:	X 0.17	2" 0.17		Est. Flow Rate (li	ters/min): <u>0,9</u> Develo	pment Tot. V	Vol (gal): <u> </u>	6.0		
Vol. of Water	in Well (gal):	= 6.5	4"	0.66	Purge Water Dispos	al: <u>Processed through G</u>	AC and disr	osal on site	e/	r.S aria	
Field Parame	ters	Purge Start Tim	e: <u>/050</u>	Purge End time	1115	1115 Total Purge Volume Removed (gal):5			5-6,	6	
Time	Temperature	Dissolved O ₂	Conductivity	рН	ORP	Visual Clarity	Odor	Sheen	Removed		
(24-hr)	[±0.5 °C]	[± 0.1 mg/L]	[±3% µS/cm]	(± 0.1 pH units)	[±10 mV]	(observed)	(Y/N)	<u>(Y/N)</u>	Vol (gal)		
1653	DIZ	2,36	874	6,77	-32,6	C. lear	\mathcal{N}_{\cdot}	\overline{N}_{+}	1.0	-	
1055	0.7	1.29	873	6.86	-49.1	Clean	\sim		1.5	-	
1057	0,6	1.04	872	6.89	-58:7	Clea	N	\sim	2,0		
1059	0.6	0,92	872	6,90	-6412	Clean	\sim	$\underline{\mathcal{N}}$	2,5		
1101	0.7	D.BZ	871	6.92	-68,0	Clean	\sim	\mathcal{N}	3,0		
1103	0,7	0.65	870	6.94	- 78.7	Clean	\mathcal{N}	av	3.5		
1105	0.7	0,60	8.70	6,95	-82.5	Clean	N	N	4,0		
1107	0.7	0,58	810	6,96	-86,7	Clean	\sim	\mathcal{N}_{i}	4.5		
1109	0.7	0.52	- 861	6.96	-90,1	Clean	\mathcal{N}	N	5.0		
111/	0.7	0.51	869	6.97	-91.4	Clean	\mathcal{N}	N	5.5		
1113	0.7	0.50	869	6,97	-72,4	Clean	\sim	N	6.0		
	,]	
Water Quality	Meter & S/N:				_ Purge Notes:		Photo			-	
Sample In	formation	, ,			Sample Criteria (cir	cle one): Stable paramet	ers) or	> 3 Well Vo	ol. Purged	-	
Sample Date: 3/19/24 Sample ID: MW-403A Time: 1125									_		
Sampler(s):	W1 W				Field Dup ID:			Time:		_	
Sample Meth	od: Sub	mensible	е римр		Equip Blank ID:	Time:				-	
Well Condition Notes:											
Casing Notes: (2004											
Monument Notes: (3000											
Additional Notes & Comments:											
						<u></u>				-	
										_	



Project:	Former Kiev	wit Facility - :	2050 Peger Rd		Site Location:	Fairbanks, Alaska				
Project #:	24-1008				Well Number:	MW-40	<u>3B</u>			
Water Colu	mn	Pre-Purge	Post-Purge: (onl)	y need to be coll	ecled if field staff hav	ve sufficient belief these me	asurements	have change	ed)	
Total Depth of Well (ft): <u>14.93</u> Water Level Measurement Date: <u>3/19/24</u>										
Depth to Product from TOC (ft) <u>ND</u> Water Level Measurement Time: <u>120</u>										
Depth to Water from TOC (ft): WL Meter & S/N: Solinst SN 484936									· .	
Column of Water in Well (ft): <u>5, 48</u> TOM-GS (ft): <u>F/n611</u> TOC-TOM (ft): <u>DK</u>										
Purge Information Well Diameter (in) Volume (gal/ft) Depth Pump Deployed (ft): 17 Tubing Used (ft): 18										
Column of Wa	ter in Well (ft):	514B	Purge Method: Jub pmarsible Pamp					Emp		
Gallons/foot o	f Well Casing:	X 0.17	2"	0.17	Est. Flow Rate (liters/min): L. L. Development Tot. Vol (gal):S					
Vol. of Water	n Well (gal):	=0,94	4" (1945) 	0.66	Purge Water Dispos	al: Processed through G	AC and dist	oosal on site	2	
Field Parame	ters	Purge Start Tim	e: <u>1215</u>	Purge End time:	1231	Total Purge Volume Remo	ved (gai): _	7,0		
Time	Temperature	Dissolved O ₂	Conductivity	pH I+ 0.1 nH unite]	ORP	Visual Clarity	Odor (Y/N)	Sheen	Removed	
(24-11)		0.79	996	7.07	-3.5.8	Chiam	\mathcal{N}	$^{\prime}$ $^{\prime}$	4.0	
17.7.7	1.0	0.66	990	7.09	-44,4	Che qui	N	N	4.5	
17.7.9	1.0	0.61	988	7.09	-48.7	Clean	N	N	570	
12.31	1.0	0,56	988	7.10	~ 54, Z	Clear.	N	\mathcal{N}_{i}	5.5	
1233	0,9	0,53	987	7,10	- 57.4	Clean	N	W	6.0	
12.35	0.9	0.51	987	7.11	-59,7	Clean	\mathcal{N}	\mathcal{N}	6.5	
1237	0,9	0,50	987	7.11	-61.3	Clean	\sim	$^{\prime}N$	7.0	
						· · · · · · · · · · · · · · · · · · ·	N.			
		ļ								
	<u> </u>									
Water Quality	Meter & S/N:				Purge Notes:	مىلىكەتلەرتىرىيى دىرىيى				
Sample In	formation	()			Sample Criteria (cir	cle one): Stable paramet	ters or	> 3 Well V	ol. Purged	
Sample Date	: <u>3//9/</u>	24_			Sample ID:	MW-4031	3	Time: /2	-50	
Sampler(s):	Sampler(s): WLW Field Dup ID: Time:									
Sample Method: <u>SLibmansible pump</u> Equip Blank ID: <u>Time</u> :										
Well Condition Notes:										
Casing Notes: Cy 80 d										
Monument	Notes:	Grat	Du	ean m	55 C. M .	ofther can	Spl	i poze	./	
Additional N	otes & Commer	nts:	1457	3.0 S.A.	11045 01	cample Ca	5/012			
Attachment 4



March 2024 Groundwater Monitoring Report Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska June 2024



Photo 1: March 27, 2024. Looking west at MW-2 (center) showing the CMI facility (background) as the well is purged using a low flow peristaltic pump instead of a submersible pump due to historic elevated contaminant concentrations. Three to five well volumes of water were removed prior to groundwater sample collection.



Photo 2: March 27, 2024. Looking south at MW-3 (center) showing the 4-Bay Building (left) as the well is purged using a low flow peristaltic pump instead of a submersible pump due to historic elevated contaminant concentrations. Three to five well volumes of water were removed prior to groundwater sample collection.

Https://Nortechinc.Sharepoint.Com/00-Jobs/2024/1008/Shared Documents/Images/Spring 2024 Report/24-1008 GW Rpt Spring 2024 Photopages V2.Docx



March 2024 Groundwater Monitoring Report Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska June 2024



Photo 3: March 26, 2024. Looking northeast at MW-4 showing 20th Avenue (background) as the well is purged using a low flow submersible pump. Water quality parameters were measured with a YSI Pro DSS instrument prior to groundwater sample collection.



Photo 4: March 26, 2024. Looking southeast at MW-5 showing the CMI yard as the well is purged using a low flow submersible pump while water quality parameters are measured with a YSI Pro DSS instrument prior to groundwater sample collection. The 4-Bay Building is shown (upper left, background).



March 2024 Groundwater Monitoring Report Former Kiewit Facility, 2050 Peger Road, Fairbanks, Alaska June 2024



Photo 5: March 19, 2024. Looking east at MW-403A and MW-403B in 20th Avenue ROW. The wells were purged using a low flow submersible pump while water quality parameters were measured with a YSI Pro DSS instrument prior to groundwater sample collection. The 2-Bay Building is shown on the right.



Photo 6: May 15, 2024. Looking south from the vicinity of the 4-Bay Building as the approximately 38 gallons of contaminated purge water generated from the six monitoring wells during sampling is processed and treated through a portable Granular Activated Carbon (GAC) system. The treated water was disposed of on Site by pouring to the ground surface a minimum of 100 feet away from drinking water wells or surface water.

Attachment 5



Laboratory Report of Analysis

To: Nortech 2400 College Road Fairbanks, AK 99707 (907)452-5688

Report Number: **1241074**

Client Project: Former Kiewit Fac-2050 Peger

Dear William Watts,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely, SGS North America Inc.		Stephen C. Ede
	Stophen C.	Ede 2024.04.08
		08:20:08 -08'00'

Jennifer Dawkins Project Manager Jennifer.Dawkins@sgs.com Date

Print Date: 04/05/2024 4:56:02PM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com Results via Engage

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Case Narrative

SGS Client: Nortech SGS Project: 1241074 Project Name/Site: Former Kiewit Fac-2050 Peger Project Contact: William Watts

Refer to sample receipt form for information on sample condition.

LCS for HBN 1873731 [VXX/41017 (1756897) LCS

8260D - LCS recovery for trichlorofluoromethane does not meet QC criteria. This analyte was not reported above LOQ in associated samples.

LCSD for HBN 1873731 [VXX/4101 (1756898) LCSD

8260D - LCS/LCSD RPD for trichlorofluoromethane does not meet QC criteria. This analyte was not reported above LOQ in associated samples.

1240966013(1757104MS) (1757109) MS

6020B - Metals MS recoveries for Iron and Manganese do not meet QC criteria. The post digestion spike was successful.

Light Gases by RSK-175 were analyzed by SGS of Orlando, FL.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 04/05/2024 4:56:04PM

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270E, 8270E-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 3/4 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.
Sample summaries which i All DRO/RRO analyses are	nclude a result for "Total Solids" have already been adjusted for moisture content.

Print Date: 04/05/2024 4:56:09PM

Note:



Sample Summary										
<u>Client Sample ID</u>	Lab Sample ID	<u>Collected</u>	Received	<u>Matrix</u>						
MW-403A	1241074001	03/19/2024	03/20/2024	Water (Surface, Eff., Ground)						
MW-403B	1241074002	03/19/2024	03/20/2024	Water (Surface, Eff., Ground)						
TB-1	1241074003	03/19/2024	03/20/2024	Water (Surface, Eff., Ground)						
MW-403A	1241074004	03/19/2024	03/20/2024	Water (Surface, Eff., Ground)						
MW-403B	1241074005	03/19/2024	03/20/2024	Water (Surface, Eff., Ground)						
Method	Method Des	scription								
SW6020B	Dissolved M	letals by ICP-MS								
AK102	DRO Low V	olume (W)								
EPA 300.0	Ion Chroma	tographic Analysis	;							
EPA 300.0	Ion Chroma	tographic Analysis	; (VV)							
SW6020B	Metals by IC	CP-MS								
SW8260D	Volatile Org	anic Compounds(W)Custom List							



Detectable	Results	Summary
------------	---------	---------

Client Sample ID: MW-403A			
Lab Sample ID: 1241074001	Parameter	Result	Units
Metals by ICP/MS	Iron	17300	ug/L
	Manganese	1450	ug/L
Volatile GC/MS	Benzene	0.480	ug/L
Waters Department	Sulfate	20.3	mg/L
Client Sample ID: MW-403B			
Lab Sample ID: 1241074002	Parameter	Result	<u>Units</u>
Metals by ICP/MS	Iron	24000	ug/L
	Manganese	1350	ug/L
Volatile GC/MS	Benzene	0.460	ug/L
Waters Department	Sulfate	23.7	mg/L
Client Sample ID: MW-403A			
Lab Sample ID: 1241074004	Parameter	Result	<u>Units</u>
Dissolved Metals by ICP/MS	Iron	17100	ug/L
	Manganese	1490	ug/L
Client Sample ID: MW-403B			
Lab Sample ID: 1241074005	Parameter	Result	<u>Units</u>
Dissolved Metals by ICP/MS	Iron	24100	ug/L
	Manganese	1410	ug/L

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Results of MW-403A							
Client Sample ID: MW-403A Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241074001 Lab Project ID: 1241074		r	Collection D Received Da Matrix: Wate Solids (%): Location:	ate: 03/19/24 1 ate: 03/20/24 09 er (Surface, Eff.,	1:25):55 Ground)	
Results by Metals by ICP/I	M5					Allowable	
Parameter	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
Iron	17300	500	150	ug/L	5		03/28/24 18:15
Manganese	1450	2.00	0.620	ug/L	5		03/28/24 18:15
Batch Information Analytical Batch: MMS122 Analytical Method: SW602 Analyst: HGS Analytical Date/Time: 03/2 Container ID: 1241074001	38 0B 8/24 18:15 -J		Prep Batch: Prep Methoc Prep Date/T Prep Initial V Prep Extract	MXX36522 d: SW3010A ime: 03/25/24 14 Vt./Vol.: 25 mL : Vol: 25 mL	:05		

SGS Pesults of MW/4034							
Client Sample ID: MW-403A Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241074001 Lab Project ID: 1241074		r	Collection Da Received Da Matrix: Wate Solids (%): Location:	ate: 03/19/24 1 te: 03/20/24 09 r (Surface, Eff.,	1:25):55 Ground)	
Results by Semivolatile Or	ganic Fuels					Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
Diesel Range Organics	0.577 U	0.577	0.192	mg/L	1		04/03/24 19:47
Surrogates							
5a Androstane (surr)	80.6	50-150		%	1		04/03/24 19:47
Batch Information							
Analytical Batch: XFC1680 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/03 Container ID: 1241074001-	8 3/24 19:47 A		Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX49302 : SW3520C me: 04/02/24 17: /t./Vol.: 260 mL Vol: 1 mL	:00		

Results of MW-403A

Client Sample ID: **MW-403A** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241074001 Lab Project ID: 1241074 Collection Date: 03/19/24 11:25 Received Date: 03/20/24 09:55 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	<u>Limits</u>	Date Analyzed
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:35
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:35
Benzene	0.480	0.400	0.120	ug/L	1		03/21/24 16:35
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:35
Naphthalene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:35
o-Xylene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:35
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		03/21/24 16:35
Toluene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:35
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		03/21/24 16:35
Surrogates							
1,2-Dichloroethane-D4 (surr)	98.3	81-118		%	1		03/21/24 16:35
4-Bromofluorobenzene (surr)	104	85-114		%	1		03/21/24 16:35
Toluene-d8 (surr)	102	89-112		%	1		03/21/24 16:35

Batch Information

Analytical Batch: VMS23148 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 03/21/24 16:35 Container ID: 1241074001-C Prep Batch: VXX41017 Prep Method: SW5030B Prep Date/Time: 03/21/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

SGS Posulte of MW 4024							
Client Sample ID: MW-403A Client Project ID: Former Kie Lab Sample ID: 1241074001 Lab Project ID: 1241074	r	Collection Da Received Da Matrix: Water Solids (%): Location:	ate: 03/19/24 1 te: 03/20/24 09 r (Surface, Eff.,	1:25 9:55 Ground)		
Parameter Nitrate-N	Result Qual 0.200 U	LOQ/CL 0.200	<u>DL</u> 0.0700	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 03/21/24 00:11
Batch Information Analytical Batch: WIC6565 Analytical Method: EPA 300.0 Analyst: EBH Analytical Date/Time: 03/21/2	20.3	2.00	0.500 Prep Batch: Prep Method Prep Date/Tir Prep Initial W	mg/L WXX15171 : METHOD me: 03/20/24 17 /t./Vol.: 10 mL	10		03/21/24 00:29
Analytical Batch: WIC6565 Analytical Method: EPA 300.0 Analyst: EBH Analytical Date/Time: 03/21/2 Container ID: 1241074001-I) 4 00:29		Prep Extract Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VOI: 10 ML WXX15171 : METHOD me: 03/20/24 17 /t./Vol.: 10 mL Vol: 10 mL	:30		

Results of MW-403B							
Client Sample ID: MW-403B Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241074002 Lab Project ID: 1241074		r	Collection D Received Da Matrix: Wate Solids (%): Location:	ate: 03/19/24 1; ate: 03/20/24 09 er (Surface, Eff.,	2:50):55 Ground)	
Parameter Iron	<u>Result</u> <u>Qual</u> 24000	<u>LOQ/CL</u> 500 2.00	<u>DL</u> 150	<u>Units</u> ug/L	<u>DF</u> 5	<u>Allowable</u> <u>Limits</u>	Date Analyzed 03/28/24 18:17 03/28/24 18:17
Batch Information Analytical Batch: MMS12238 Analytical Method: SW6020B Analyst: HGS Analytical Date/Time: 03/28/24 18 Container ID: 1241074002-J	3:17	2.00	Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	ug/∟ MXX36522 d: SW3010A ime: 03/25/24 14 Vt./Vol.: 25 mL : Vol: 25 mL	5 :05		03/28/24 18:17

Results of MW-403B							
Client Sample ID: MW-403B Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241074002 Lab Project ID: 1241074		r	Collection Da Received Da Matrix: Wate Solids (%): Location:	ate: 03/19/24 1: ate: 03/20/24 09 er (Surface, Eff.,	2:50):55 Ground)	
	guine rueis					Allowable	
Parameter Diesel Range Organics	<u>Result</u> <u>Qual</u>	LOQ/CL 0.605	<u>DL</u> 0.202	<u>Units</u> ma/l	<u>DF</u> 1	<u>Limits</u>	Date Analyzed
	0.000 0	0.005	0.202	ing/L	I		04/03/24 19:39
5a Androstane (surr)	71.3	50-150		%	1		04/03/24 19:59
Batch Information							
Analytical Batch: XFC1680 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/03 Container ID: 1241074002-	8 3/24 19:59 .A		Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	XXX49302 i: SW3520C ime: 04/02/24 17 Vt./Vol.: 248 mL Vol: 1 mL	:00		

Results of MW-403B

Client Sample ID: **MW-403B** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241074002 Lab Project ID: 1241074 Collection Date: 03/19/24 12:50 Received Date: 03/20/24 09:55 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	<u>Result</u> <u>Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:50
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:50
Benzene	0.460	0.400	0.120	ug/L	1		03/21/24 16:50
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:50
Naphthalene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:50
o-Xylene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:50
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		03/21/24 16:50
Toluene	1.00 U	1.00	0.310	ug/L	1		03/21/24 16:50
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		03/21/24 16:50
Surrogates							
1,2-Dichloroethane-D4 (surr)	93.4	81-118		%	1		03/21/24 16:50
4-Bromofluorobenzene (surr)	109	85-114		%	1		03/21/24 16:50
Toluene-d8 (surr)	103	89-112		%	1		03/21/24 16:50

Batch Information

Analytical Batch: VMS23148 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 03/21/24 16:50 Container ID: 1241074002-C Prep Batch: VXX41017 Prep Method: SW5030B Prep Date/Time: 03/21/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

	BGGS Results of MW-403B							
	Client Sample ID: MW-403B Client Project ID: Former Kiewit I Lab Sample ID: 1241074002 Lab Project ID: 1241074	Fac-2050 Peger		Collection Date: 03/19/24 12:50 Received Date: 03/20/24 09:55 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:				
>	Results by Waters Department							
	Parameter Nitrate-N	Result Qual 0.200 U	LOQ/CL 0.200	<u>DL</u> 0.0700	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 03/21/24 00:48
	Suirate	23.7	2.00	0.500	mg/L	10		03/21/24 01:06
r	Batch Information Analytical Batch: WIC6565 Analytical Method: EPA 300.0 Analyst: EBH Analytical Date/Time: 03/21/24 00: Container ID: 1241074002-I		Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract					
	Analytical Batch: WIC6565 Analytical Method: EPA 300.0 Analyst: EBH Analytical Date/Time: 03/21/24 01: Container ID: 1241074002-I	06		Prep Batch: Prep Method Prep Date/Ti Prep Initial M Prep Extract	WXX15171 : METHOD me: 03/20/24 17:3 /t./Vol.: 10 mL Vol: 10 mL	30		

Results of TB-1

Client Sample ID: **TB-1** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241074003 Lab Project ID: 1241074 Collection Date: 03/19/24 00:00 Received Date: 03/20/24 09:55 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 15:04
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 15:04
Benzene	0.400 U	0.400	0.120	ug/L	1		03/21/24 15:04
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/21/24 15:04
Naphthalene	1.00 U	1.00	0.310	ug/L	1		03/21/24 15:04
o-Xylene	1.00 U	1.00	0.310	ug/L	1		03/21/24 15:04
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		03/21/24 15:04
Toluene	1.00 U	1.00	0.310	ug/L	1		03/21/24 15:04
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		03/21/24 15:04
Surrogates							
1,2-Dichloroethane-D4 (surr)	108	81-118		%	1		03/21/24 15:04
4-Bromofluorobenzene (surr)	101	85-114		%	1		03/21/24 15:04
Toluene-d8 (surr)	100	89-112		%	1		03/21/24 15:04

Batch Information

Analytical Batch: VMS23148 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 03/21/24 15:04 Container ID: 1241074003-A Prep Batch: VXX41017 Prep Method: SW5030B Prep Date/Time: 03/21/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Results of MW-4034							
Client Sample ID: MW-403A Client Project ID: Former Kiew Lab Sample ID: 1241074004 Lab Project ID: 1241074	r	Collection Da Received Da Matrix: Wate Solids (%): Location:	ate: 03/19/24 1 te: 03/20/24 09 r (Surface, Eff.,	1:25 9:55 Ground)		
Results by Dissolved Metals by		1.00/01			55	Allowable	
Parameter Iron	<u>Result</u> <u>Quai</u> 17100	<u>LOQ/CL</u> 500	<u>DL</u> 150	<u>Units</u> ua/L	<u>DF</u> 5	Limits	Date Analyzed 03/28/24 18·20
Manganese	1490	2.00	0.620	ug/L	5		03/28/24 18:20
Batch Information Analytical Batch: MMS12238 Analytical Method: SW6020B Analyst: HGS			Prep Batch: Prep Method Prep Date/Ti	MXX36522 : SW3010A me: 03/25/24 14	:05		

Besults of MW-403B							
Client Sample ID: MW-403B Client Project ID: Former Kiewi Lab Sample ID: 1241074005 Lab Project ID: 1241074	t Fac-2050 Pege	r	Collection Date: 03/19/24 12:50 Received Date: 03/20/24 09:55 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:				
-Results by Dissolved Metals by	ICP/MS					Allowable	
Parameter	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
Iron	24100	500	150	ug/L	5		03/28/24 18:23
Manganese	1410	2.00	0.620	ug/L	5		03/28/24 18:23
Batch Information							
Analytical Batch: MMS12238			Prep Batch:	MXX36522			
Analytical Method: SW6020B			Prep Method	: SW3010A	.OF		
Analysi' Huss			Prep Date/11	me: U3/25/24 14	:05		
Analytical Date/Time: 03/28/24 1	8.23		EIED IIIIIA M				

Blank Lab ID: 1757100		I	indi ixi		o, Em, Oroana)		
QC for Samples: 1241074001, 1241074002	, 1241074004, 124107	4005					
Results by SW6020B							
Parameter	LOQ/CL	DL	LOD	<u>Units</u>			
Iron	375U	500	150	375	ug/L		
manganese	1.500	2.00	0.620	1.50	ug/L		
atch Information							
Analytical Batch: MMS	12237		Prep Batcl	h: MXX36522			
Analytical Method: SW	6020B		Prep Method: SW3010A				
Analyst: HGS	7800		Prep Date/Time: 3/25/2024 2:05:00PM Prep Initial Wt (Vol : 25 ml				
		Prep Initial WL/Vol.: 25 mL Prep Extract Vol: 25 mL					

SGS	

Blank Spike ID: LCS for HBN 1241074 [MXX36522] Blank Spike Lab ID: 1757101 Date Analyzed: 03/26/2024 21:31

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241074001, 1241074002, 1241074004, 1241074005

Results by SW6020B

		Blank Spike	• (ug/L)	
Parameter	Spike	Result	<u>Rec (%)</u>	<u>CL</u>
on	5000	5240	105	(87-118)
anganese	500	513	103	(87-115)

Analytical Batch:MMS12237Prep Batch:MXX36522Analytical Method:SW6020BPrep Method:SW3010AInstrument:P7 Agilent 7800Prep Date/Time:03/25/202414:05Analyst:HGSSpike Init Wt./Vol.:5000 ug/LExtract Vol:25 mLDupe Init Wt./Vol.:Extract Vol:25 mL



Matrix Spike Summary

Original Sample ID: 1757104 MS Sample ID: 1757109 MS MSD Sample ID: 1757110 MSD Analysis Date: 03/26/2024 21:34 Analysis Date: 03/26/2024 21:36 Analysis Date: 03/26/2024 21:39 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241074001, 1241074002, 1241074004, 1241074005

Spike Result Rec (%) CL RPD (%) RPD (%) 5000 13600 99 87-118 4.77 (< 20) 500 2430 105 87-115 4.28 (< 20)						
5000 13600 99 87-118 4.77 (< 20) 500 2430 105 87-115 4.28 (< 20)						
500 2430 105 87-115 4.28 (< 20)						
p Method: 3010 H20 Digest for Metals ICP-MS p Date/Time: 3/25/2024 2:05:00PM p Initial Wt./Vol.: 25.00mL p Extract Vol: 25.00mL						
Prep Batch: MXX36522 Prep Method: 3010 H20 Digest for Metals ICP-MS Prep Date/Time: 3/25/2024 2:05:00PM Prep Initial Wt./Vol.: 25.00mL Prep Extract Vol: 25.00mL						

Bench Spike Summary

Original Sample ID: 1757104 MS Sample ID: 1757111 BND MSD Sample ID: Analysis Date: 03/26/2024 21:34 Analysis Date: 03/26/2024 21:42 Analysis Date: Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241074001, 1241074002, 1241074004, 1241074005

Results by SW6020B										
		Ma	trix Spike (ug/L)	Spik	e Duplicate	e (ug/L)			
<u>Parameter</u>	Sample	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Iron	8630	25000	34300	103				75-125		
Manganese	1900	1250	3100	96				75-125		
Batch Information Analytical Batch: MMS12237 Analytical Method: SW6020B Instrument: P7 Agilent 7800 Analyst: HGS Analytical Date/Time: 3/26/20)24 9:42:00F	PM		Prep Prep Prep Prep Prep	9 Batch: N 9 Method: 9 Date/Tin 9 Initial Wi 9 Extract \	MXX36522 3010 H20 ne: 3/25/2 t./Vol.: 25. /ol: 25.00) Digest for 024 2:05:0 00mL mL	Metals ICF 0PM	P-MS	

Method Blank

Blank ID: MB for HBN 1873731 [VXX/41017] Blank Lab ID: 1756896 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241074001, 1241074002, 1241074003

Results by SW8260D

<u>Parameter</u>	Results	LOQ/CL	<u>DL</u>	LOD	<u>Units</u>
1,2,4-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
1,3,5-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Benzene	0.300U	0.400	0.120	0.300	ug/L
Ethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Naphthalene	0.750U	1.00	0.310	0.750	ug/L
o-Xylene	0.750U	1.00	0.310	0.750	ug/L
P & M -Xylene	1.50U	2.00	0.620	1.50	ug/L
Toluene	0.750U	1.00	0.310	0.750	ug/L
Xylenes (total)	2.25U	3.00	1.00	2.25	ug/L
Surrogates					
1,2-Dichloroethane-D4 (surr)	102	81-118		0	%
4-Bromofluorobenzene (surr)	103	85-114		0	%
Toluene-d8 (surr)	100	89-112		0	%

Batch Information

Analytical Batch: VMS23148 Analytical Method: SW8260D Instrument: VPA 780/5975 GC/MS Analyst: JY Analytical Date/Time: 3/21/2024 11:56:00AM Prep Batch: VXX41017 Prep Method: SW5030B Prep Date/Time: 3/21/2024 6:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL



Blank Spike Summary

Blank Spike ID: LCS for HBN 1241074 [VXX41017] Blank Spike Lab ID: 1756897 Date Analyzed: 03/21/2024 12:11 Spike Duplicate ID: LCSD for HBN 1241074 [VXX41017] Spike Duplicate Lab ID: 1756898 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241074001, 1241074002, 1241074003

Results by SW8260D									
		Blank Spike	e (ug/L)		Spike Dupli	cate (ug/L)			
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
1,2,4-Trimethylbenzene	30	34.2	114	30	33.3	111	(79-124)	2.60	(< 20)
1,3,5-Trimethylbenzene	30	34.4	115	30	34.0	113	(75-124)	1.20	(< 20)
Benzene	30	30.8	103	30	29.9	100	(79-120)	3.00	(< 20)
Ethylbenzene	30	31.6	105	30	30.6	102	(79-121)	3.30	(< 20)
Naphthalene	30	30.5	102	30	31.4	105	(61-128)	2.90	(< 20)
o-Xylene	30	31.0	103	30	30.1	100	(78-122)	2.90	(< 20)
P & M -Xylene	60	62.9	105	60	60.8	101	(80-121)	3.40	(< 20)
Toluene	30	30.3	101	30	29.8	99	(80-121)	1.50	(< 20)
Xylenes (total)	90	93.9	104	90	90.9	101	(79-121)	3.30	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		94	30		92	(81-118)	1.30	
4-Bromofluorobenzene (surr)	30		103	30		104	(85-114)	0.39	
Toluene-d8 (surr)	30		102	30		102	(89-112)	0.62	

Batch Information

Analytical Batch: VMS23148 Analytical Method: SW8260D Instrument: VPA 780/5975 GC/MS Analyst: JY Prep Batch: VXX41017 Prep Method: SW5030B Prep Date/Time: 03/21/2024 06:00 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

lank ID: MB for HBN 1 lank Lab ID: 1757041 IC for Samples:	873937 [WXX/15171]	Matrix: V	Water (Surface	e, Eff., Ground)	
241074001, 1241074002	2					
Results by EPA 300.0						
P <u>arameter</u> Nitrate-N Sulfate	<u>Results</u> 0.150U 0.150U	<u>LOQ/CL</u> 0.200 0.200	<u>DL</u> 0.0700 0.0500	<u>LOD</u> 0.150 0.150	<u>Units</u> mg/L mg/L	
atch Information						
Analytical Batch: WIC6 Analytical Method: EP Instrument: 930 Metro Analyst: EBH Analytical Date/Time: 3	8565 A 300.0 hm compact IC flex 3/20/2024 10:20:08PM	I	Prep Batch Prep Metho Prep Date/ Prep Initial Prep Extrac	: WXX15171 od: METHOD Time: 3/20/202 Wt./Vol.: 10 m ct Vol: 10 mL	4 5:30:00PM L	



Blank Spike ID: LCS for Blank Spike Lab ID: 175 Date Analyzed: 03/20/2	HBN 1241074 7042 2024 22:38	[WXX1517	1]	Matrix: Water (Surface, Eff., Ground)					
QC for Samples: 124 Results by EPA 300.0	1074001, 124107	4002							
-		Blank Spike	e (mg/L)						
<u>Parameter</u>	Spike	Result	<u>Rec (%)</u>	<u>CL</u>					
Nitrate-N	5	5.06	101	(90-110)					
Sulfate	5	5.12	102	(90-110)					
Batch Information									
Analytical Batch: WIC65	65			Prep Batch: WXX15171					
Analytical Method: EPA	300.0			Prep Method: METHOD					
Instrument: 930 Metrohr	n compact IC fle	ĸ		Prep Date/Time: 03/20/2024 17:30					
Analyst: EBH				Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL Dupe Init Wt./Vol.: Extract Vol:					



Matrix Spike Summary

Original Sample ID: 1757040 MS Sample ID: 1757044 MS MSD Sample ID: Analysis Date: 03/21/2024 1:06 Analysis Date: 03/21/2024 1:25 Analysis Date: Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241074001, 1241074002

Results by EPA 300.0			_							
		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
<u>Parameter</u>	Sample	<u>Spike</u>	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Nitrate-N	1.50U	50.0	50.7	101				90-110		
Sulfate	23.7	50.0	74	101				90-110		
Batch Information Analytical Batch: WIC6565 Analytical Method: EPA 300.0 Instrument: 930 Metrohm compact IC flex Analyst: EBH Analytical Date/Time: 3/21/2024) Batch: \ Method: Date/Tin Initial Wi Extract \	NXX15171 EPA 300 ne: 3/20/2 t./Vol.: 10. /ol: 10.00	l .0 Extractior 024 5:30:0 .00mL mL	n Waters/L 00PM	iquids	

Method Blank								
Blank ID: MB for HBN 1874564 Blank Lab ID: 1758245		Matrix: Water (Surface, Eff., Ground)						
QC for Samples: 1241074001, 1241074002								
Results by AK102								
Parameter	<u>Results</u>	LOQ/CL	<u>DL</u>	LOD	<u>Units</u>			
Diesel Range Organics	0.450U	0.600	0.200	0.450	mg/L			
Surrogates								
5a Androstane (surr)	75.2	60-120		0	%			
Batch Information								
Analytical Batch: XFC16808			Prep Batcl	h: XXX49302				
Analytical Method: AK102			Prep Meth	od: SW3520C				
Instrument: Agilent 7890B F			Prep Date Prep Initia	/Time: 4/2/2024 TWt /Vol : 250 r	5:00:00PM nl			
Analyst: BRP			i icp iiiida	2001				



Blank Spike Summary

Blank Spike ID: LCS for HBN 1241074 [XXX49302] Blank Spike Lab ID: 1758246 Date Analyzed: 04/03/2024 20:37 Spike Duplicate ID: LCSD for HBN 1241074 [XXX49302] Spike Duplicate Lab ID: 1758247 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241074001, 1241074002

Results by AK102									
		Blank Spike	e (mg/L)	Spike Duplicate (mg/L)					
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Diesel Range Organics	20	19.5	98	20	18.2	91	(75-125)	7.20	(< 20)
Surrogates									
5a Androstane (surr)	0.4		115	0.4		116	(60-120)	0.29	
Batch Information									
Analytical Batch: XFC16808				Pre	p Batch: X	XX49302			
Analytical Method: AK102				Pre	p Method:	SW3520C			
Instrument: Agilent 7890B F				Prep Date/Time: 04/02/2024 17:00					
Analyst: BRP				Spike Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL					
				Dup	e Init Wt./\	/ol.: 0.4 mg	/L Extract V	ol: 1 mL	



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Γ	CLIENT:	Nortech					In	struc	tions:	Sec	tions 1	- 5 r	nust	be fille	ed out.		
	CONTACT		NE #1					Omis	sions	may	delay t	ne or	iset c	of anal	ysis.		Page of
	CONTACT:	William Watts	907-452	-5688		Sec	tion 3					Pre	eservat	tive			
ction 1	PROJECT NAME:	Former Kiewit Facility - PROJE 2050 Peger Rd PERM	ECT/ // T#:			# C		HC	, hci	Nor	e HCI	Hor	e Nor	.0 HH	5 ³ HNO	~//	
Š	REPORTS T	O: William Watts E-MA	IL: willi	am.watts@noi	rtechengr.com	0	Comp					Ana	lysis*				NOTE
		Profi	le #:			Т	Grab					0	0.	nese	020		*The following analyses
	INVOICE TO	: QUO	TE #:	14 H.		A	мі		8260	5	le/	300	A 300	angai	PA 6		require specific method
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	RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	E IR INS	mental)	DRO by A	/OCs by Custom	PAHs by EPA 8270	Methane/ Ethene by RSK 175	Vitrate by	Sulfate by	fotal Iron a	Dissolved Manganes		REMARKS/LOC ID
	ins	MW-403A	3/19/20	1125	Water	115	Ged	X	X		X	×	×	×	X		440
	245	MW - 403R	2/19/24	12.50	Water	11	Gens	X	X		X	×	X	×	X		5A)
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	Relinquishe	ed By: (1)	Date	Time	Received By:	States of the second				Sec	tion 4		D Proj	ect? Ye	es No	Data Deli	verable Requirements:
	Will.	: C. Watts	3/19/20	134Z		1	\sim		_								ADEC Level II
	Relinquishe	d-BJP. (2)	Date/	Time	Received By:	~	\mathcal{C}		-	Reque	ested Tu	rnarou	nd Tim	e and/o	r Specia	Instruction	s:
2	S Participad Bur (2)							Standard TAT / Nitrate Has Short Hold No J-Flags For VOCs: Report BTEX: 1.2.4-TMB: 1.3.5-TMB: and Naphthal									
ctio													MB; and Na	ohthalene			
Se										Tem	p Blank	°C:	3	.5		Chain of	Custody Seal (Circle)
	Relinquishe	od By: (4)	Date	Time	Received For	Laborat	tory By:					or An	nbient	[]		INTACI	
3/20/24 9:55 Jucn			ny	Delivery Method: Hand Delivery [] Commerical D				al Delivery []									

http://www.sgs.com/terms-and-conditions





SAMPLE RECEIPT FORM

<u> </u>	roject	Manage	er Com	pletion
Was all necessary information recorded on the	/Yes/	No	N/A	
COC upon receipt? (temperature, COC seals,	\sim			
etc.?)			61/A	If "Ne" are the complex either everyth or compled <9
Was temperature between 0-6°C?	Yes	NO		If "No", are the samples either exempt or sampled <o< td=""></o<>
Were all analyses received within holding time*?	Kes	No	N/A	
	\bigcirc			
Was a method specified for each analysis,	Yes	No	N/A	
where applicable? If no, please note correct				
methods.		Nia	NITA	
Are compound lists specified, where applicable?		NO	N/A	
Por project specific or special compound lists				
If rush was requested by the client, was the	Yes	No	MPA	If "NO", what is the approved TAT?
requested TAT approved?			N C	
If SEDD Deliverables are required, were	Yes	No	N/A)	If "NO", contact client for information.
Location ID's and an NPDL Number provided?				
	Sampl	e Logir		bletion
Do ID's on sample containers match COC?	res	INO	IN/A	
If provided on containers, do dates/times	Yes	No	N/A	Note: If times differ <1 hr., record details below and
collected match COC?	\sim			login per COC.
Were all sample containers received in good	Ves	No	N/A	
condition?	\vdash			
Were proper containers	Yes	V No	N/A	Note: If 200.8/6020 Total Metals are received unpreserved,
(type/mass/volume/preservative) received for all		ſ		If 200.8/6020 Dissolved Metals are received unpreserved, log
samples?				in for LABFILTER and do not preserve.
"See form F-083 Sample Guide				For all non-metals methods, inform Project Manager.
(in the second se				
Were Trip Blanks (VOC, GRO, Low-Level Hg,	Yes	No	N/A	
etc.) received with samples, where applicable*?-	+			
Were all VOA vials free of headspace >6mm?	Yes	No	N/A	
Were all soil VOA samples received field	Yes	NO		\triangleright
Did all soil VOA samples have an	Ves	No	N/A	
accompanying unpreserved container for %	103			\mathcal{P}
solids?		e	<u></u>	
If special handling is required, were containers	Yes	No	N/A	
labelled appropriately? e.g. MI/ISM, foreign				P
soils, lab filter, Ref Lab, limited volume	=	L		
For Rush/Short Holding time, was the lab	Yes	DNO	N/A	
For any question answered "NO" was the	Yes		N/A	PM Initials
Project Manager notified?			\sim	
Was Peer Review of sample	Yes	No	N/A	Reviewer Initiats
numbering/labelling completed?	1	V		
Additional Notes/Clarification where Applicable, inc	luding I	resolutio	on of "N	lo" answers when a change order is not attached:
				\sim
1				



Sample Containers and Preservatives

<u>Container Id</u>	Preservative	<u>Container</u>	Container Id	<u>Preservative</u>	<u>Container</u>
		Condition			Condition
1241074001-A	HCL to $pH < 2$	OK			
1241074001-B	HCL to $pH < 2$	OK			
1241074001-C	HCL to pH < 2	OK			
1241074001-D	HCL to $pH < 2$	OK			
1241074001-E	HCL to $pH < 2$	OK			
1241074001-F	HCL to $pH < 2$	OK			
1241074001-G	HCL to pH < 2	OK			
1241074001-H	HCL to $pH < 2$	OK			
1241074001-I	No Preservative Required	OK			
1241074001-J	HNO3 to pH < 2	OK			
1241074002-A	HCL to pH < 2	OK			
1241074002-В	HCL to $pH < 2$	OK			
1241074002-C	HCL to $pH < 2$	OK			
1241074002-D	HCL to $pH < 2$	OK			
1241074002-E	HCL to pH < 2	OK			
1241074002-F	HCL to $pH < 2$	OK			
1241074002-G	HCL to $pH < 2$	OK			
1241074002-H	HCL to pH < 2	OK			
1241074002-I	No Preservative Required	OK			
1241074002-J	HNO3 to pH < 2	OK			
1241074003-A	HCL to $pH < 2$	OK			
1241074003-B	HCL to $pH < 2$	ОК			
1241074003-C	HCL to $pH < 2$	ОК			
1241074004-A	HNO3 to pH < 2	OK			
1241074005-A	HNO3 to pH < 2	ОК			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

- OK The container was received at an acceptable pH for the analysis requested.
- BU The container was received with headspace greater than 6mm.
- DM The container was received damaged.
- FR The container was received frozen and not usable for Bacteria or BOD analyses.
- IC The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
- NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
- PA The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
- PH The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added. QN Insufficient sample quantity provided.



Orlando, FL

The results set forth herein are provided by SGS North America Inc.

Technical Report for

SGS North America, Inc

1241074

SGS Job Number: FC14325



Sampling Date: 03/19/24

Report to:

SGS North America, Inc 200 W Potter Dr Anchorage, AK 99518 justin.nelson@sgs.com; env.alaska.reflabteam@sgs.com

ATTN: Justin Nelson

Total number of pages in report: 16



Norme Farm

Norm Farmer Technical Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Client Service contact: Andrea Colby 407-425-6700 Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV This report shall not be reproduced, except in its entirety, without the written approval of SGS. Test results relate only to samples analyzed.

SGS North America Inc. • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • Page 31 of 46

Please share your ideas about how we can serve you better at: EHS.US.CustomerCare@sgs.com



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03/27/24

Automated Report

e-Hardcopy 2.0
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Sample Summary

SGS North America, Inc

FC14325-2 03/19/24 12:50

1241074

Sample
NumberCollected
DateMatrix
Time ByClient
Sample IDThis report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the RLND = Not detected. The following applies:
MW-403A

03/26/24 AQ Water

Job No: FC14325

MW-403B

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	SGS North America, Inc	Job No:	FC14325
Site:	1241074	Report Date:	3/27/2024 12:10:53
On 03/26/202	4, 2 Sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) we	ere received at SC	S North America Inc -

Orlando. at a maximum corrected temperature of 4.4 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC14325 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

GC Volatiles By Method RSKSOP-147/175

Matrix: AQ

Batch ID: GLL3068

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FC14325-1DUP, FC14325-2MS were used as the QC samples indicated.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.- Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Kim Benham, Report Generation (signature on file)



Summary of Hits Job Number: FC14325 Account: SGS North America, Inc Project: 1241074 Collected: 03/19/24

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FC14325-1	MW-403A					
Methane		308	0.50		ug/l	RSKSOP-147/175
FC14325-2	MW-403B					
Methane		293	0.50		ug/l	RSKSOP-147/175

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Orlando, FL

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Sample Results

Report of Analysis



SGS North America Inc.

Report of Analysis

Client San Lab Samp Matrix: Method: Project:	nple ID: MW-40 le ID: FC1432 AQ - W RSKSO 1241074	3A 5-1 7ater P-147/175 4				Da Da Pe	ate Sampled: ate Received: ercent Solids:	03/19/24 03/26/24 n/a
	File ID	DF	Analyzed	By	Prep l	Date	Prep Batch	Analytical Batch
Run #1	LL88266.D	1	03/27/24	08:36 JR	n/a		n/a	GLL3068
Run #2								
	Initial Volume	Headspa	e Volume	Volume I	njected	Tempe	erature	
Run #1 Run #2	37.0 ml	5.0 ml		500 ul		21 Deg	g. C	
CAS No.	Compound		Result	RL	Units	Q		
74-82-8	Methane		308	0.50	ug/l			
74-84-0	Ethane		ND	1.0	ug/l			
74-85-1	Ethene		ND	1.0	ug/l			

ND = Not detected

- RL = Reporting Limit
- E = Indicates value exceeds calibration range

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound



4

J = Indicates an estimated value

SGS North America Inc.

Report of Analysis

Client San Lab Samp Matrix: Method: Project:	nple ID: MW-40 le ID: FC1432 AQ - W RSKSO 124107 ²	3B 5-2 fater P-147/175 4					D D P	ate Sampled: ate Received: ercent Solids:	03/1 03/2 n/a	19/24 26/24
Run #1 Run #2	File ID LL88267.D	DF 1	Analyzed 03/27/24	l I 08:43 J	By I R 1	Prep I n∕a	Date	Prep Batc n/a	h	Analytical Batch GLL3068
Run #1 Run #2	Initial Volume 38.0 ml	Headspa 5.0 ml	ace Volume	Volum 500 ul	e Injecto	ed	Temp 21 De	erature g. C		
CAS No.	Compound		Result	t R	LI	Units	Q			
74-82-8 74-84-0 74-85-1	Methane Ethane Ethene		293 ND ND	0. 1. 1.	50 ι 0 ι 0 ι	1g/l 1g/l 1g/l				

ND = Not detected

- RL = Reporting Limit
- E = Indicates value exceeds calibration range

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound



Page 1 of 1

J = Indicates an estimated value



Orlando, FL

Section 5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



SGS North America Inc. CHAIN OF CUSTODY RECORD

FC14325



Locations Nationwide Alaska Florida

Texas

New Jersey Colorado North Carolina

Louisiana

		F		43	57	しつ							Virginia www.us	Louisiana
CLIENT:	SGS North Ame	erica Inc Ala	ska Division		SG	S Refere	nce:		S	GS,	Orla	ando FL		1390.0011
CONTACT:	Justin Nelson	PHONE NO:	(907) 56	62-2343	Addi	itional	Comme	ents:	All soils	repo	ort ou	t in dry weig	ht unless	Page 1 of 1
PROJECT NAME:	1241074	PWSID#: NPDL#:			#	Preserv-	HC!							
REPORTS TO	: Justin.Nelson	E-MAIL: Env.Alaska.	Justin.Nelso RefLabTeam(n@sgs.com @sgs.com		TYPE C = COMP	SK-175			1				
INVOICE TO: env.alask	SGS - Alaska (a.accounting@sgs.com	QUOTE #: pm P.O. #: 1241074		074	A 1 N	G = GRAB MI = Multi	ses by R\$							
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	ТІМЕ ННММ	MATRIX/ MATRIX CODE	R S	Incre- mental Solis	Light Ga			мз	MSD	SGS lab #		Location ID
1	MW-403A	03/19/2024	11:25:00	Water	3		X					1241074001		
2	MW-403B	03/19/2024	12:50:00	Water	3		X	_	_			1241074002		
Relinquished	By: (1)	Date	Time	Received	Ву:			DC Re	D Projec	t? L (J Fl	ags)?	NO	Data Deliverable Requiremen	
Jere	ing brend	3/25/24	10/52					li 1	Report as	DLILOD	LOQ.	NO	Leve	12+SGS EDD
Relinquished	By: (2)	Date	Time	Received	By:			Co	oler ID:					
									Reques	ted T	urnar	ound Time a	nd-or Spec	ial Instructions:
Relinquished I	By: (3)	Date	Time	Received	By:									
								Tei	mp Blank	°C:			Chain of C	ustody Seal: (Circle)
Relinquished I	Ву: (4)	Date	Time	Received I	For Laboratory By: 945			5	or Ambient []			[]	INTACT BROKEN ABSE	
X 200 W Pot	ter Drive Anchorage AK 995	18 Tel: (907)	62-2343 Eav	. (007) 561	5201			l.tt	n:llinner			an and soudit	ana hén	

[5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

-EVIEWED-INITIAL ASSESSMENT ZB ZD) 3.4 1R#f(

F088_COC_REF_LAB_20190411

FC14325: Chain of Custody Page 1 of 2



Job Number: fc14325 Client				Project: 1241074	roject: 1241074				
3/26/2024 9:45:	00 AM	Delivery Method:	FEDEX	Airbill #'s: 642042704324					
asured) °C: Co rrected) °C: Co	oler 1: (3.4); oler 1: (4.4);								
<u>Y</u>	or N		Sample Info	ormation	Y	or N	N/A		
✓ </td <td>IR Gun Ice (Bag) or N O</td> <td>VA V V VA</td> <td> Sample lat Samples p Sufficient v Condition of Sample red Dates/Time VOCs have Bottles rec Compositin Voa Soil I % Solids </td> <td>bels present on bottles: vresented properly volume/containers recv'd for analysis of sample: cv'd within HT es/IDs on COC match sample label e headspace exeived for unspecified tests ng instructions clear Kits/Jars received past 48hrs? Jar Received?</td> <td>S Intact S C</td> <td></td> <td></td>	IR Gun Ice (Bag) or N O	VA V V VA	 Sample lat Samples p Sufficient v Condition of Sample red Dates/Time VOCs have Bottles rec Compositin Voa Soil I % Solids 	bels present on bottles: vresented properly volume/containers recv'd for analysis of sample: cv'd within HT es/IDs on COC match sample label e headspace exeived for unspecified tests ng instructions clear Kits/Jars received past 48hrs? Jar Received?	S Intact S C				
			12. Residual	Chionne Present?					
5 Gram pH 0-3: Strip Lot #	5 Gram 226422	pH 10-12:		umber of Lab Filtered Metals: Other: (Specify)pH 1.0 -	12.0	222	2221		
	fc14325 3/26/2024 9:45:0 asured) °C: Coor rrected) °C: Coor ✓	fc14325 Client: 3/26/2024 9:45:00 AM asured) °C: Cooler 1: (3.4); rrected) °C: Cooler 1: (4.4); ✓ 0 <tr< td=""><td>fc14325 Client: SGS ALASKA 3/26/2024 9:45:00 AM Delivery Method: </td><td>fc14325 Client: SGS ALASKA 3/26/2024 9:45:00 AM Delivery Method: FEDEX asured) °C: Cooler 1: (3.4); 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Second structure Image: Second structure 1. Sample Infc Image: Image: Second structure Image: Second structure 1. 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Sample Information Y or N O V O 1. Sample Information Y or N O V O 1. Sample Information Y or N O V O 1. Sample Information Y or N O V O 3. Sufficient volume/containers recv'd for analysis O O IR Gun 4. Condition of sample: Intact Intact Intact O Ice (Bag) Sample received within HT Intact O O O O O : Image: Conspositing instructions clear Intact Intact O O O O O :: Image: Conspositing instructions clear Image: C		

SGS - Orlando Sample Receipt Summary

FC14325: Chain of Custody

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Section 6

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary Job Number: FC14325

Account: Project:	SGSAKA SGS N 1241074	lorth Ame	rica, Inc				
Sample GLL3068-MB	File ID LL88265.D	DF 1	Analyzed 03/27/24	By JR	Prep Date n/a	Prep Batch n/a	Analytical Batch GLL3068
The QC report	ted here applies to	o the follo	wing samples:]	Method: RSKS	OP-147/175
FC14325-1, FC	214325-2						
CAS No. Co	ompound		Result F	RL	Units Q		

74-82-8	Methane	ND	0.50	ug/l
74-84-0	Ethane	ND	1.0	ug/l
74-85-1	Ethene	ND	1.0	ug/l

Page 1 of 1



Blank Spike/Blank Spike Duplicate Summary

Job Number:	FC14325
Account:	SGSAKA SGS North America, Inc
Project:	1241074

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLL3068-BS	LL88263.D	1	03/27/24	JR	n/a	n/a	GLL3068
GLL3068-BSD	LL88264.D	1	03/27/24	JR	n/a	n/a	GLL3068

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FC14325-1, FC14325-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	108	103	95	106	98	3	62-139/30
74-84-0	Ethane	219	212	97	218	100	3	67-141/30
74-85-1	Ethene	290	289	100	298	103	3	68-141/30

Matrix Spike Summary

Job Number:	FC14325	
Account:	SGSAKA SGS North America,	Inc
Project:	1241074	

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FC14325-2MS	LL88269.D	1	03/27/24	JR	n/a	n/a	GLL3068
FC14325-2	LL88267.D	1	03/27/24	JR	n/a	n/a	GLL3068

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FC14325-1, FC14325-2

CAS No.	Compound	FC14325-2 ug/l Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	293	108	400	99	62-139
74-84-0	Ethane	ND	219	217	99	67-141
74-85-1	Ethene	ND	290	299	103	68-141

6.3.1

Duplicate Summary

Job Number:	FC14325
Account:	SGSAKA SGS North America, Inc
Project:	1241074

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FC14325-1DUP	LL88268.D	1	03/27/24	JR	n/a	n/a	GLL3068
FC14325-1	LL88266.D	1	03/27/24	JR	n/a	n/a	GLL3068

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FC14325-1, FC14325-2

CAS No.	Compound	FC14325-1 ug/l Q	DUP ug/l Q	RPD	Limits
74-82-8	Methane	308	317	3	30
74-84-0	Ethane	ND	ND	nc	30
74-85-1	Ethene	ND	ND	nc	30



Page 1 of 1



ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	William Watts May 9, 2024	CS Site Name:	Kiewit Pacific Company, 2050 Peger Road, Fairbanks, Alaska	Lab Name:	SGS North America Inc.
Title:	Project Manager	ADEC File No.:	102.38.164	Lab Report No.:	1241074
Consulting Firm:	NORTECH , Inc.	Hazard ID No.:	25680	Lab Report Date:	April 4, 2024

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
 Yes ⊠ No □ N/A □ Comments:
- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?

```
\mathsf{Yes} \boxtimes \mathsf{No} \Box \mathsf{N/A} \Box
```

Comments: Except for Light Gases (methane, ethane, and ethene) analysis by EPA Method RSK175, all sample analyses were performed by SGS North America Inc. in Anchorage, Alaska. Samples for Light Gases analysis were transferred to SGS-Orlando, Florida network laboratory. The Light Gases analysis was conducted to evaluate natural source zone depletion at the site.

2. Chain of Custody (CoC)

a. Is the CoC information completed, signed, and dated (including released/received by)?

```
Yes \boxtimes No \square N/A \square
Comments:
```

b. Were the correct analyses requested?

Yes No No N/A Analyses requested: DRO by AK102, VOCs by EPA Method 8260D, and Natural Attenuation Parameters: Methane/Ethane/Ethane by EPA Method RSKSOP 147/175, Nitrate and Sulfate by EPA Method 300.0, and Total and Dissolved Iron and Manganese by EPA Method 6020B. Comments:

3. Laboratory Sample Receipt Documentation

a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes \boxtimes No \square N/A \square Cooler temperature(s): 3.5° C and 4.4° C

Sample temperature(s): Click or tap here to enter text. Comments:

- b. Is the sample preservation acceptable acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- c. Is the sample condition documented broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
 Yes ⊠ No □ N/A □
 Comments: The samples were received in good condition.
- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
 Yes □ No □ N/A ⊠
 Comments: There were no discrepancies.

e. Is the data quality or usability affected?

Yes \Box No \Box N/A \boxtimes Comments: Data quality and usability are not affected.

4. Case Narrative

a. Is the case narrative present and understandable? Yes ⊠ No □ N/A □ Comments:

```
b. Are there discrepancies, errors, or QC failures identified by the lab?
Yes ⊠ No □ N/A □
Comments:
1240966013(1757104MS) (1757109) MS
6020B - Metals MS recoveries for Iron and Manganese do not meet QC criteria. The post
digestion spike was successful.
```

c. Were all the corrective actions documented?
 Yes □ No □ N/A ⊠
 Comments: No corrective actions were necessary.

d. What is the effect on data quality/usability according to the case narrative? Comments: There is no effect on data quality or usability according to the case

narrative.

5. Sample Results

- Are the correct analyses performed/reported as requested on CoC?
 Yes ⊠ No □ N/A □
 Comments:
- b. Are all applicable holding times met? Yes ⊠ No □ N/A □ Comments:
- c. Are all soils reported on a dry weight basis?
 Yes □ No □ N/A ⊠
 Comments: There were no soil samples submitted with this work order.
- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
 Yes ⊠ No □ N/A □

Comments:

e. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

6. QC Samples

- a. Method Blank
 - Was one method blank reported per matrix, analysis, and 20 samples? Yes ⋈ No □ N/A □ Comments:
 - ii. Are all method blank results less than LOQ (or RL)?
 Yes ⊠ No □
 Comments:
 - iii. If above LoQ or RL, what samples are affected? Comments: No samples are affected. Method blank results are below LOQs.
 - iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes \Box No \Box N/A \boxtimes Comments: No samples are affected. No data flags are necessary.

v. Data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
 Yes ⊠ No □ N/A □

Comments: Click or tap here to enter text.

- ii. Metals/Inorganics Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- iii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) Yes ⊠ No □ N/A □ Comments:
- iv. Precision Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
 Yes ⊠ No □ N/A ⊠
 Comments: Click or tap here to enter text.
- v. If %R or RPD is outside of acceptable limits, what samples are affected? Comments: No samples are affected.
- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes \Box No \Box N/A \boxtimes Comments: No samples are affected. No data flags are necessary.

vii. Is the data quality or usability affected?

Yes \Box No \Box N/A \boxtimes Comments: Data quality and usability are not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes \Box No \boxtimes N/A \Box Comments: MS/MSD samples were not required for this project, and the lab did not run a MS/MSD with the batch. According to the lab, when there is not sufficient volume for MS/MSD analyses an LCS/LCSD is run.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes \boxtimes No \square N/A \square Comments: MS/MSD were run on a laboratory batch sample not associated with this project.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes No N/A Comments: 1240966013(1757104MS) (1757109) MS 6020B - Metals MS recoveries for Iron and Manganese do not meet QC criteria. The post digestion spike was successful.

 iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- v. If %R or RPD is outside of acceptable limits, what samples are affected? Comments: No samples are affected.
- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes \Box No \Box N/A \boxtimes Comments: No samples are affected. No data flags are necessary.

- vii. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.
- d. Surrogates Organics Only or Isotope Dilution Analytes (IDA) Isotope Dilution Methods Only
 - i. Are surrogate/IDA recoveries reported for organic analyses field, QC, and laboratory samples?

Yes 🛛 No 🗆 N/A 🗆

Comments: Click or tap here to enter text.

- ii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages) Yes ⊠ No □ N/A □ Comments: Click or tap here to enter text.
- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
 Yes □ No □ N/A ⊠
 Comments: Click or tap here to enter text.
- iv. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

e. Trip Blanks

- Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- ii. Are all results less than LoQ or RL?
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- iii. If above LoQ or RL, what samples are affected? Comments: No samples are affected.
- iv. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

Yes \Box No \boxtimes N/A \Box Comments: One field duplicate pair was required for the project and was submitted with a subsequent laboratory work order. A field duplicate was not submitted with this laboratory work order.

ii. Was the duplicate submitted blind to lab?

Yes \Box No \Box N/A \boxtimes Comments: See 6.f.i above.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X \ 100$$

Where R_1 = Sample Concentration

R₂ = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes \Box No \Box N/A \boxtimes Comments: See 6.f.i above.

iv. Is the data quality or usability affected? (Explain)

Yes \Box No \Box N/A \boxtimes Comments: See 6.f.i above.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?

Yes 🗆 No 🖂 N/A 🗆

Comments: One equipment blank was required for the project and was submitted with a subsequent laboratory work order. An equipment blank was not submitted with this laboratory work order.

ii. Are all results less than LoQ or RL?

Yes \Box No \Box N/A \boxtimes Comments: See 6.g.i above.

- iii. If above LoQ or RL, specify what samples are affected. Comments: See 6.g.i above.
- iv. Are data quality or usability affected? Yes □ No □ N/A ⊠ Comments: See 6.g.i above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?

Yes ⊠ No □ N/A □

Comments: No additional flags or qualifiers are necessary for this work order.



Laboratory Report of Analysis

To: Nortech 2400 College Road Fairbanks, AK 99707 (907)452-5688

Report Number: **1241160**

Client Project: Former Kiewit Fac-2050 Peger

Dear William Watts,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely, SGS North America Inc. Stephen C. Ede Martin C. Ede 2024.04.09 07:59:09-08'00'

Jennifer Dawkins Project Manager Jennifer.Dawkins@sgs.com Date

Print Date: 04/08/2024 4:57:59PM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518 t 907.562.2343 f 907.561.5301 www.us.sgs.com Results via Engage

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Case Narrative

SGS Client: Nortech SGS Project: 1241160 Project Name/Site: Former Kiewit Fac-2050 Peger Project Contact: William Watts

Refer to sample receipt form for information on sample condition.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 04/08/2024 4:58:01PM

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270E, 8270E-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 3/4 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.
o	
Sample summaries which i	nclude a result for "I otal Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are	Integrated per SOP.

Print Date: 04/08/2024 4:58:04PM

Note:



Sample Summary							
Client Sample ID	Lab Sample ID	Collected	Received	<u>Matrix</u>			
MW-4	1241160001	03/26/2024	03/27/2024	Water (Surface, Eff., Ground)			
MW-5	1241160002	03/26/2024	03/27/2024	Water (Surface, Eff., Ground)			
EB-1	1241160003	03/26/2024	03/27/2024	Water (Surface, Eff., Ground)			
MW-4	1241160004	03/26/2024	03/27/2024	Water (Surface, Eff., Ground)			
MW-5	1241160005	03/26/2024	03/27/2024	Water (Surface, Eff., Ground)			
Method	Method Des	scription					
SW6020B	Dissolved N	letals by ICP-MS					
AK102	DRO Low V	olume (W)					
EPA 300.0	Ion Chromatographic Analysis						
EPA 300.0	Ion Chroma	tographic Analysis	; (W)				
SW6020B	Metals by ICP-MS						



Detectable Results Sun	nmary
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Client Sample ID: MW-4			
Lab Sample ID: 1241160001	Parameter	Result	<u>Units</u>
Metals by ICP/MS	Iron	99500	ug/L
	Manganese	2420	ug/L
Semivolatile Organic Fuels	Diesel Range Organics	0.774	mg/L
Waters Department	Sulfate	0.259	mg/L
Client Sample ID: MW-5			
Lab Sample ID: 1241160002	<u>Parameter</u>	Result	<u>Units</u>
Metals by ICP/MS	Iron	16000	ug/L
	Manganese	1550	ug/L
Waters Department	Sulfate	20.8	mg/L
Client Sample ID: MW-4			
Lab Sample ID: 1241160004	<u>Parameter</u>	Result	<u>Units</u>
Dissolved Metals by ICP/MS	Iron	102000	ug/L
	Manganese	2410	ug/L
Client Sample ID: MW-5			
Lab Sample ID: 1241160005	<u>Parameter</u>	Result	<u>Units</u>
Dissolved Metals by ICP/MS	Iron	17100	ug/L
	Manganese	1560	ug/L

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SGS							
Client Sample ID: MW-4 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241160001 Lab Project ID: 1241160		r	Collection Date: 03/26/24 13:00 Received Date: 03/27/24 10:00 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:				
Results by Metals by ICP/M <u>Parameter</u> Iron Manganese	I S <u>Result</u> <u>Qual</u> 99500 2420	<u>LOQ/CL</u> 500 2.00	<u>DL</u> 150 0.620	<u>Units</u> ug/L ug/L	<u>DF</u> 5 5	<u>Allowable</u> Limits	Date Analyzed 04/05/24 19:26 04/05/24 19:26
Batch Information Analytical Batch: MMS1225 Analytical Method: SW6020 Analyst: HGS Analytical Date/Time: 04/05 Container ID: 1241160001-	.0 iB i/24 19:26 D		Prep Batch: Prep Methoo Prep Date/T Prep Initial V Prep Extract	MXX36541 d: SW3010A ime: 04/01/24 13 Vt./Vol.: 25 mL : Vol: 25 mL	:49		

- Results of MW-4							
Client Sample ID: MW-4 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241160001 Lab Project ID: 1241160		er	Collection Da Received Da Matrix: Wate Solids (%): Location:)			
Results by Semivolatile Organic	Fuels		_				
<u>Parameter</u> Diesel Range Organics	<u>Result</u> <u>Qual</u> 0.774	<u>LOQ/CL</u> 0.577	<u>DL</u> 0.192	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed
Surrogates							
5a Androstane (surr)	77.7	50-150		%	1		04/04/24 01:59
Batch Information							
Analytical Batch: XFC16808 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/04/24 07 Container ID: 1241160001-A	1:59		Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX49302 : SW3520C me: 04/02/24 17 /t./Vol.: 260 mL Vol: 1 mL	:00		

Results of MW-4							
Client Sample ID: MW - Client Project ID: Form Lab Sample ID: 124116 Lab Project ID: 124116	4 er Kiewit Fac-2050 Pege ;0001 0	r	Collection Da Received Da Matrix: Water Solids (%): Location:	ate: 03/26/24 13 te: 03/27/24 10 r (Surface, Eff.,	3:00):00 Ground))	
Results by Waters Depa	artment						
<u>Parameter</u> Nitrate-N	<u>Result</u> <u>Qual</u> 0.200 U	<u>LOQ/CL</u> 0.200	<u>DL</u> 0.0700	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 03/27/24 18:18
Sulfate	0.259	0.200	0.0500	mg/L	1		03/27/24 18:18
Batch Information							
Analytical Batch: WIC6 Analytical Method: EPA Analyst: EBH Analytical Date/Time: 0	567 . 300.0 3/27/24 18:18		Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	WXX15175 : METHOD me: 03/27/24 13 /t./Vol.: 10 mL Vol: 10 ml	:30		

Results of MW-5								
Client Sample ID: MW-5 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241160002 Lab Project ID: 1241160			Collection Date: 03/26/24 11:00 Received Date: 03/27/24 10:00 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Metals by ICP/N	15					Allowable		
Parameter	Result Qual	LOQ/CL	<u>DL</u>	Units	<u>DF</u>	<u>Limits</u>	Date Analyzed	
Iron	16000	500	150	ug/L	5		04/05/24 17:20	
Batch Information Analytical Batch: MMS1225 Analytical Method: SW6020 Analyst: HGS Analytical Date/Time: 04/05 Container ID: 1241160002-	50 0B 5/24 17:20 D		Prep Batch: Prep Methoc Prep Date/T Prep Initial V Prep Extract	MXX36541 I: SW3010A ime: 04/01/24 13: Vt./Vol.: 25 mL Vol: 25 mL	:49			

Results of MW-5							
Client Sample ID: MW-5 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241160002 Lab Project ID: 1241160			Collection Date: 03/26/24 11:00 Received Date: 03/27/24 10:00 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:				
Results by Semivolatile Organic	c Fuels						
<u>Parameter</u> Diesel Range Organics	<u>Result</u> <u>Qual</u> 0.605 U	<u>LOQ/CL</u> 0.605	<u>DL</u> 0.202	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 04/04/24 02:12
Surrogates							
5a Androstane (surr)	78.7	50-150		%	1		04/04/24 02:12
Batch Information							
Analytical Batch: XFC16808 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/04/24 0 Container ID: 1241160002-A	2:12		Prep Batch: Prep Methoc Prep Date/T Prep Initial V Prep Extract	XXX49302 d: SW3520C ime: 04/02/24 17 Vt./Vol.: 248 mL Vol: 1 mL	:00		

Results of MW-5								
Client Sample ID: MW-5 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241160002 Lab Project ID: 1241160			Collection Date: 03/26/24 11:00 Received Date: 03/27/24 10:00 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Waters Departme	nt							
<u>Parameter</u> Nitrate-N	<u>Result</u> <u>Qual</u> 0.200 U	<u>LOQ/CL</u> 0.200	<u>DL</u> 0.0700	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyze</u> 03/27/24 18:55	
Sulfate	20.8	2.00	0.500	mg/L	10		03/27/24 19:14	
Batch Information Analytical Batch: WIC6567 Analytical Method: EPA 300.0 Analyst: EBH Analytical Date/Time: 03/27/2 Container ID: 1241160002-C) 14 18:55		Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	WXX15175 : METHOD me: 03/27/24 13; /t./Vol.: 10 mL Vol: 10 mL	:30			
Analytical Batch: WIC6567 Analytical Method: EPA 300.0 Analyst: EBH Analytical Date/Time: 03/27/24 19:14 Container ID: 1241160002-C			Prep Batch: WXX15175 Prep Method: METHOD Prep Date/Time: 03/27/24 13:30 Prep Initial Wt./Vol.: 10 mL Prep Extract Vol: 10 mL					

Client Semple ID: EP 1				ato: 03/26/24 1	2.15		
Client Sample ID: EB-1 Client Project ID: Former Ki Lab Sample ID: 124116000 Lab Project ID: 1241160	iewit Fac-2050 Pege 3		Received Da Matrix: Wate Solids (%): Location:	nte: 03/26/24 10 nte: 03/27/24 10 r (Surface, Eff.,	3:45):00 Ground))	
Results by Semivolatile Org	janic Fuels						
<u>Parameter</u> Diesel Range Organics	<u>Result</u> <u>Qual</u> 0.600 U	<u>LOQ/CL</u> 0.600	<u>DL</u> 0.200	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzec</u> 04/04/24 02:24
Surrogates							
5a Androstane (surr)	80.5	50-150		%	1		04/04/24 02:24
Batch Information							
Analytical Batch: XFC16808 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/04/	'24 02:24 A		Prep Batch: Prep Method Prep Date/Til Prep Initial W Prep Extract	XXX49302 : SW3520C me: 04/02/24 17 /t./Vol.: 250 mL Vol: 1 mL	:00		

Results of MW-4							
Client Sample ID: MW-4 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241160004 Lab Project ID: 1241160			Collection Da Received Da Matrix: Wate Solids (%): Location:				
Results by Dissolved Metals by	ICP/MS						
					55	Allowable	
	Result Qual		<u>DL</u>	<u>Units</u>		Limits	Date Analyzed
Iron	102000	500	150	ug/L	5		04/05/24 17:23
Manganese	2410	2.00	0.620	ug/L	5		04/05/24 17:23
Batch Information							
Analytical Batch: MMS12250			Prep Batch:	MXX36541			
Analytical Method: SW6020B			Prep Method	: SW3010A			
Analyst: HGS			Prep Date/Ti	me: 04/01/24 13	:49		
Analytical Date/Time: 04/05/24 1	7:23		Prep Initial W	/t./Vol.: 25 mL			

-Results of MW-5							
Client Sample ID: MW-5 Client Project ID: Former Kiewi t Lab Sample ID: 1241160005 Lab Project ID: 1241160	: Fac-2050 Pege	r	Collection Da Received Da Matrix: Wate Solids (%): Location:	ate: 03/26/24 1 ate: 03/27/24 10 r (Surface, Eff.,	1:00):00 Ground)	
Results by Dissolved Metals by	ICP/MS						
Parameter_	Result Qual	LOQ/CL	<u>DL</u>	Units	DF	<u>Allowable</u> Limits	Date Analyze
Iron	17100	500	150	ug/L	5		04/05/24 17:25
Manganese	1560	2.00	0.620	ug/L	5		04/05/24 17:25
Batch Information							
Batch Information Analytical Batch: MMS12250			Prep Batch:	MXX36541			
Batch Information Analytical Batch: MMS12250 Analytical Method: SW6020B			Prep Batch: Prep Method	MXX36541 I: SW3010A			
Batch Information Analytical Batch: MMS12250 Analytical Method: SW6020B Analyst: HGS			Prep Batch: Prep Method Prep Date/Ti	MXX36541 I: SW3010A me: 04/01/24 13	:49		
SGS

Blank ID: MB for HBN 1 Blank Lab ID: 1757996	874471 [MXX/36541]	Matrix:	Water (Surfac	e, Eff., Ground)
QC for Samples: 1241160001, 1241160002	2, 1241160004, 124116	0005			
Results by SW6020B					
Parameter	Results	LOQ/CL	DL	LOD	<u>Units</u>
Iron	375U	500	150	375	ug/L
Manganese	1.50U	2.00	0.620	1.50	ug/L
atch Information					
Analytical Batch: MMS	\$12249		Prep Batcl	h: MXX36541	
Analytical Method: SW	/6020B		Prep Meth	od: SW3010A	
	7800		Prep Date Prep Initia	/Time: 4/1/2024 TWt /Vol : 25 m	4 1:49:06PM
Analyst: HGS				1 1 1 1 0 1 2 0 11	

Print Date: 04/08/2024 4:58:11PM

SGS	

Results by SW6020B Blank Spike (ug/L) Parameter Spike Result Rec (%) CL ron 5000 5230 105 (87-118) // Anganese 500 493 99 (87-115) Batch Information Prep Batch: MXX36541 Analytical Batch: MMS12249 Prep Method: SW3010A Analytical Method: SW6020B Prep Date/Time: 04/01/2024 13:49 Spike Information Prep Date/Time: 04/01/2024 13:49 Analyst: HGS Spike Init Wt./vol.: S000 ug/L Extract Vol: 25 mL	QC for Samples: 12411600	01, 124110	60002, 124	1160004, 1241	Matrix: Water (Surface, Eff., Ground) 160005
Blank Spike (ug/L) Spike Result Rec (%) CL ron 5000 5230 105 (87-118) Manganese 500 493 99 (87-115) Batch Information Analytical Batch: MMS12249 Analytical Method: SW6020B Prep Method: SW3010A Instrument: P7 Agilent 7800 Prep Date/Time: 04/01/2024 13:49 Analyst: HGS Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 25 mL	Results by SW6020B				
ParameterSpikeResultRec (%)CLIron50005230105(87-118)Manganese50049399(87-115)Batch InformationAnalytical Batch:MMS12249 Analytical Method:SW6020B Instrument:Prep Batch:MX36541 Prep Date/Time:04/01/2024Instrument:P7 Agilent 7800 			Blank Spik	e (ug/L)	
ron50005230105(87-118)Manganese50049399(87-115)Batch InformationAnalytical Batch:MMS12249 Analytical Method:SW6020B Instrument:Prep Batch:MXX36541 Prep Method:SW3010A Prep Date/Time:Analyst:HGSHGSPrep Date/Time:04/01/2024 13:49 Spike Init Wt./Vol.:Spike Init Wt./Vol.:Stract Vol:	Parameter	Spike	<u>Result</u>	<u>Rec (%)</u>	CL
Manganese 500 493 99 (87-115) Batch Information Analytical Batch: MMS12249 Analytical Method: SW6020B Instrument: P7 Agilent 7800 Analyst: HGS Prep Date/Time: 04/01/2024 13:49 Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 25 mL Dupe Init Wt./Vol.: Extract Vol: 25 mL	ron	5000	5230	105	(87-118)
Batch Information Prep Batch: MXX36541 Analytical Batch: SW6020B Prep Method: SW3010A Instrument: P7 Agilent 7800 Prep Date/Time: 04/01/2024 13:49 Analyst: HGS Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 25 mL Dupe Init Wt./Vol.: Extract Vol:	langanese	500	493	99	(87-115)
Analytical Batch: MMS12249Prep Batch: MXX36541Analytical Method: SW6020BPrep Method: SW3010AInstrument: P7 Agilent 7800Prep Date/Time: 04/01/2024 13:49Analyst: HGSSpike Init Wt./Vol.: 5000 ug/LExtract Vol: 25 mLDupe Init Wt./Vol.:Extract Vol:	Batch Information				
Analytical Method: SW6020B Prep Method: SW3010A Instrument: P7 Agilent 7800 Prep Date/Time: 04/01/2024 13:49 Analyst: HGS Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 25 mL Dupe Init Wt./Vol.: Extract Vol:	Analytical Batch: MMS12249				Prep Batch: MXX36541
Instrument: P7 Agilent 7800 Analyst: HGS Prep Date/Time: 04/01/2024 13:49 Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 25 mL Dupe Init Wt./Vol.: Extract Vol:	Analytical Method: SW6020B				Prep Method: SW3010A
Analyst. NGS Spike Init Wt./Vol.: 5000 ug/E Extract Vol. 25 InE Dupe Init Wt./Vol.: Extract Vol:	Instrument: P7 Agilent 7800				Prep Date/Time: 04/01/2024 13:49
	Analyst. HOS				Dupe Init Wt./Vol.: Extract Vol. 20 me

Print Date: 04/08/2024 4:58:15PM

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Matrix Spike Summary

Original Sample ID: 1758010 MS Sample ID: 1758012 MS MSD Sample ID: 1758013 MSD Analysis Date: 04/05/2024 12:56 Analysis Date: 04/05/2024 12:58 Analysis Date: 04/05/2024 13:00 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241160001, 1241160002, 1241160004, 1241160005

		Ma	atrix Spike (ug/L)	Spik	e (ug/L)				
Parameter	Sample	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
ron	8520	5000	14200	00 113	5000	13100	93	87-118	7.55	(< 20)
Vanganese	740	500	1260	105	500	1240	100	87-115	2.06	(< 20)
Batch Information]									
Analytical Batch: MM Analytical Method: SI Instrument: P7 Agiler	IS12249 W6020B nt 7800			Prep Prep Prep	Batch: N Method: Date/Tim	/IXX36541 3010 H20 ne: 4/1/20) Digest for 24 1:49:06	Metals ICF	P-MS	
Analyst: HGS				Prep	o Initial Wt	./Vol.: 25.	00mL			
Analyst: HGS Analytical Date/Time:	4/5/2024 12:58:00	PM		Prep Prep) Initial Wt Extract \	/Vol.: 25. /ol: 25.00	00mL mL			
Analyst: HGS Analytical Date/Time:	4/5/2024 12:58:00	PM		Prep Prep	o Initial Wt	:./Vol.: 25. /ol: 25.00	00mL mL			
Analyst: HGS Analytical Date/Time:	4/5/2024 12:58:00	PM		Prep Prep	o Initial Wt	:./Vol.: 25. /ol: 25.00	00mL mL			
Analyst: HGS Analytical Date/Time:	4/5/2024 12:58:00	PM		Prep Prep	o Initial Wt	:./Vol.: 25.00 /ol: 25.00	00mL mL			
Analyst: HGS Analytical Date/Time:	4/5/2024 12:58:00	PM		Prep Prep	o Initial Wf	:./Vol.: 25. /ol: 25.00	00mL mL			
Analyst: HGS Analytical Date/Time:	4/5/2024 12:58:00	PM		Prep Prep	o Initial Wf	:./Vol.: 25. /ol: 25.00	00mL mL			

Print Date: 04/08/2024 4:58:17PM

Mothod Blank

SGS

Blank ID: MB for HBN 187 Blank Lab ID: 1757426	74020 [WXX/15175]		Matrix: \	Water (Surface	e, Eff., Ground)
QC for Samples: 1241160001, 1241160002					
Results by EPA 300.0					
Parameter_	Results	LOQ/CL	DL	LOD	Units
Nitrate-N	0.150U	0.200	0.0700	0.150	mg/L
Sulfate	0.150U	0.200	0.0500	0.150	mg/L
Batch Information					
Analytical Batch: WIC656	67		Prep Batch	: WXX15175	
Analytical Method: EPA	300.0		Prep Metho	od: METHOD	
	n compact IC flex		Prep Date/	Time: 3/27/202	24 1:30:00PM
Instrument: 930 Metrohm					

Print Date: 04/08/2024 4:58:18PM



Blank Spike Summary				
Blank Spike ID: LCS for H Blank Spike Lab ID: 17574 Date Analyzed: 03/27/20	BN 1241160 427 24 15:13	WXX1517	75]	
QC for Samples: 12411	60001, 124116	60002		Matrix: Water (Surface, Eff., Ground)
Results by EPA 300.0				
		Blank Spike	e (mg/L)	
Parameter	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>CL</u>
Nitrate-N	5	4.90	98	(90-110)
Sulfate	5	4.91	98	(90-110)
Batch Information				
Analytical Batch: WIC6567 Analytical Method: EPA 30 Instrument: 930 Metrohm Analyst: EBH	0.0 compact IC fle	ĸ		Prep Batch: WXX15175 Prep Method: METHOD Prep Date/Time: 03/27/2024 13:30 Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL Dupe Init Wt./Vol.: Extract Vol:

Print Date: 04/08/2024 4:58:21PM



Matrix Spike Summary

Original Sample ID: 1757424 MS Sample ID: 1757429 MS MSD Sample ID: 1757430 MSD

QC for Samples: 1241160001, 1241160002

Analytical Date/Time: 3/27/2024 8:09:00PM

Analysis Date: 03/27/2024 19:51 Analysis Date: 03/27/2024 20:09 Analysis Date: 03/27/2024 20:28 Matrix: Water (Surface, Eff., Ground)

Results by EPA 300.0		_								
		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
Parameter	<u>Sample</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Nitrate-N	0.404J	20.0	20.8	102	20.0	20.9	103	90-110	0.44	(< 15)
Sulfate	40.6	97	20.0	40.5	97	90-110	0.07	(< 15)		
Batch Information										
Analytical Batch: WIC6567	,			Prep	Batch: \	NXX15175	5			
Analytical Method: EPA 30	0.0			Prep	Method:	EPA 300	.0 Extraction	n Waters/L	iquids	
Instrument: 930 Metrohm of	compact IC flex			Prep	Date/Tin	ne: 3/27/2	024 1:30:0	0PM		
Analyst: FBH				Prer	hitial W	t /Vol · 10	00ml			

Prep Extract Vol: 10.00mL



Matrix Spike Summary

Original Sample ID: 1757425 MS Sample ID: 1757431 MS MSD Sample ID: Analysis Date: 03/27/2024 22:01 Analysis Date: 03/27/2024 22:19 Analysis Date: Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241160001, 1241160002

		Ma	trix Spike (x Spike (mg/L) Spike Duplicate (m							
Parameter	<u>Sample</u>	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL	
Nitrate-N	0.300U	10.0	10.1	101				90-110			
Sulfate	14.4	10.0	24.1	97				90-110			
Analytical Batch: WIC650 Analytical Method: EPA 3 Instrument: 930 Metrohm Analyst: EBH Analytical Date/Time: 3/2	67 300.0 1 compact IC flex 27/2024_10:19:00	(OPM		Prep Prep Prep Prep Prep	Prep Batch: WXX15175 Prep Method: EPA 300.0 Extraction Waters/Liquids Prep Date/Time: 3/27/2024 1:30:00PM Prep Initial Wt./Vol.: 10.00mL Prep Extract Vol: 10.00mL						

SGS

-Method Blank					
Blank ID: MB for HBN 1874564 Blank Lab ID: 1758245	[XXX/49302]		Matrix:	Water (Surface	e, Eff., Ground)
QC for Samples: 1241160001, 1241160002, 124116	60003				
Results by AK102					
Parameter	<u>Results</u>	LOQ/CL	<u>DL</u>	LOD	<u>Units</u>
Diesel Range Organics	0.450U	0.600	0.200	0.450	mg/L
Surrogates					
5a Androstane (surr)	75.2	60-120		0	%
3atch Information					
Analytical Batch: XFC16808			Prep Batcl	h: XXX49302	
Analytical Method: AK102			Prep Meth	od: SW3520C	
				A 1/3 //3/3/3/3/	
Instrument: Agilent 7890B F			Prep Date Prep Initia	/Time: 4/2/2024 I Wt /Vol · 250 r	5:00:00PM

Print Date: 04/08/2024 4:58:25PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1241160 [XXX49302] Blank Spike Lab ID: 1758246 Date Analyzed: 04/03/2024 20:37 Spike Duplicate ID: LCSD for HBN 1241160 [XXX49302] Spike Duplicate Lab ID: 1758247 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241160001, 1241160002, 1241160003

Results by AK102			_						
		Blank Spike	e (mg/L)	S	pike Duplic	cate (mg/L)			
<u>Parameter</u>	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Diesel Range Organics	20	19.5	98	20	18.2	91	(75-125)	7.20	(< 20)
Surrogates									
5a Androstane (surr)	0.4		115	0.4		116	(60-120)	0.29	
Batch Information									
Analytical Batch: XFC16808 Analytical Method: AK102	Analytical Batch: XFC16808 Analytical Method: AK102				o Batch: X o Method:	XX49302 SW3520C			
Instrument: Agilent 7890B F Analyst: BRP		Pre Spil Dup	o Date/Tim ke Init Wt./\ ve Init Wt./\	e: 04/02/202 /ol.: 0.4 mg /ol.: 0.4 mg	2 4 17:00 //L Extract \ /L Extract \/	/ol: 1 mL ol: 1 mL			

Print Date: 04/08/2024 4:58:28PM



SGS North America Inc. CHAIN OF CUSTODY RECORD

1241160

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	CONTACT:	William Watts	PHONE #: 907-452-	5688		Sec	tion 3					Pro	eservat	ive				1 ago 7 - 5 7 -
ection 1	PROJECT NAME:	Former Kiewit Facility - 2050 Peger Rd O: William Watts	PROJECT/ PWSID/ PERMIT#:	am.watts@noi	techengr.com	# C O	Comp	HC	HC	Nor	e HCI	Nor	e Non	e Hur	0 ³ HNO	<u>,</u>	4	
S			Profile #:	C	,	N T	Grab		8			0.0	0.0	anese	6020		NO ⁻	TE: e following analyses
	INVOICE TO	: Nortech	QUOTE #: P.O. #: 24-1008			A I N	MI (Multi- incre-	K102	EPA 826 .ist)	D SIM	Ethane/ EPA	EPA 30	EPA 30	ind Mang 20	iron and e by EPA red)		and	/or compound list: EX, Metals, PFAS
	RESERVED for lab use	SAMPLE IDENTIFICA	FION DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	E R S	mental)	DRO by A	VOCs by F (Custom L	PAHs by EPA 8270	Methane/F Ethene by RSK 175	Nitrate by	Sulfate by	Total Iron a by EPA 602	Dissolved I Manganese (Field Filter		F	REMARKS/LOC ID
	TAD (4A	mw-4	3/26/24	1300	Warek	5	GRAS	×				*	X	×	×			
	TROGEN	mw-5	3/26/24	1100	Water	.5	GROG	X				×	\times	\star	×		_	
2	346	EB-1	3/26/24	1345	Waren	2	Geno	X							<u> </u>			
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\vdash		3	Data	Time	Received By:	1			7	Sec	tion 4	DC	D Proj	ect? Ye	es No	Data De	liveral	ble Requirements:
	Relinquish	еа ву: (1)	- 3/2 G/2	1447				<	7			1					ADE	C Level II
	Wille	an_L. Walls	- Data	Time	Received Bi	<u> </u>				Co	oler ID:	rnarou	nd Tim	e and/o	or Specia	l Instructio	ns:	
5	Reiinquisne	30 By: (2)	> 3/1/10	1545	heederved by:					Stand	ard TAT	/ Nitra	te Has	Short H	lold			
ct io	Baliroutich	ad By: (3)	Date	Time	Received By:		<			For V	OCs: Re	port B ⁻	TEX; 1,	2,4-TME	3; 1,3,5-T	MB; and N	aphtha	lene
es.		50 Dy. (0)					\supset			Ten	ip Blank	°C:	1	2.6	×	Chain	of Cus	tody Seal: (Circle)
	Relinquish	ed By: (4)	Date	Time	Received For	Labora	tory By:					or Ar	nbient	[]		INTAC	T BR	OKEN ABSENT
			3/27/24	10:00	<u>I</u> ere	my	۵×۰	سلا			De	livery	Viethod	Hand	Delivery] Comme	rical D	elivery []

http://www.sgs.com/terms-and-conditions



1241160

SAMPLE RECEIPT FORM

	Project	Mana	ger Cor	npletion
Was all necessary information recorded on the	/Yes) No	N/A	
COC upon receipt? (temperature, COC seals,		1		
etc.?)				
Was temperature between 0-6° C?	Xes)	No	N/A	If "No", are the samples either exempt* or sampled <8
				hours prior to receipt?
		1		
Were all analyses received within holding time*?	Yes	No	N/A	
Was a method specified for each analysis,	Yes) No	N/A	
where applicable? If no, please note correct		1		Specialized Dilmake
methods.				sprinter minute
Are compound lists specified, where applicable?	Yes	No	N/A	
For project specific or special compound lists	-	1		En tal Dag
please note correct analysis code.				Je list on coc
If rush was requested by the client, was the	Yes	No	NA	If "NO" what is the approved TAT2
requested TAT approved?			52	
If SEDD Deliverables are required, were	Yes	No	N/A	If "NO" contact client for information
Location ID's and an NPDL Number provided?				
	Sampl	e i ogi	in Com	
Do ID's on sample containers match COC?	Wes	No.	ΙΝ/Δ	
If provided on containers, do dates/times	Yes	No		Note: If times differ at hr record data its to the
collected match COC?				login per COC
Were all sample containers received in good	ttes	No.		
condition?	100	\mathcal{V}	איי	
Were proper containers	1	No		Noto: If 200 8/6020 Tatal Materia
(type/mass/volume/preservative) received for all	🖑)			preserve and note HNO2 let here:
samples?				If 200.8/6020 Dissolved Metals are received upprocerved lag
*See form F-083 "Sample Guide"				in for LABFILTER and do not preserve.
				For all non-metals methods, inform Project Manager,
Were Trip Blanks (VOC, GBO, Low-Level Ho	Voc	No	(NVA)	
etc.) received with samples, where applicable*?	105			
Were all VOA vials free of headspace >6mm?	Vor	No	KNUA	
	163			
Were all soil VOA samples received field	Ves	No	NIA	
extracted with Methanol?	163			
Did all soil VOA samples have an	Van	Nie	t wal	
accompanying unpreserved container for %	res	INO	(A/A)	
solids?				
If special handling is required were containers	Voc	No	CAUTA	
labelled appropriately? e.g. MI/ISM foreign	res	INO	(IN/A)	
soils, lab filter, Ref Lab, limited volume			$ \rangle$	
For Rush/Short Holding time, was the lab	Van	No		
notified?	res	INO	N/A	Shark 11.12
For any question answered "NO" was the	Vaa			OTISET FOID
Project Manager notified?	res	INO	N/A	PM Initials:
Was Peer Review of sample	<u> </u>	Nie		
numbering/labelling completed?		INO	N/A	Reviewer Initials:
Additional Notes/Clarification where Applicable incl	uding r	oolutie		
	aung re	solutio	DI DI "NO	answers when a change order is not attached:



Sample Containers and Preservatives

<u>Container Id</u>	Preservative	<u>Container</u> Condition	<u>Container Id</u>	<u>Preservative</u>	<u>Container</u> <u>Condition</u>
1241160001-A	HCL to pH < 2	ОК			
1241160001-B	HCL to $pH < 2$	OK			
1241160001-C	No Preservative Required	OK			
1241160001-D	HNO3 to pH < 2 $$	OK			
1241160002-A	HCL to pH < 2	ОК			
1241160002-В	HCL to pH < 2	ОК			
1241160002-C	No Preservative Required	OK			
1241160002-D	HNO3 to pH < 2	ОК			
1241160003-A	HCL to pH < 2	ОК			
1241160003-В	HCL to pH < 2	ОК			
1241160004-A	HNO3 to pH < 2	OK			
1241160005-A	HNO3 to $pH < 2$	ОК			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis

requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added. QN - Insufficient sample quantity provided.

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	William Watts May 10, 2024	CS Site Name:	Kiewit Pacific Company, 2050 Peger Road, Fairbanks, Alaska	Lab Name:	SGS North America Inc.
Title:	Project Manager	ADEC File No.:	102.38.164	Lab Report No.:	1241160
Consulting Firm:	<i>NORTECH</i> , Inc.	Hazard ID No.:	25680	Lab Report Date:	April 9, 2024

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
 Yes ⊠ No □ N/A □ Comments:
- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?

```
Yes \Box No \Box N/A \boxtimes
```

Comments: All sample analyses were performed by SGS North America Inc. in Anchorage, Alaska.

2. Chain of Custody (CoC)

- a. Is the CoC information completed, signed, and dated (including released/received by)?
 Yes ⊠ No □ N/A □
 Comments:
- b. Were the correct analyses requested?

Yes ⊠ No □ N/A □ Analyses requested: DRO by AK102 and Natural Attenuation Parameters: Nitrate and Sulfate by EPA Method 300.0 and Total and Dissolved Iron and Manganese by EPA Method 6020B. Comments:

3. Laboratory Sample Receipt Documentation

a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes \boxtimes No \square N/A \square Cooler temperature(s): 2.6° C

Sample temperature(s): Click or tap here to enter text. Comments:

- b. Is the sample preservation acceptable acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- c. Is the sample condition documented broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
 Yes ⊠ No □ N/A □
 Comments: The samples were received in good condition.
- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
 Yes □ No □ N/A ⊠
 Comments: There were no discrepancies.
- e. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

4. Case Narrative

- a. Is the case narrative present and understandable? Yes ⊠ No □ N/A □ Comments:
- b. Are there discrepancies, errors, or QC failures identified by the lab? Yes □ No ⊠ N/A □
 Comments: There were no discrepancies, errors, or QC failures.
- c. Were all the corrective actions documented?
 Yes □ No □ N/A ⊠
 Comments: No corrective actions were necessary.

d. What is the effect on data quality/usability according to the case narrative? Comments: There is no effect on data quality or usability according to the case

narrative.

5. Sample Results

- Are the correct analyses performed/reported as requested on CoC?
 Yes ⊠ No □ N/A □
 Comments:
- b. Are all applicable holding times met? Yes ⊠ No □ N/A □ Comments:
- c. Are all soils reported on a dry weight basis?
 Yes □ No □ N/A ⊠
 Comments: There were no soil samples submitted with this work order.
- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
 Yes ⊠ No □ N/A □

Comments:

e. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

6. QC Samples

- a. Method Blank
 - Was one method blank reported per matrix, analysis, and 20 samples? Yes ⋈ No □ N/A □ Comments:
 - ii. Are all method blank results less than LOQ (or RL)?
 Yes ⊠ No □
 Comments:
 - iii. If above LoQ or RL, what samples are affected? Comments: No samples are affected. Method blank results are below LOQs.
 - iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes \Box No \Box N/A \boxtimes Comments: No samples are affected. No data flags are necessary.

v. Data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
 Yes ⋈ No □ N/A □

Comments: Click or tap here to enter text.

- ii. Metals/Inorganics Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- iii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
 Yes ⊠ No □ N/A □

Comments:

- iv. Precision Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
 Yes ⊠ No □ N/A ⊠
 Comments: Click or tap here to enter text.
- v. If %R or RPD is outside of acceptable limits, what samples are affected? Comments: No samples are affected.
- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

vii. Is the data quality or usability affected?

Yes \Box No \Box N/A \boxtimes Comments: Data quality and usability are not affected.

- c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)
 - i. Organics Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes \Box No \boxtimes N/A \Box Comments: MS/MSD samples were not required for this project, and the lab did not run a MS/MSD for DRO with the batch. According to the lab, when there is not sufficient volume for MS/MSD analyses an LCS/LCSD is run.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- iii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
 Yes ⊠ No □ N/A □
 Comments:
- iv. Precision Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- v. If %R or RPD is outside of acceptable limits, what samples are affected? Comments: No samples are affected.
- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes \Box No \Box N/A \boxtimes Comments: No samples are affected. No data flags are necessary.

- vii. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.
- d. Surrogates Organics Only or Isotope Dilution Analytes (IDA) Isotope Dilution Methods Only
 - i. Are surrogate/IDA recoveries reported for organic analyses field, QC, and laboratory samples?

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- ii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
 Yes □ No □ N/A ⊠

Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

e. Trip Blanks

- Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes □ No ⊠ N/A □
 Comments: Samples for volatiles analysis were not submitted with this laboratory work order.
- ii. Are all results less than LoQ or RL?
 Yes □ No □ N/A ⊠
 Comments: Click or tap here to enter text.
- iii. If above LoQ or RL, what samples are affected? Comments: See 6.e.i above.
- iv. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

Yes \Box No \boxtimes N/A \Box Comments: One field duplicate pair was required for the project and was submitted with a subsequent laboratory work order. A field duplicate was not submitted with this laboratory work order.

ii. Was the duplicate submitted blind to lab?

Yes \Box No \Box N/A \boxtimes Comments: See 6.f.i above.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X \ 100$$

Where R_1 = Sample Concentration

R₂ = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes \Box No \Box N/A \boxtimes Comments: See 6.f.i above.

iv. Is the data quality or usability affected? (Explain)
 Yes □ No □ N/A ⊠
 Comments: See 6.f.i above.

g. Decontamination or Equipment Blanks

- Were decontamination or equipment blanks collected? Yes ⊠ No □ N/A □ Comments: Click or tap here to enter text.
- ii. Are all results less than LoQ or RL? Yes ⊠ No □ N/A □ Comments: Click or tap here to enter text.
- iii. If above LoQ or RL, specify what samples are affected. Comments: No samples are affected.
- iv. Are data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?

Yes \boxtimes No \square N/A \square

Comments: No additional flags or qualifiers are necessary for this work order.



To: Nortech 2400 College Road Fairbanks, AK 99707 (907)452-5688 Report Number: 1241194 Client Project: Former Kiewit Fac-2050 Peger Dear William Watts, Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote. If there are any questions about the report or services performed during this project, please call Jennifer at (907) 562-2343. We will be happy to answer any questions or concerns which you may have. Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs. Sincerely, Stephen C. Ede SGS North America Inc. Stann C. Ede 2024.04.11 09:34:56 -08'00' Jennifer Dawkins Date Project Manager Jennifer.Dawkins@sgs.com

Laboratory Report of Analysis

Print Date: 04/10/2024 4:54:23PM

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Case Narrative

SGS Client: Nortech SGS Project: 1241194 Project Name/Site: Former Kiewit Fac-2050 Peger Project Contact: William Watts

Refer to sample receipt form for information on sample condition.

1241124004(1757750MS) (1757754) MS

300.0 - Anions - MS recovery for sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

1241124002(1757749MSD) (1757756) MSD

300.0 - Anions - MSD recovery for sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

LCS for HBN 1874669 [VXX/41057 (1758432) LCS

8260D - LCS recovery for 1,1,2,2-tetrachloroethane does not meet QC criteria. This analyte was not reported above LOQ in associated samples.

LCSD for HBN 1874669 [VXX/4105 (1758433) LCSD

8260D - LCSD recovery for 1,1,2,2-tetrachloroethane does not meet QC criteria. This analyte was not reported above LOQ in associated samples.

RSK-175 Methane/Ethane/Ethene were analyzed by SGS of Orlando, FL.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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Report of	Manual	Integrations
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Laboratory ID	<u>Client Sample ID</u>	Analytical Batch	Analyte	<u>Reason</u>
8270E SIM LV (P	PAH)			
1241194002	MW-3	XMS14200	Acenaphthene	RP
1241194002	MW-3	XMS14200	Fluorene	RP
1241194005	MW-300	XMS14200	Acenaphthene	RP
1241194005	MW-300	XMS14200	Phenanthrene	RP
1758197	MB for HBN 1874554 [XXX/49299]	XMS14200	Pyrene	RP
1758198	LCS for HBN 1874554 [XXX/49299	XMS14200	Anthracene	RP
1758198	LCS for HBN 1874554 [XXX/49299	XMS14200	Benzo[a]pyrene	RP
1758198	LCS for HBN 1874554 [XXX/49299	XMS14200	Benzo[b]Fluoranthene	BLC
1758198	LCS for HBN 1874554 [XXX/49299	XMS14200	Benzo[k]fluoranthene	RP
1758198	LCS for HBN 1874554 [XXX/49299	XMS14200	Chrysene	RP
1758199	LCSD for HBN 1874554 [XXX/4929	XMS14200	2-Methylnaphthalene	RP
1758199	LCSD for HBN 1874554 [XXX/4929	XMS14200	Anthracene	RP
1758199	LCSD for HBN 1874554 [XXX/4929	XMS14200	Benzo[b]Fluoranthene	BLC
1758199	LCSD for HBN 1874554 [XXX/4929	XMS14200	Benzo[k]fluoranthene	RP
1758199	LCSD for HBN 1874554 [XXX/4929	XMS14200	Chrysene	RP
1758426	CVC for HBN 1874658 (XMS/14200	XMS14200	Benzo[a]pyrene	RP
1758426	CVC for HBN 1874658 (XMS/14200	XMS14200	Benzo[b]Fluoranthene	BLC
1758426	CVC for HBN 1874658 (XMS/14200	XMS14200	Benzo[k]fluoranthene	RP
1758426	CVC for HBN 1874658 (XMS/14200	XMS14200	Chrysene	RP

Manual Integration Reason Code Descriptions

Code Description

- O Original Chromatogram
- M Modified Chromatogram
- SS Skimmed surrogate
- BLG Closed baseline gap
- RP Reassign peak name
- PIR Pattern integration required
- IT Included tail
- SP Split peak
- RSP Removed split peak
- FPS Forced peak start/stop
- BLC Baseline correction
- PNF Peak not found by software

All DRO/RRO analysis are integrated per SOP.



Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <<u>http://www.sgs.com/en/Terms-and-Conditions.aspx></u>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270E, 8270E-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
В	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 3/4 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.
0	
Sample summaries which i	nclude a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are	Integrated per SOP.

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Note:



Sample Summary Client Sample ID Lab Sample ID Matrix **Collected Received** MW-2 1241194001 Water (Surface, Eff., Ground) 03/27/2024 03/28/2024 MW-3 Water (Surface, Eff., Ground) 1241194002 03/27/2024 03/28/2024 MW-4 1241194003 03/26/2024 03/28/2024 Water (Surface, Eff., Ground) MW-5 1241194004 03/26/2024 03/28/2024 Water (Surface, Eff., Ground) MW-300 Water (Surface, Eff., Ground) 1241194005 03/27/2024 03/28/2024 EB-1 1241194006 03/26/2024 03/28/2024 Water (Surface, Eff., Ground) TB-2 1241194007 03/26/2024 03/28/2024 Water (Surface, Eff., Ground) MW-2 1241194008 03/27/2024 03/28/2024 Water (Surface, Eff., Ground) MW-3 1241194009 03/27/2024 03/28/2024 Water (Surface, Eff., Ground)

Method Description
8270 PAH SIM GC/MS LV
Dissolved Metals by ICP-MS
DRO Low Volume (W)
Ion Chromatographic Analysis
Ion Chromatographic Analysis (W)
Metals by ICP-MS
Volatile Organic Compounds(W)Custom List



Detectable Results Summary Client Sample ID: MW-2 Lab Sample ID: 1241194001 Parameter Result Units 50900 ug/L Metals by ICP/MS Iron Manganese 2980 ug/L **Diesel Range Organics** 3.16 Semivolatile Organic Fuels mg/L 1,2,4-Trimethylbenzene 135 ug/L Volatile GC/MS 1,3,5-Trimethylbenzene 55.7 ug/L 10.8 Ethylbenzene ug/L Naphthalene 26.7 ug/L o-Xylene 43.9 ug/L P & M -Xylene 72.0 ug/L Xylenes (total) 116 ug/L Client Sample ID: MW-3 Lab Sample ID: 1241194002 Parameter Result Units 57800 Metals by ICP/MS ug/L Iron Manganese 2770 ug/L **Polynuclear Aromatics GC/MS** 1-Methylnaphthalene 0.289 ug/L 2-Methylnaphthalene 0.183 ug/L Acenaphthene 0.322 ug/L 0.225 Fluorene ug/L 0.483 Naphthalene ug/L **Diesel Range Organics** 7.11 Semivolatile Organic Fuels mg/L Volatile GC/MS 1,2,4-Trimethylbenzene 7.26 ug/L 1,3,5-Trimethylbenzene 3.13 ug/L Benzene 1.19 ug/L Naphthalene 4.72 ug/L o-Xylene ug/L 1.41 P & M -Xylene 2.37 ug/L Toluene 1.54 ug/L Xylenes (total) 3.78 ug/L Waters Department Sulfate 3.39 mg/L Client Sample ID: MW-4 Lab Sample ID: 1241194003 Parameter Result Units Volatile GC/MS Benzene 1.02 ug/L

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Detectable Results Summary

Client Sample ID: MW-300			
Lab Sample ID: 1241194005	Parameter	Result	<u>Units</u>
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	0.556	ug/L
	2-Methylnaphthalene	0.457	ug/L
	Acenaphthene	0.276	ug/L
	Fluorene	0.322	ug/L
	Naphthalene	0.754	ug/L
Semivolatile Organic Fuels	Diesel Range Organics	3.10	mg/L
Volatile GC/MS	1,2,4-Trimethylbenzene	5.70	ug/L
	1,3,5-Trimethylbenzene	2.50	ug/L
	Benzene	1.20	ug/L
	Naphthalene	3.42	ug/L
	o-Xylene	1.27	ug/L
	P & M -Xylene	2.19	ug/L
	Toluene	1.53	ug/L
	Xylenes (total)	3.46	ug/L
Client Sample ID: MW-2			
Lab Sample ID: 1241194008	Parameter	<u>Result</u>	<u>Units</u>
Dissolved Metals by ICP/MS	Iron	49100	ug/L
-	Manganese	2880	ug/L
Client Sample ID: MW-3			
Lab Sample ID: 1241194009	Parameter	Result	<u>Units</u>
Dissolved Metals by ICP/MS	Iron	44900	ug/L
-	Manganese	2550	ug/L

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Results of MW-2							
Client Sample ID: MW-2 Client Project ID: Former Kiewit Lab Sample ID: 1241194001 Lab Project ID: 1241194		Collection Date: 03/27/24 12:20 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:)		
Results by Metals by ICP/MS							
<u>Parameter</u> Iron	<u>Result</u> <u>Qual</u> 50900	<u>LOQ/CL</u> 500	<u>DL</u> 150	<u>Units</u> ug/L	<u>DF</u> 5	<u>Allowable</u> <u>Limits</u>	Date Analyzec 04/05/24 17:28
Manganese	2980	4.00	1.24	ug/L	10		04/08/24 15:17
Batch Information							
Analytical Batch: MMS12251 Analytical Method: SW6020B Analyst: HGS Analytical Date/Time: 04/08/24 1 Container ID: 1241194001-G	5:17		Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	MXX36541 d: SW3010A ime: 04/01/24 13 Vt./Vol.: 25 mL t Vol: 25 mL	:49		
Analytical Batch: MMS12250 Analytical Method: SW6020B Analyst: HGS Analytical Date/Time: 04/05/24 1: Container ID: 12/41194001 G	7:28		Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extrad	MXX36541 d: SW3010A ime: 04/01/24 13 Vt./Vol.: 25 mL t Vol: 25 ml	:49		

Results of MW-2							
Client Sample ID: MW-2 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241194001 Lab Project ID: 1241194		r	Collection Date: 03/27/24 12:20 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:				
Results by Semivolatile Organ	nic Fuels						
<u>Parameter</u> Diesel Range Organics	<u>Result</u> <u>Qual</u> 3.16	<u>LOQ/CL</u> 0.591	<u>DL</u> 0.197	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 04/04/24 04:16
Surrogates 5a Androstane (surr)	81.7	50-150		%	1		04/04/24 04:16
Batch Information Analytical Batch: XFC16808 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/04/24 Container ID: 1241194001-D	↓ 04:16		Prep Batch: Prep Methor Prep Date/T Prep Initial V Prep Extract	XXX49303 d: SW3520C 'ime: 04/02/24 17: Nt./Vol.: 254 mL t Vol: 1 mL	30		

SGS

Results of MW-2

Client Sample ID: **MW-2** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194001 Lab Project ID: 1241194 Collection Date: 03/27/24 12:20 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
Parameter	<u>Result</u> <u>Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1,2,4-Trimethylbenzene	135	1.00	0.310	ug/L	1		04/01/24 15:07
1,3,5-Trimethylbenzene	55.7	1.00	0.310	ug/L	1		04/03/24 18:58
Benzene	0.400 U	0.400	0.120	ug/L	1		04/01/24 15:07
Ethylbenzene	10.8	1.00	0.310	ug/L	1		04/01/24 15:07
Naphthalene	26.7	1.00	0.310	ug/L	1		04/01/24 15:07
o-Xylene	43.9	1.00	0.310	ug/L	1		04/01/24 15:07
P & M -Xylene	72.0	2.00	0.620	ug/L	1		04/01/24 15:07
Toluene	1.00 U	1.00	0.310	ug/L	1		04/01/24 15:07
Xylenes (total)	116	3.00	1.00	ug/L	1		04/01/24 15:07
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	81-118		%	1		04/01/24 15:07
4-Bromofluorobenzene (surr)	111	85-114		%	1		04/01/24 15:07
Toluene-d8 (surr)	101	89-112		%	1		04/01/24 15:07

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/01/24 15:07 Container ID: 1241194001-A

Analytical Batch: VMS23173 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/03/24 18:58 Container ID: 1241194001-B Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 04/01/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Prep Batch: VXX41057 Prep Method: SW5030B Prep Date/Time: 04/03/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

SGS							
Client Sample ID: MW-2 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241194001 Lab Project ID: 1241194		r	Collection Date: 03/27/24 12:20 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:				
Results by Waters Departmen	nt						
<u>Parameter</u> Nitrate-N Sulfate	<u>Result</u> <u>Qual</u> 0.200 U 0.200 U	<u>LOQ/CL</u> 0.200 0.200	<u>DL</u> 0.0700 0.0500	<u>Units</u> mg/L mg/L	<u>DF</u> 1 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 03/28/24 14:43 03/28/24 14:43
Batch Information Analytical Batch: WIC6568 Analytical Method: EPA 300.0 Analyst: EBH Analytical Date/Time: 03/28/24 Container ID: 1241194001-F	4 14:43		Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	WXX15179 d: METHOD iime: 03/28/24 12: Nt./Vol.: 10 mL t Vol: 10 mL	:00		

- Results of MW-3							
Client Sample ID: MW-3 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241194002 Lab Project ID: 1241194			Collection D Received Da Matrix: Wate Solids (%): Location:	ate: 03/27/24 09 ate: 03/28/24 09 er (Surface, Eff.,	I		
- Results by Metals by ICP/MS							
<u>Parameter</u> Iron	<u>Result</u> <u>Qual</u> 57800	<u>LOQ/CL</u> 500	<u>DL</u> 150	<u>Units</u> ug/L	<u>DF</u> 5	<u>Allowable</u> <u>Limits</u>	Date Analyzed
Manganese	2770	4.00	1.24	ug/L	10		04/08/24 15:20
Batch Information							
Analytical Batch: MMS12251 Analytical Method: SW6020B Analyst: HGS Analytical Date/Time: 04/08/24 Container ID: 1241194002-I	15:20		Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	MXX36541 d: SW3010A ime: 04/01/24 13 Vt./Vol.: 25 mL t Vol: 25 mL	:49		
Analytical Batch: MMS12250 Analytical Method: SW6020B Analyst: HGS Analytical Date/Time: 04/05/24 Container ID: 1241194002-I	17:30		Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	MXX36541 d: SW3010A ime: 04/01/24 13 Vt./Vol.: 25 mL t Vol: 25 mL	49		

Results of MW-3

Client Sample ID: **MW-3** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194002 Lab Project ID: 1241194 Collection Date: 03/27/24 09:50 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Polynuclear Aromatics GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> <u>Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1-Methylnaphthalene	0.289	0.0481	0.0144	ug/L	1		04/03/24 21:11
2-Methylnaphthalene	0.183	0.0481	0.0144	ug/L	1		04/03/24 21:11
Acenaphthene	0.322	0.0481	0.0144	ug/L	1		04/03/24 21:11
Acenaphthylene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Anthracene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Benzo(a)Anthracene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Benzo[a]pyrene	0.0192 U	0.0192	0.00596	ug/L	1		04/03/24 21:11
Benzo[b]Fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Benzo[g,h,i]perylene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Benzo[k]fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Chrysene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Dibenzo[a,h]anthracene	0.0192 U	0.0192	0.00596	ug/L	1		04/03/24 21:11
Fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Fluorene	0.225	0.0481	0.0144	ug/L	1		04/03/24 21:11
Indeno[1,2,3-c,d] pyrene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Naphthalene	0.483	0.0962	0.0298	ug/L	1		04/03/24 21:11
Phenanthrene	0.0962 U	0.0962	0.0298	ug/L	1		04/03/24 21:11
Pyrene	0.0481 U	0.0481	0.0144	ug/L	1		04/03/24 21:11
Surrogates							
2-Methylnaphthalene-d10 (surr)	78.6	38-100		%	1		04/03/24 21:11
Fluoranthene-d10 (surr)	71.6	30-111		%	1		04/03/24 21:11

Batch Information

Analytical Batch: XMS14200 Analytical Method: 8270E SIM LV (PAH) Analyst: HMW Analytical Date/Time: 04/03/24 21:11 Container ID: 1241194002-F Prep Batch: XXX49299 Prep Method: SW3535A Prep Date/Time: 04/02/24 14:00 Prep Initial Wt./Vol.: 260 mL Prep Extract Vol: 1 mL

SGS							
Results of MW-3		_	Collection D	ata: 02/27/24.00			
Client Sample ID: MW-3 Client Project ID: Former Kie Lab Sample ID: 1241194002 Lab Project ID: 1241194	r	Collection Date: 03/27/24 09:50 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Semivolatile Orga	nic Fuels						
<u>Parameter</u> Diesel Range Organics	<u>Result</u> Qual 7.11	<u>LOQ/CL</u> 0.602	<u>DL</u> 0.201	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 04/04/24 04:28
Surrogates							
5a Androstane (surr)	96	50-150		%	1		04/04/24 04:28
Batch Information							
Analytical Batch: XFC16808 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/04/24 Container ID: 1241194002-D		Prep Batch: XXX49303 Prep Method: SW3520C Prep Date/Time: 04/02/24 17:30 Prep Initial Wt./Vol.: 249 mL Prep Extract Vol: 1 mL					

Print Date: 04/10/2024 4:54:34PM

SGS

Results of MW-3

Client Sample ID: **MW-3** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194002 Lab Project ID: 1241194 Collection Date: 03/27/24 09:50 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1,2,4-Trimethylbenzene	7.26	1.00	0.310	ug/L	1		04/01/24 15:22
1,3,5-Trimethylbenzene	3.13	1.00	0.310	ug/L	1		04/03/24 19:13
Benzene	1.19	0.400	0.120	ug/L	1		04/01/24 15:22
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 15:22
Naphthalene	4.72	1.00	0.310	ug/L	1		04/01/24 15:22
o-Xylene	1.41	1.00	0.310	ug/L	1		04/01/24 15:22
P & M -Xylene	2.37	2.00	0.620	ug/L	1		04/01/24 15:22
Toluene	1.54	1.00	0.310	ug/L	1		04/01/24 15:22
Xylenes (total)	3.78	3.00	1.00	ug/L	1		04/01/24 15:22
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	81-118		%	1		04/01/24 15:22
4-Bromofluorobenzene (surr)	106	85-114		%	1		04/01/24 15:22
Toluene-d8 (surr)	101	89-112		%	1		04/01/24 15:22

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/01/24 15:22 Container ID: 1241194002-A

Analytical Batch: VMS23173 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/03/24 19:13 Container ID: 1241194002-B Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 04/01/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Prep Batch: VXX41057 Prep Method: SW5030B Prep Date/Time: 04/03/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Results of MW-3							
Client Sample ID: MW-3 Client Project ID: Former K Lab Sample ID: 124119400 Lab Project ID: 1241194	r	Collection Date: 03/27/24 09:50 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Waters Departm	lent						
<u>Parameter</u> Nitrate-N	<u>Result</u> <u>Qual</u> 0.200 U	<u>LOQ/CL</u> 0.200	<u>DL</u> 0.0700	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 03/28/24 15:01
Sulfate Batch Information Analytical Batch: WIC6568 Analytical Method: EPA 300 Analyst: EBH Analytical Date/Time: 03/28 Container ID: 1241194002-I	3.39 0.0 /24 15:01 H	0.200	0.0500 Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	mg/L WXX15179 : METHOD ne: 03/28/24 12 /t./Vol.: 10 mL Vol: 10 mL	1		03/28/24 15:01

SGS

Results of MW-4

Client Sample ID: **MW-4** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194003 Lab Project ID: 1241194 Collection Date: 03/26/24 13:00 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	<u>Limits</u>	Date Analyzed
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:07
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:07
Benzene	1.02	0.400	0.120	ug/L	1		04/01/24 16:07
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:07
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:07
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:07
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/01/24 16:07
Toluene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:07
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/01/24 16:07
Surrogates							
1,2-Dichloroethane-D4 (surr)	108	81-118		%	1		04/01/24 16:07
4-Bromofluorobenzene (surr)	100	85-114		%	1		04/01/24 16:07
Toluene-d8 (surr)	99.3	89-112		%	1		04/01/24 16:07

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/01/24 16:07 Container ID: 1241194003-A Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 04/01/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL
Results of MW-5

Client Sample ID: **MW-5** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194004 Lab Project ID: 1241194 Collection Date: 03/26/24 11:00 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	<u>Limits</u>	Date Analyzed
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:22
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:22
Benzene	0.400 U	0.400	0.120	ug/L	1		04/01/24 16:22
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:22
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:22
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:22
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/01/24 16:22
Toluene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:22
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/01/24 16:22
Surrogates							
1,2-Dichloroethane-D4 (surr)	103	81-118		%	1		04/01/24 16:22
4-Bromofluorobenzene (surr)	102	85-114		%	1		04/01/24 16:22
Toluene-d8 (surr)	100	89-112		%	1		04/01/24 16:22

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/01/24 16:22 Container ID: 1241194004-A Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 04/01/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Results of MW-300

Client Sample ID: **MW-300** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194005 Lab Project ID: 1241194 Collection Date: 03/27/24 10:00 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Polynuclear Aromatics GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> <u>Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	Limits	Date Analyzed
1-Methylnaphthalene	0.556	0.0490	0.0147	ug/L	1		04/03/24 21:28
2-Methylnaphthalene	0.457	0.0490	0.0147	ug/L	1		04/03/24 21:28
Acenaphthene	0.276	0.0490	0.0147	ug/L	1		04/03/24 21:28
Acenaphthylene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Anthracene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Benzo(a)Anthracene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Benzo[a]pyrene	0.0196 U	0.0196	0.00608	ug/L	1		04/03/24 21:28
Benzo[b]Fluoranthene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Benzo[g,h,i]perylene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Benzo[k]fluoranthene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Chrysene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Dibenzo[a,h]anthracene	0.0196 U	0.0196	0.00608	ug/L	1		04/03/24 21:28
Fluoranthene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Fluorene	0.322	0.0490	0.0147	ug/L	1		04/03/24 21:28
Indeno[1,2,3-c,d] pyrene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Naphthalene	0.754	0.0980	0.0304	ug/L	1		04/03/24 21:28
Phenanthrene	0.0980 U	0.0980	0.0304	ug/L	1		04/03/24 21:28
Pyrene	0.0490 U	0.0490	0.0147	ug/L	1		04/03/24 21:28
Surrogates							
2-Methylnaphthalene-d10 (surr)	85.7	38-100		%	1		04/03/24 21:28
Fluoranthene-d10 (surr)	71.9	30-111		%	1		04/03/24 21:28

Batch Information

Analytical Batch: XMS14200 Analytical Method: 8270E SIM LV (PAH) Analyst: HMW Analytical Date/Time: 04/03/24 21:28 Container ID: 1241194005-F Prep Batch: XXX49299 Prep Method: SW3535A Prep Date/Time: 04/02/24 14:00 Prep Initial Wt./Vol.: 255 mL Prep Extract Vol: 1 mL

Results of MW-300							
Client Sample ID: MW-300 Client Project ID: Former Ki Lab Sample ID: 1241194005 Lab Project ID: 1241194	Client Sample ID: MW-300 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241194005 Lab Project ID: 1241194		Collection D Received Da Matrix: Wate Solids (%): Location:	Collection Date: 03/27/24 10:00 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:			
Parameter Diesel Range Organics	Result Qual 3.10	<u>LOQ/CL</u> 0.545	<u>DL</u> 0.182	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 04/04/24 05:43
Surrogates 5a Androstane (surr)	82.3	50-150		%	1		04/04/24 05:43
Batch Information Analytical Batch: XFC16808 Analytical Method: AK102 Analyst: BRP Analytical Date/Time: 04/04/2 Container ID: 1241194005-D	24 05:43		Prep Batch: Prep Methor Prep Date/T Prep Initial V Prep Extract	XXX49303 d: SW3520C ime: 04/02/24 17: Vt./Vol.: 275 mL : Vol: 1 mL	:30		

Results of MW-300

Client Sample ID: **MW-300** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194005 Lab Project ID: 1241194 Collection Date: 03/27/24 10:00 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> <u>Qual</u>	LOQ/CL	<u>DL</u>	<u>Units</u>	DF	Limits	Date Analyzed
1,2,4-Trimethylbenzene	5.70	1.00	0.310	ug/L	1		04/01/24 15:38
1,3,5-Trimethylbenzene	2.50	1.00	0.310	ug/L	1		04/03/24 19:28
Benzene	1.20	0.400	0.120	ug/L	1		04/01/24 15:38
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 15:38
Naphthalene	3.42	1.00	0.310	ug/L	1		04/01/24 15:38
o-Xylene	1.27	1.00	0.310	ug/L	1		04/01/24 15:38
P & M -Xylene	2.19	2.00	0.620	ug/L	1		04/01/24 15:38
Toluene	1.53	1.00	0.310	ug/L	1		04/01/24 15:38
Xylenes (total)	3.46	3.00	1.00	ug/L	1		04/01/24 15:38
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	81-118		%	1		04/01/24 15:38
4-Bromofluorobenzene (surr)	106	85-114		%	1		04/01/24 15:38
Toluene-d8 (surr)	102	89-112		%	1		04/01/24 15:38

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/01/24 15:38 Container ID: 1241194005-A

Analytical Batch: VMS23173 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/03/24 19:28 Container ID: 1241194005-B Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 04/01/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Prep Batch: VXX41057 Prep Method: SW5030B Prep Date/Time: 04/03/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Results of EB-1

Client Sample ID: **EB-1** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194006 Lab Project ID: 1241194 Collection Date: 03/26/24 13:45 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	Units	DF	Limits	Date Analyzed
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:37
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:37
Benzene	0.400 U	0.400	0.120	ug/L	1		04/01/24 16:37
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:37
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:37
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:37
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/01/24 16:37
Toluene	1.00 U	1.00	0.310	ug/L	1		04/01/24 16:37
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/01/24 16:37
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	81-118		%	1		04/01/24 16:37
4-Bromofluorobenzene (surr)	105	85-114		%	1		04/01/24 16:37
Toluene-d8 (surr)	101	89-112		%	1		04/01/24 16:37

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/01/24 16:37 Container ID: 1241194006-A Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 04/01/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Results of TB-2

Client Sample ID: **TB-2** Client Project ID: **Former Kiewit Fac-2050 Peger** Lab Sample ID: 1241194007 Lab Project ID: 1241194 Collection Date: 03/26/24 00:00 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:

Results by Volatile GC/MS

						Allowable	
<u>Parameter</u>	<u>Result</u> Qual	LOQ/CL	<u>DL</u>	Units	DF	Limits	Date Analyzed
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 22:42
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 22:42
Benzene	0.400 U	0.400	0.120	ug/L	1		04/01/24 22:42
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/01/24 22:42
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/01/24 22:42
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/01/24 22:42
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/01/24 22:42
Toluene	1.00 U	1.00	0.310	ug/L	1		04/01/24 22:42
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/01/24 22:42
Surrogates							
1,2-Dichloroethane-D4 (surr)	99.5	81-118		%	1		04/01/24 22:42
4-Bromofluorobenzene (surr)	103	85-114		%	1		04/01/24 22:42
Toluene-d8 (surr)	101	89-112		%	1		04/01/24 22:42

Batch Information

Analytical Batch: VMS23168 Analytical Method: SW8260D Analyst: JY Analytical Date/Time: 04/01/24 22:42 Container ID: 1241194007-A Prep Batch: VXX41049 Prep Method: SW5030B Prep Date/Time: 04/01/24 06:00 Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Results of MW-2										
Client Sample ID: MW-2 Client Project ID: Former Kiew .ab Sample ID: 1241194008 .ab Project ID: 1241194	it Fac-2050 Pege	r	Collection Date: 03/27/24 12:20 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:							
Results by Dissolved Metals by	ICP/MS									
Parameter ron	<u>Result</u> <u>Qual</u> 49100	LOQ/CL	<u>DL</u> 150	<u>Units</u> ug/l	DF 5	<u>Allowable</u> <u>Limits</u>	Date Analy			
langanese	2880	4.00	1.24	ug/L	10		04/08/24 15			
Analytical Batch: MMS12251 Analytical Method: SW6020B Analyst: HGS Analytical Date/Time: 04/08/24 Container ID: 1241194008-A	Prep Batch: MXX36541 Prep Method: SW3010A Prep Date/Time: 04/01/24 13:49 Prep Initial Wt./Vol.: 25 mL Prep Extract Vol: 25 mL									
Analytical Batch: MMS12250 Analytical Method: SW6020B Analyst: HGS Analytical Date/Time: 04/05/24 Container ID: 1241194008-A	17:33		Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	MXX36541 d: SW3010A ime: 04/01/24 13 Vt./Vol.: 25 mL Vol: 25 mL	:49					

Print Date: 04/10/2024 4:54:34PM

Results of MW-3								
Client Sample ID: MW-3 Client Project ID: Former Kiewit Fac-2050 Peger Lab Sample ID: 1241194009 Lab Project ID: 1241194 Results by Dissolved Metals by ICP/MS			Collection Date: 03/27/24 09:50 Received Date: 03/28/24 09:15 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Dissolved Meta	s by ICP/MS							
<u>Parameter</u> Iron	<u>Result</u> <u>Qual</u> 44900	<u>LOQ/CL</u> 500	<u>DL</u> 150	<u>Units</u> ug/L	<u>DF</u> 5	<u>Allowable</u> <u>Limits</u>	<u>Date Analyz</u> 04/05/24 17:3	
Manganese	2550	4.00	1.24	ug/L	10		04/08/24 15:2	
Batch Information Analytical Batch: MMS1225 Analytical Method: SW6020 Analyst: HGS Analytical Date/Time: 04/08 Container ID: 1241194009-	1 B /24 15:25 A		Prep Batch: Prep Methoo Prep Date/T Prep Initial V Prep Extract	MXX36541 d: SW3010A ime: 04/01/24 13 Vt./Vol.: 25 mL t Vol: 25 mL	49			
Analytical Batch: MMS1225 Analytical Method: SW6020 Analyst: HGS Analytical Date/Time: 04/05 Container ID: 1241194009-	0)B /24 17:35 A		Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	MXX36541 d: SW3010A iime: 04/01/24 13 Nt./Vol.: 25 mL t Vol: 25 mL	:49			

Print Date: 04/10/2024 4:54:34PM

Method Blank					
Blank ID: MB for HBN 18 Blank Lab ID: 1757996	874471 [MXX/36541	l	Matrix:	Water (Surfac	e, Eff., Ground)
QC for Samples: 1241194001, 1241194002	, 1241194008, 124119	4009			
Results by SW6020B					
Parameter	Results	LOQ/CL	<u>DL</u>	LOD	<u>Units</u>
Iron	375U	500	150	375	ug/L
Manganese	1.50U	2.00	0.620	1.50	ug/L
atch Information					
Analytical Batch: MMS	12249		Prep Batcl	h: MXX36541	
Analytical Method: SW	6020B		Prep Meth	od: SW3010A	
Instrument: P7 Agilent	7800		Prep Date	/Time: 4/1/202	4 1:49:06PM
Analyst: HGS	1/5/2024 12:45:00DM		Prep Initia Prop Extra	I Wt./Vol.: 25 m	۱L
*	I/5/2024 12:45:00PM		Prep Extra	act Vol: 25 mL	

SGS	

Date Analyzed: 04/05/2	024 12:47			Matrix: Water (Surface, Eff., Ground)
QC for Samples: 1241	194001, 124119	94002, 1241	194008, 1241	194009
Results by SW6020B			_	
Devenueter	Creike	Blank Spike	e (ug/L)	
	Spike	Result	<u>Rec (%)</u>	
Iron Manganese	5000 500	5230 493	105 99	(87-118) (87-115)
Batch Information				
Analytical Batch: MMS12: Analytical Method: SW60 Instrument: P7 Agilent 78 Analyst: HGS	249 20B 300			Prep Batch: MXX36541 Prep Method: SW3010A Prep Date/Time: 04/01/2024 13:49 Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 25 mL Dupe Init Wt./Vol.: Extract Vol:



Matrix Spike Summary

Original Sample ID: 1758010 MS Sample ID: 1758012 MS MSD Sample ID: 1758013 MSD Analysis Date: 04/05/2024 12:56 Analysis Date: 04/05/2024 12:58 Analysis Date: 04/05/2024 13:00 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194001, 1241194002, 1241194008, 1241194009

Parameter ron Manganese Batch Information Analytical Batch: MMS122 Analytical Method: SW602 Instrument: P7 Agilent 780	<u>Sample</u> 8520 740	<u>Spike</u> 5000 500	<u>Result</u> 14200 1260	<u>Rec (%)</u> 113 105	<u>Spike</u> 5000	<u>Result</u> 13100	<u>Rec (%)</u> 93	<u>CL</u> 87-118	<u>RPD (%)</u> 7 55	RPD CL
ron Manganese Batch Information Analytical Batch: MMS122 Analytical Method: SW602 Instrument: P7 Agilent 780	8520 740	5000 500	14200 1260	113 105	5000	13100	93	87-118	7 55	(< 20)
Manganese Batch Information Analytical Batch: MMS122 Analytical Method: SW602 Instrument: P7 Agilent 780	740	500	1260	105	=				1.00	(< 20)
Batch Information Analytical Batch: MMS122 Analytical Method: SW602 Instrument: P7 Agilent 780	40				500	1240	100	87-115	2.06	(< 20)
Analytical Batch: MMS122 Analytical Method: SW602 Instrument: P7 Agilent 780	10									
Analytical Method: SW602 Instrument: P7 Agilent 780	49			Prep	Batch: N	/IXX36541				
Instrument: P7 Agilent 780	0B			Prep	Method:	3010 H20	Digest for	Metals ICF	P-MS	
Analyst: HGS	0			Prep) Date/ I in Initial Wt	1e: 4/1/20	24 1:49:06 00ml	РМ		
Analytical Date/Time: 4/5/2	2024 12:58:00	PM		Prep	Extract \	/ol: 25.00	nL			

Method Blank

Blank ID: MB for HBN 1874496 [VXX/41047] Blank Lab ID: 1758093 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1241194001, 1241194002, 1241194003, 1241194004, 1241194005, 1241194006

Results by SW8260D					
,					
<u>Parameter</u>	<u>Results</u>	LOQ/CL	<u>DL</u>	LOD	Units
1,2,4-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
1,3,5-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Benzene	0.300U	0.400	0.120	0.300	ug/L
Ethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Naphthalene	0.750U	1.00	0.310	0.750	ug/L
o-Xylene	0.750U	1.00	0.310	0.750	ug/L
P & M -Xylene	1.50U	2.00	0.620	1.50	ug/L
Toluene	0.750U	1.00	0.310	0.750	ug/L
Xylenes (total)	2.25U	3.00	1.00	2.25	ug/L
Surrogates					
1,2-Dichloroethane-D4 (surr)	93.7	81-118		0	%
4-Bromofluorobenzene (surr)	106	85-114		0	%
Toluene-d8 (surr)	102	89-112		0	%

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Instrument: VPA 780/5975 GC/MS Analyst: JY Analytical Date/Time: 4/1/2024 11:52:00AM Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 4/1/2024 6:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL



Blank Spike Summary

Blank Spike ID: LCS for HBN 1241194 [VXX41047] Blank Spike Lab ID: 1758094 Date Analyzed: 04/01/2024 12:08 Spike Duplicate ID: LCSD for HBN 1241194 [VXX41047] Spike Duplicate Lab ID: 1758095 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194001, 1241194002, 1241194003, 1241194004, 1241194005, 1241194006

Results by SW8260D

		Blank Spike	e (ug/L)	:	Spike Dupli	cate (ug/L)			
Parameter	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
1,2,4-Trimethylbenzene	30	35.3	118	30	33.2	111	(79-124)	6.10	(< 20)
1,3,5-Trimethylbenzene	30	36.2	121	30	33.6	112	(75-124)	7.40	(< 20)
Benzene	30	32.7	109	30	32.1	107	(79-120)	1.80	(< 20)
Ethylbenzene	30	32.8	109	30	32.3	108	(79-121)	1.70	(< 20)
Naphthalene	30	31.5	105	30	34.0	113	(61-128)	7.50	(< 20)
o-Xylene	30	31.9	106	30	32.6	109	(78-122)	2.20	(< 20)
P & M -Xylene	60	65.3	109	60	64.8	108	(80-121)	0.68	(< 20)
Toluene	30	32.2	107	30	31.4	105	(80-121)	2.30	(< 20)
Xylenes (total)	90	97.2	108	90	97.5	108	(79-121)	0.29	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		90	30		100	(81-118)	11.30	
4-Bromofluorobenzene (surr)	30		105	30		100	(85-114)	4.70	
Toluene-d8 (surr)	30		102	30		101	(89-112)	1.30	

Batch Information

Analytical Batch: VMS23167 Analytical Method: SW8260D Instrument: VPA 780/5975 GC/MS Analyst: JY Prep Batch: VXX41047 Prep Method: SW5030B Prep Date/Time: 04/01/2024 06:00 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 04/10/2024 4:54:47PM

SGS North America Inc.

Method Blank

Blank ID: MB for HBN 1874550 [VXX/41049] Blank Lab ID: 1758175

QC for Samples: 1241194007

Results by SW8260D

<u>Parameter</u>	Results	LOQ/CL	<u>DL</u>	LOD	<u>Units</u>
1,2,4-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
1,3,5-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Benzene	0.300U	0.400	0.120	0.300	ug/L
Ethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Naphthalene	0.750U	1.00	0.310	0.750	ug/L
o-Xylene	0.750U	1.00	0.310	0.750	ug/L
P & M -Xylene	1.50U	2.00	0.620	1.50	ug/L
Toluene	0.750U	1.00	0.310	0.750	ug/L
Xylenes (total)	2.25U	3.00	1.00	2.25	ug/L
Surrogates					
1,2-Dichloroethane-D4 (surr)	99.1	81-118		0	%
4-Bromofluorobenzene (surr)	103	85-114		0	%
Toluene-d8 (surr)	102	89-112		0	%

Batch Information

Analytical Batch: VMS23168 Analytical Method: SW8260D Instrument: Agilent 7890-75MS Analyst: JY Analytical Date/Time: 4/1/2024 12:10:00PM Prep Batch: VXX41049 Prep Method: SW5030B Prep Date/Time: 4/1/2024 6:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Matrix: Water (Surface, Eff., Ground)



Blank Spike Summary

Blank Spike ID: LCS for HBN 1241194 [VXX41049] Blank Spike Lab ID: 1758176 Date Analyzed: 04/01/2024 12:26 Spike Duplicate ID: LCSD for HBN 1241194 [VXX41049] Spike Duplicate Lab ID: 1758177 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194007

Results	by	SW	826	0D	

		Blank Spike	e (ug/L)	:	Spike Dupli	cate (ug/L)			
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
1,2,4-Trimethylbenzene	30	29.9	100	30	29.4	98	(79-124)	1.60	(< 20)
1,3,5-Trimethylbenzene	30	32.4	108	30	31.7	106	(75-124)	2.10	(< 20)
Benzene	30	31.2	104	30	30.7	102	(79-120)	1.60	(< 20)
Ethylbenzene	30	30.6	102	30	30.5	102	(79-121)	0.52	(< 20)
Naphthalene	30	29.4	98	30	30.0	100	(61-128)	2.00	(< 20)
o-Xylene	30	31.7	106	30	31.8	106	(78-122)	0.32	(< 20)
P & M -Xylene	60	63.1	105	60	62.8	105	(80-121)	0.43	(< 20)
Toluene	30	30.2	101	30	30.1	100	(80-121)	0.30	(< 20)
Xylenes (total)	90	94.7	105	90	94.6	105	(79-121)	0.18	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		94	30		92	(81-118)	1.90	
4-Bromofluorobenzene (surr)	30		101	30		100	(85-114)	0.70	
Toluene-d8 (surr)	30		101	30		101	(89-112)	0.89	

Batch Information

Analytical Batch: VMS23168 Analytical Method: SW8260D Instrument: Agilent 7890-75MS Analyst: JY Prep Batch: VXX41049 Prep Method: SW5030B Prep Date/Time: 04/01/2024 06:00 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 04/10/2024 4:54:54PM

SGS North America Inc.

Method Blank

Blank ID: MB for HBN 1874669 [VXX/41057] Blank Lab ID: 1758431 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194001, 1241194002, 1241194005

Results by SW8260D					
Parameter	Results	LOQ/CL	<u>DL</u>	LOD	<u>Units</u>
Surrogates	0.7500	1.00	0.310	0.750	ug/L
1,2-Dichloroethane-D4 (surr)	99.8	81-118		0	%
4-Bromofluorobenzene (surr)	109	85-114		0	%
Toluene-d8 (surr)	99.8	89-112		0	%

Batch Information

Analytical Batch: VMS23173 Analytical Method: SW8260D Instrument: VPA 780/5975 GC/MS Analyst: JY Analytical Date/Time: 4/3/2024 3:07:00PM Prep Batch: VXX41057 Prep Method: SW5030B Prep Date/Time: 4/3/2024 6:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL



Blank Spike Summary

Blank Spike ID: LCS for HBN 1241194 [VXX41057] Blank Spike Lab ID: 1758432 Date Analyzed: 04/03/2024 16:08 Spike Duplicate ID: LCSD for HBN 1241194 [VXX41057] Spike Duplicate Lab ID: 1758433 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194001, 1241194002, 1241194005

Results by SW8260D			_						
		Blank Spike	e (ug/L)	:	Spike Dupli	cate (ug/L)			
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
1,3,5-Trimethylbenzene	30	34.9	116	30	34.3	114	(75-124)	1.70	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		99	30		99	(81-118)	0.54	
4-Bromofluorobenzene (surr)	30		106	30		107	(85-114)	0.75	
Toluene-d8 (surr)	30		100	30		99	(89-112)	1.40	

Batch Information

Analytical Batch: VMS23173 Analytical Method: SW8260D Instrument: VPA 780/5975 GC/MS Analyst: JY Prep Batch: VXX41057 Prep Method: SW5030B Prep Date/Time: 04/03/2024 06:00 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Method Blank

SG:

Blank ID: MB for HBN 1874168 [WXX/15179] Blank Lab ID: 1757751

QC for Samples: 1241194001, 1241194002

Matrix: Water (Surface, Eff., Ground)

Results by EPA 300	.0							
Parameter	<u>Results</u>	LOQ/CL	DL	LOD	<u>Units</u>			
Nitrate-N	0.150U	0.200	0.0700	0.150	mg/L			
Sulfate	0.150U	0.200	0.0500	0.150	mg/L			
Analytical Batch: V	VIC6568		Prep Batch	· WXX15179				
Analytical Method:	EPA 300.0		Prep Metho	od: METHOD				
Instrument: 930 Me	Instrument: 930 Metrohm compact IC flex			Prep Date/Time: 3/28/2024 12:00:00PM				
Analyst: EBH	Analyst: EBH			Prep Initial Wt./Vol.: 10 mL				
Analytical Date/Tim	e: 3/28/2024 1:47:38PM		Prep Extra	ct Vol: 10 mL				



Blank Spike (mg/L) Parameter Spike Result Rec (%) CL Nitrate-N 5 4.81 96 (90-110) Sulfate 5 4.81 96 (90-110) Batch Information Prep Batch: WIC6568 Analytical Batch: WIC6568 Prep Batch: WXX15179 Analytical Method: EPA 300.0 Prep Method: METHOD Instrument: 930 Metrohm compact IC flex Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL Dupe Init Wt./Vol.: 5 mg/L Extract Vol:	Blank Spike ID: LCS for H Blank Spike Lab ID: 1757 Date Analyzed: 03/28/20 QC for Samples: 12411	BN 1241194 752 24 14:06 94001, 124115	[WXX1517 94002	' 9]	Matrix: Water (Surface, Eff., Ground)
Blank Spike (mg/L) Parameter Spike Result Rec (%) CL Nitrate-N 5 4.81 96 (90-110) Sulfate 5 4.81 96 (90-110) Batch Information Prep Batch: WXX15179 Analytical Batch: WIC6568 Prep Method: METHOD Analytical Method: EPA 300.0 Prep Method: METHOD Instrument: 930 Metrohm compact IC flex Prep Date/Time: 03/28/2024 12:00 Analyst: EBH Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL	Results by EPA 300.0				
ParameterSpikeResultRec (%)CLNitrate-N54.8196(90-110)Sulfate54.8196(90-110)Batch InformationPrep Batch: WXX15179Analytical Batch: WIC6568 Analytical Method: EPA 300.0 Instrument: 930 Metrohm compact IC flex Analyst: EBHPrep Method: METHOD Prep Date/Time: 03/28/2024 12:00 Spike Init Wt./Vol.: 5 mg/LExtract Vol: 10 mL Dupe Init Wt./Vol.: 6 tract Vol:			Blank Spike	e (mg/L)	
Nitrate-N 5 4.81 96 (90-110) Sulfate 5 4.81 96 (90-110) Batch Information (90-110) (90-110) Analytical Batch: WIC6568 Analytical Method: EPA 300.0 Instrument: 930 Metrohm compact IC flex Analyst: EBH Prep Batch: WXX15179 Prep Method: METHOD Prep Date/Time: 03/28/2024 12:00 Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL Dupe Init Wt./Vol.: Extract Vol:	Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>
Sulfate 5 4.81 96 (90-110) Batch Information	Nitrate-N	5	4.81	96	(90-110)
Batch Information Analytical Batch: WIC6568 Prep Batch: WXX15179 Analytical Method: EPA 300.0 Prep Method: METHOD Instrument: 930 Metrohm compact IC flex Prep Date/Time: 03/28/2024 12:00 Analyst: EBH Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL Dupe Init Wt./Vol.: Extract Vol:	Sulfate	5	4.81	96	(90-110)
	Batch Information Analytical Batch: WIC6568 Analytical Method: EPA 300.0 Instrument: 930 Metrohm compact IC flex Analyst: EBH				Prep Batch: WXX15179 Prep Method: METHOD Prep Date/Time: 03/28/2024 12:00 Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL Dupe Init Wt./Vol.: Extract Vol:



Matrix Spike Summary

Original Sample ID: 1757750 MS Sample ID: 1757754 MS MSD Sample ID: Analysis Date: 03/28/2024 18:25 Analysis Date: 03/28/2024 18:43 Analysis Date: Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194001, 1241194002

Results by EPA 300.0			_								
		Ma	trix Spike (mg/L)		Spike	e Duplicate	e (mg/L)			
Parameter	<u>Sample</u>	Spike	Result	Rec	<u>(%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Nitrate-N	1.66	5.00	6.53	97					90-110		
Sulfate	13.8	5.00	18.1	86	*				90-110		
Batch Information Analytical Batch: WIC6568 Analytical Method: EPA 300.0 Instrument: 930 Metrohm compact IC flex Analyst: EBH Analytical Date/Time: 3/28/2024 6:43:49PM					Prep Batch: WXX15179 Prep Method: EPA 300.0 Extraction Waters/Liquids Prep Date/Time: 3/28/2024 12:00:00PM Prep Initial Wt./Vol.: 10.00mL Prep Extract Vol: 10.00mL						



Matrix Spike Summary

Original Sample ID: 1757749 MS Sample ID: 1757755 MS MSD Sample ID: 1757756 MSD

QC for Samples: 1241194001, 1241194002

Analysis Date: 03/28/2024 19:02 Analysis Date: 03/28/2024 19:20 Analysis Date: 03/28/2024 19:39 Matrix: Water (Surface, Eff., Ground)

Results by EPA 300.0			_							
		Ma	trix Spike (mg/L)	Spike	e Duplicate	e (mg/L)			
Parameter	<u>Sample</u>	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Nitrate-N	0.268J	10.0	10.3	101	10.0	10.4	101	90-110	0.58	(< 15)
Sulfate	19.5	10.0	29.1	96	10.0	30.8	113 *	90-110	5.60	(< 15)
Batch Information										
Analytical Batch: WIC656	8			Prep	Batch: \	NXX15179	9			

Analytical Datch: W100000 Analytical Method: EPA 300.0 Instrument: 930 Metrohm compact IC flex Analyst: EBH Analytical Date/Time: 3/28/2024 7:20:00PM Prep Batch: WXX15179 Prep Method: EPA 300.0 Extraction Waters/Liquids Prep Date/Time: 3/28/2024 12:00:00PM Prep Initial Wt./Vol.: 10.00mL Prep Extract Vol: 10.00mL

Method Blank

Blank ID: MB for HBN 1874554 [XXX/49299] Blank Lab ID: 1758197 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194002, 1241194005

Results by 8270E SIM LV (PAH)

<u>Parameter</u>	<u>Results</u>	LOQ/CL	<u>DL</u>	LOD	<u>Units</u>
1-Methylnaphthalene	0.0375U	0.0500	0.0150	0.0375	ug/L
2-Methylnaphthalene	0.0375U	0.0500	0.0150	0.0375	ug/L
Acenaphthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Acenaphthylene	0.0375U	0.0500	0.0150	0.0375	ug/L
Anthracene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo(a)Anthracene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[a]pyrene	0.0150U	0.0200	0.00620	0.0150	ug/L
Benzo[b]Fluoranthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[g,h,i]perylene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[k]fluoranthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Chrysene	0.0375U	0.0500	0.0150	0.0375	ug/L
Dibenzo[a,h]anthracene	0.0150U	0.0200	0.00620	0.0150	ug/L
Fluoranthene	0.0291J	0.0500	0.0150	0.0375	ug/L
Fluorene	0.0375U	0.0500	0.0150	0.0375	ug/L
Indeno[1,2,3-c,d] pyrene	0.0375U	0.0500	0.0150	0.0375	ug/L
Naphthalene	0.0750U	0.100	0.0310	0.0750	ug/L
Phenanthrene	0.0750U	0.100	0.0310	0.0750	ug/L
Pyrene	0.0247J	0.0500	0.0150	0.0375	ug/L
Surrogates					
2-Methylnaphthalene-d10 (surr)	75	38-100		0	%
Fluoranthene-d10 (surr)	82.7	30-111		0	%

Batch Information

Analytical Batch: XMS14200 Analytical Method: 8270E SIM LV (PAH) Instrument: Agilent 8890 GC/MS SYA Analyst: HMW Analytical Date/Time: 4/3/2024 8:23:00PM Prep Batch: XXX49299 Prep Method: SW3535A Prep Date/Time: 4/2/2024 2:00:00PM Prep Initial Wt./Vol.: 250 mL Prep Extract Vol: 1 mL

Print Date: 04/10/2024 4:55:09PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1241194 [XXX49299] Blank Spike Lab ID: 1758198 Date Analyzed: 04/03/2024 20:39 Spike Duplicate ID: LCSD for HBN 1241194 [XXX49299] Spike Duplicate Lab ID: 1758199 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194002, 1241194005

Results by 8270E SIM LV (PAH)

	Blank Spike (ug/L) Spike Duplicate (ug/L)					cate (ug/L)			
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
1-Methylnaphthalene	2	1.35	67	2	1.30	65	(41-115)	3.50	(< 20)
2-Methylnaphthalene	2	1.31	65	2	1.28	64	(39-114)	2.20	(< 20)
Acenaphthene	2	1.43	72	2	1.45	72	(48-114)	0.85	(< 20)
Acenaphthylene	2	1.50	75	2	1.46	73	(35-121)	2.40	(< 20)
Anthracene	2	1.69	84	2	1.61	81	(53-119)	4.40	(< 20)
Benzo(a)Anthracene	2	1.53	77	2	1.52	76	(59-120)	0.91	(< 20)
Benzo[a]pyrene	2	1.60	80	2	1.57	79	(53-120)	1.60	(< 20)
Benzo[b]Fluoranthene	2	1.54	77	2	1.53	76	(53-126)	1.20	(< 20)
Benzo[g,h,i]perylene	2	1.42	71	2	1.45	72	(44-128)	1.80	(< 20)
Benzo[k]fluoranthene	2	1.73	87	2	1.66	83	(54-125)	4.50	(< 20)
Chrysene	2	1.59	79	2	1.62	81	(57-120)	2.20	(< 20)
Dibenzo[a,h]anthracene	2	1.58	79	2	1.59	80	(44-131)	0.65	(< 20)
Fluoranthene	2	1.51	75	2	1.51	76	(58-120)	0.29	(< 20)
Fluorene	2	1.50	75	2	1.49	75	(50-118)	0.34	(< 20)
Indeno[1,2,3-c,d] pyrene	2	1.51	76	2	1.51	75	(48-130)	0.16	(< 20)
Naphthalene	2	1.33	67	2	1.29	65	(43-114)	3.20	(< 20)
Phenanthrene	2	1.53	77	2	1.49	75	(53-115)	2.70	(< 20)
Pyrene	2	1.46	73	2	1.46	73	(53-121)	0.04	(< 20)
Surrogates									
2-Methylnaphthalene-d10 (surr)	2		75	2		72	(38-100)	4.50	
Fluoranthene-d10 (surr)	2		83	2		84	(30-111)	1.10	

Batch Information

Analytical Batch: XMS14200 Analytical Method: 8270E SIM LV (PAH) Instrument: Agilent 8890 GC/MS SYA Analyst: HMW Prep Batch: XXX49299 Prep Method: SW3535A Prep Date/Time: 04/02/2024 14:00 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 04/10/2024 4:55:12PM

SGS North America Inc.

200 West Potter Drive Anchorage, AK 95518 t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank	Method Blank						
Blank ID: MB for HBN 1874565 Blank Lab ID: 1758248		Matrix: Water (Surface, Eff., Ground)					
QC for Samples: 1241194001, 1241194002, 12411	94005						
Results by AK102							
Parameter	<u>Results</u>	LOQ/CL	DL	LOD	<u>Units</u>		
Diesel Range Organics	0.112U	0.150	0.0500	0.112	mg/L		
Surrogates							
5a Androstane (surr)	68.9	60-120		0	%		
Batch Information							
Analytical Batch: XFC16808			Prep Batch	: XXX49303			
Analytical Method: AK102			Prep Method: SW3520C				
Instrument: Agilent 7890B F			Prep Date/Time: 4/2/2024 5:30:00PM				
Instrument: Agilent 7890B F			Dron Initial	V//t /V/01 · 1/1/1			



Blank Spike Summary

Blank Spike ID: LCS for HBN 1241194 [XXX49303] Blank Spike Lab ID: 1758249 Date Analyzed: 04/04/2024 05:18 Spike Duplicate ID: LCSD for HBN 1241194 [XXX49303] Spike Duplicate Lab ID: 1758250 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1241194001, 1241194002, 1241194005

[
Results	hv	AK1	02

		Blank Spike	5	Spike Duplie	cate (mg/L)				
<u>Parameter</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Diesel Range Organics	5	4.45	89	5	4.80	96	(75-125)	7.70	(< 20)
Surrogates									
5a Androstane (surr)	0.1		108	0.1		115	(60-120)	6.50	
Batch Information									
Analytical Batch: XFC16808				Pre	p Batch: X	XX49303			
Analytical Method: AK102				Pre	p Method:	SW3520C			
Instrument: Agilent 7890B F				Pre	p Date/Tim	e: 04/02/202	4 17:30		
Analyst: BRP				Spil	ke Init Wt./\	/ol.: 0.1 mg	I/L Extract V	/ol: 1 mL	
				Dup	e Init Wt./\	/ol.: 0.1 mg	/L Extract Vo	ol: 1 mL	



SGS North America Inc. CHAIN OF CUSTODY RECORD





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	CLIENT:	Nortech					in	struc Omis:	tions: sions	Sect may	tions 1 delay t	- 5 r he or	nust nset c	be fille of anal	ed out. ysis.			Page 1 of 1
	CONTACT:	William Watts PHON	E #: 907-452-	5688		Sect	tion 3					Pr	eserva	tive				
section 1	PROJECT NAME:	Former Kiewit Facility - PROJEC 2050 Peger Rd PERMIT O: William Watts E-MAI	CT/ #: L: willia	m.watts@nor	echengr.com	# C O	Comp	HC	, HC	Nor	e HCI	Nor	e Hor lysis*	.e +++++	3 ³ HNO	\sim	**	
S S		Profile	 e #:		-	N T	Grab					0	o.	asar	020			NOTE: *The following analyses
	INVOICE TO	D: QUOT Nortech P.O. #	E #: : 24-1008			A I N	MI (Multi- incre-	K102	EPA 8260 List)	MIS D	Ethane/ / EPA	/ EPA 300	y EPA 300	and Manga 20	Iron and e by EPA 6 red)			require specific method and/or compound list: BTEX, Metals, PFAS
	RESERVED	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	E R S	mental)	DRO by A	VOCs by (Custom	PAHs by EPA 8270	Methane/ Ethene by RSK 175	Nitrate by	Sulfate b	Total Iron by EPA 60	Dissolved Manganes (Field Filte			REMARKS/LOC ID
	(AJ)(#	MW-2	3/27/2024	1220	Water	11	Grab	X	х		х	Х	Х	X	X			
1	DALLY9A	MW-3	3/27/2024	950	Water	13	Grab	x	x	х	X	Х	X	X	X			
	3 AF)	MW-4	3/26/2024	1300	Water	6	Grab		X		X			· ·				
ы	GAD	MW-5	3/26/2024	1100	Water	6	Grab		X		X							
lec	GAG	MW-300	3/27/2024	1000	Water	7	Grab	X	X	X								
ľ	GAD	EB-1	3/26/2024	1345	Water	3	Grab		X									
	(7 AC)	ТВ-2	-	· <u>-</u>	Water	3	-		X									Lab Prep Trip Blank
									+									
									1		·							
F	Relinquist	ned By: (1)	Date 3/21/24	Time	Received By:	7			7	Sec	ction 4	DC	DD Proj	ject? Ye	es No	Data	a Deliv	verable Requirements:
	nu	can att	0,0,0	7900 Time	Dominand Bur		Martin Contraction	<i>c</i> (10000000000000000000000000000000000000	Co	oler ID:	rnarou	nd Tin	and/o	r Snecia	IInstru	ctions	
ion 5	Relinquish	Relinquished By: (2) Date Time Received By:							Stand No J-	lard TAT	/ Nitra	te Has	Short H		MD: on	d Nan	hthalono	
	Relinquist	ied By: (3)	Date	Time	Received By:	ويتفر ويتفر والمتركب والمتركب والمتركب والمتركب والمتركب والمتركب والمتركب والمتركب والمتركب والمترك	$ \rightarrow $			For V	OCs: Re	port B		,2,4-1 ME	5; 1,3,5-1	wв; an	и мар	
1	Relinquist	ned By: (4)	Date	Time	Received For	Laborat	tory By:			Ten	np Blank	°C:	'J nhiert	<u>\</u>		Chi A	ain of WC_F ACT	
	- Connection		3/28/24	9:15	Jar	المراجعة	Gr	. M						1 J	Dollivor		monto	al Delivery []
			17 77			J					De	nvery	vietnoc	i. Hano	Delivery		mento	al Penkelà l'1

http://www.sgs.com/terms-and-conditions

21 MARA

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Anc 2.1 °C D30

Page 43 of 68 F083-Blank_COC_20181228



1241194

SAMPLE RECEIPT FORM

	Project I	Manag	er Com	pletion
Was all necessary information recorded on the (COC upon receipt? (temperature, COC seals, etc.?)	Yes	No	N/A	
Was temperature between 0-6°C?	Yes) No	N/A	If "No", are the samples either exempt* or sampled <8 hours prior to receipt?
Were all analyses received within holding time*?	Yes	No	N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	(Yes)	No	N/A	specktad Nitrate
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	(Yes)	> No	N/A	See Coc
If rush was requested by the client, was the requested TAT approved?	Yes	No (N/A) If "NO", what is the approved TAT?
If SEDD Deliverables are required, were Location ID's and an NPDL Number provided?	Yes	No	N/A	Jf "NO", contact client for information.
	Sample	e Logir	n Comp	bletion
Do ID's on sample containers match COC?	Yes	No	N/A	
If provided on containers, do dates/times collected match COC?	Yes -	No	N/A	Note: If times differ <1 hr., record details below and login per COC.
Were all sample containers received in good condition?	Yes	No	N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? *See form F-083 "Sample Guide"	(Yes)	No	N/A	Note: If 200.8/6020 Total Metals are received unpreserved, preserve and note HNO3 lot here: If 200.8/6020 Dissolved Metals are received unpreserved, log in for LABFILTER and do not preserve. For all non-metals methods, inform Project Manager.
Were Trip Blanks (VOC, GRO, Low-Level Hg, etc.) received with samples, where applicable*?	Yes	No	N/A	
Were all VOA vials free of headspace >6mm?	Yes	No	N/A	
Were all soil VOA samples received field extracted with Methanol?	Yes	No	N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	Yes	No (N/A	
If special handling is required, were containers labelled appropriately? e.g. MI/ISM, foreign soils, lab filter, Ref Lab, limited volume	Yes	No	N/A	
For Rush/Short Holding time, was the lab notified?	Yes	> No	N/A	Short Hold
For any question answered "NO", was the Project Manager notified?	Yes	No	N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	Yes) No	N/A	Reviewer Initials: JLb
Additional Notes/Clarification where Applicable, inc	luding r	esolutio	on of "N	o" answers when a change order is not attached:



Sample Containers and Preservatives

Container Id	Preservative	<u>Container</u>	Container Id	Preservative	<u>Container</u>
		<u>condition</u>			<u>condition</u>
1241194001-A	HCL to $pH < 2$	OK			
1241194001-B	HCL to $pH < 2$	OK			
1241194001-C	HCL to $pH < 2$	OK			
1241194001-D	HCL to $pH < 2$	OK			
1241194001-E	HCL to $pH < 2$	OK			
1241194001-F	No Preservative Required	OK			
1241194001-G	HNO3 to pH < 2	OK			
1241194001-H	HCL to $pH < 2$	OK			
1241194001-I	HCL to $pH < 2$	OK			
1241194001-J	HCL to pH < 2	OK			
1241194002-A	HCL to pH < 2	OK			
1241194002-B	HCL to $pH < 2$	OK			
1241194002-C	HCL to $pH < 2$	OK			
1241194002-D	HCL to $pH < 2$	OK			
1241194002-E	HCL to $pH < 2$	OK			
1241194002-F	No Preservative Required	OK			
1241194002-G	No Preservative Required	OK			
1241194002-H	No Preservative Required	OK			
1241194002-I	HNO3 to pH < 2 $$	OK			
1241194002-J	HCL to $pH < 2$	OK			
1241194002-K	HCL to pH < 2	OK			
1241194002-L	HCL to pH < 2	OK			
1241194003-A	HCL to pH < 2	OK			
1241194003-B	HCL to pH < 2	OK			
1241194003-C	HCL to pH < 2	ОК			
1241194003-D	HCL to pH < 2	ОК			
1241194003-E	HCL to pH < 2	ОК			
1241194003-F	HCL to pH < 2	ОК			
1241194004-A	HCL to pH < 2	ОК			
1241194004-B	HCL to pH < 2	ОК			
1241194004-C	HCL to pH < 2	ОК			
1241194004-D	HCL to pH < 2	ОК			
1241194004-E	HCL to pH < 2	ОК			
1241194004-F	HCL to pH < 2	ОК			
1241194005-A	HCL to pH < 2	ОК			
1241194005-B	HCL to pH < 2	OK			
1241194005-C	HCL to pH < 2	OK			
1241194005-D	HCL to pH < 2	OK			
1241194005-E	HCL to pH < 2	OK			
1241194005-F	No Preservative Required	OK			
1241194005-G	No Preservative Required	OK			
1241194006-A	HCL to $pH < 2$	OK			
1241194006-B	HCL to $pH < 2$	OK			
1241194006-0	HCL to $pH < 2$	OK			
1241194007-4	HCL to $pH < 2$	OK			
1241194007-B	HCL to $pH < 2$	OK			
1241194007-C	HCL to $pH < 2$	OK			
1241194008-A	HNO3 to pH < 2	OK			
1241194009-A	HNO3 to pH < 2	OK			

Container Id

<u>Preservative</u>

<u>Container</u> Condition Container Id

<u>Preservative</u>

Container Condition

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

 $\operatorname{\mathsf{BU}}$ - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis

requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added. QN - Insufficient sample quantity provided.



Orlando, FL

The results set forth herein are provided by SGS North America Inc.

Technical Report for

SGS North America, Inc

1241194

SGS Job Number: FC14511



Sampling Date: 03/27/24

Report to:

SGS North America, Inc 200 W Potter Dr Anchorage, AK 99518 justin.nelson@sgs.com; env.alaska.reflabteam@sgs.com

ATTN: Justin Nelson

Total number of pages in report: 22



Norme Farm

Norm Farmer Technical Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Client Service contact: Andrea Colby 407-425-6700 Certifications: FL(E83510), LA(03051), KS(E-10327), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AL, AK, AR, CT, IA, KY, MA, MI. MS, ND, NH, NV, OK, OR, IL, UT, VT, WA, WI, WV This report shall not be reproduced, except in its entirety, without the written approval of SGS. Test results relate only to samples analyzed.

SGS North America Inc. • 4405 Vineland Road • Suite C-15 • Orlando, FL 32811 • tel: 407-425-6700 • Page 47 of 68

Please share your ideas about how we can serve you better at: EHS.US.CustomerCare@sgs.com



1 of 22

04/08/24

Automated Report

e-Hardcopy 2.0

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Sample Summary

SGS North America, Inc

1241194

Job No:

Sample Number	Collected Date	Time By	N Received C	fatrix Code Type	Client Sample ID					
This report contains results reported as ND = Not detected. The following applies:Organics ND= Not detected above the RL										
FC14511-1	03/27/24	12:20	04/03/24 A	Q Water	MW-2					
FC14511-2	03/27/24	09:50	04/03/24 A	Q Water	MW-3					
FC14511-3	03/27/24	13:00	04/03/24 A	Q Water	MW-4					
FC14511-4	03/27/24	11:00	04/03/24 A	Q Water	MW-5					

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	SGS North America, Inc	Job No:	FC14511

Site: 1241194

Report Date 4/9/2

e 4/9/2024 1:35:01 AM

On 04/03/2024, 4 Sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. - Orlando. at a maximum corrected temperature of 3.2 C. Samples were intact and chemically preserved, unless noted below. A SGS North America Inc. - Orlando Job Number of FC14511 was assigned to the project.

Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section. Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

GC Volatiles By Method RSKSOP-147/175

Matrix: AQ Batch ID: GLL3074

Sample(s) FC14504-1DUP, FC14504-3MS were used as the QC samples indicated.

Matrix: AQ Batch ID: GLL3075

Sample(s) FC14542-1DUP, FC14542-3MS were used as the QC samples indicated.

SGS North America Inc. - Orlando certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted. Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria. SGS North America Inc.-Orlando is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety.

Narrative prepared by:

Gutierrez, Kenneth John L. Report Generation

Summary of Hits Job Number: FC14511 Account: SGS Nort SGS North America, Inc Project: 1241194 Collected: 03/27/24

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
FC14511-1	MW-2					
Methane		3450	5.0		ug/l	RSKSOP-147/175
FC14511-2	MW-3					
Methane		1460	1.0		ug/l	RSKSOP-147/175
FC14511-3	MW-4					
Methane		735	0.50		ug/l	RSKSOP-147/175
FC14511-4	MW-5					
Methane		251	0.50		ug/l	RSKSOP-147/175

ω





Orlando, FL

4

Sample Results

Report of Analysis



Client San Lab Samp Matrix: Method: Project:	nple ID: MW-2 le ID: FC1451 AQ - W RSKSO 1241194	1-1 ater P-147/175 4					D D P	Pate Sampled: Pate Received: Patercent Solids:	03/27/24 04/03/24 n/a
	File ID	DF	Analyzed	I	By	Prep l	Date	Prep Batc	h Analytical Batch
Run #1	LL88426.D	1	04/04/24	12:26	JR	n/a		n/a	GLL3074
Run #2	LL88436.D	10	04/04/24	13:44	JR	n/a		n/a	GLL3074
	Initial Volume	Headspac	ce Volume	Volu	me Inj	jected	Temp	erature	
Run #1	38.0 ml	5.1 ml		500 i	ıl		21 De	eg. C	
Run #2	38.0 ml	5.1 ml		500 ι	ıl		21 De	eg. C	
CAS No.	Compound		Resul	t	RL	Units	Q		
74-82-8	Methane		3450	1	5.0	ug/l			
74-84-0	Ethane		ND		1.0	ug/l			
74-85-1	Ethene		ND		1.0	ug/l			

Report of Analysis

(a) Result is from Run# 2

ND = Not detected

- RL = Reporting Limit
- E = Indicates value exceeds calibration range

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound



4.1 **4**

J = Indicates an estimated value
Client San Lab Samp Matrix: Method: Project:	nple ID: MW-3 le ID: FC1451 AQ - W RSKSO 1241194	1-2 fater P-147/175 4	5			D D Pe	ate Sampled: ate Received: ercent Solids:	03/27/24 04/03/24 n/a
	File ID	DF	Analyzed	By	Prep 1	Date	Prep Batc	h Analytical Batch
Run #1	LL88427.D	1	04/04/24	12:34 JR	n/a		n/a	GLL3074
Run #2	LL88459.D	1	04/05/24	12:49 JR	n/a		n/a	GLL3075
	Initial Volume	Headspa	ace Volume	Volume I	njected	Temp	erature	
Run #1	37.5 ml	5.0 ml		500 ul		21 De	g. C	
Run #2	38.0 ml	5.0 ml		250 ul		21 De	g. C	
CAS No.	Compound		Result	RL	Units	Q		
74-82-8	Methane		1460 ^a	1.0	ug/l			
74-84-0	Ethane		ND	1.0	ug/l			
74-85-1	Ethene		ND	1.0	ug/l			

Report of Analysis

(a) Result is from Run# 2

ND = Not detected

- RL = Reporting Limit
- E = Indicates value exceeds calibration range

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound

Page 1 of 1

4.2 **4**



J = Indicates an estimated value

SGS North America Inc.

Report of Analysis

Client San Lab Samp Matrix: Method: Project:	nple ID: MW-4 le ID: FC1451 AQ - W RSKSO 1241194	1-3 ater P-147/175 4					D D P	ate Sampled: ate Received: ercent Solids:	03/27/24 04/03/24 n/a
	File ID	DF	Analyzed	l	By	Prep I	Date	Prep Batcl	h Analytical Batch
Run #1 Run #2	LL88428.D	1	04/04/24	12:43	JR	n/a		n/a	GLL3074
Run #1 Run #2	Initial Volume 38.0 ml	Headspa 5.0 ml	ice Volume	Volui 500 u	me Inj 1	ected	Temp 21 De	erature g. C	
CAS No.	Compound		Result	t i	RL	Units	Q		
74-82-8	Methane		735		0.50	ug/l			
74-84-0	Ethane		ND		1.0	ug/l			
74-85-1	Ethene		ND		1.0	ug/l			

ND = Not detected

- RL = Reporting Limit
- E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank

Page 55 of 68

N = Indicates presumptive evidence of a compound

4.3



J = Indicates an estimated value

SGS North America Inc.

Report of Analysis

Client San Lab Samp Matrix: Method: Project:	nple ID: MW-5 le ID: FC1451 AQ - W RSKSO 1241194	1-4 'ater P-147/175 4				D D P	Pate Sampled: Pate Received: ercent Solids:	03/27/24 04/03/24 n/a
Run #1 Run #2	File ID LL88431.D	DF 1	Analyzed 04/04/24	By 13:06 JR	Prep I n/a	Date	Prep Batc n/a	h Analytical Batch GLL3074
Run #1 Run #2	Initial Volume 37.0 ml	Headspa 5.0 ml	ace Volume	Volume In 500 ul	jected	Temp 21 De	erature eg. C	
CAS No.	Compound		Result	RL	Units	Q		
74-82-8 74-84-0 74-85-1	Methane Ethane Ethene		251 ND ND	0.50 1.0 1.0	ug/l ug/l ug/l			

ND = Not detected

- RL = Reporting Limit
- E = Indicates value exceeds calibration range

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound



Page 1 of 1

4.4

J = Indicates an estimated value



Orlando, FL

Section 5

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody

SGS North America Inc. CHAIN OF CUSTODY RECORD



Locations Nationwide Alaska Florida New Jersey Colorado

North Carolina

Texas

										-(4	511	Virginia <u>www.u</u>	Louisiana <u>is.sgs.com</u>
CLIENT:	SGS North Ame	erica Inc Ala	ska Division		SG	S Refere	ence:			S	GS,	Orla	ando FL		Barra 4 of 4
CONTACT:	Justin Nelson	PHONE NO:	(907) 56	52-2343	Add	tional	Comm	ents	: All	soils	repo	rt ou	t in dry weigl	nt unless	Pageron
PROJECT	12/110/	PWSID#:			#	Preserv									
NAME:	1241134	NPDL#:			c	Used:	*								
REPORTS TO	: Justin.Nelson	E-MAIL:	Justin.Nelso	n@sgs.com	0	TYPE									
		Env.Alaska.	RefLabTeam	@sgs.com	T	C = COMP	je								
INVOICE TO:	SGS - Alaska	QUOTE #:			A	G =	e ar								
env.alask	a.accounting@sgs.com	P.O. #:	1241	194	I N	MI =	- Me								
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	тіме ННММ	MATRIX/ MATRIX CODE	E R S	Incre- mental Soils	RSK-175 Ethane/E				MS	MSD	SGS lab #		Location ID
1	MW-2	3/27/2024	12:20	Water	3		X						1241194001		2
2	MW-3	3/27/2024	9:50	Water	3		X						1241194002		
3	MW-4	3/27/2024	13:00	Water	3		X			12			1241194003		
4	MW-5	3/27/2024	11:00	Water	3		X			_			1241194004		
						-									
										- 1	NITTA	100	<u> </u>	ZA	
						-					3011/4	L ASS	SSMENT		
					-	-		-		-	_	-		it	Comment demands
					-			-		L	ABEL	VERI	CATION	A	/
Relinquished	By: (1)	Date	Time	Received	Bv					roioct	2	1 21415	NO	Data Dalla	wolite Operation antos
Λ.	/				<i></i>				Banar					Data Delive	erable Requirements.
WU	n	4/1/24	1115						If J- Rep	ort as [LOQ.	NO		Level 2
Relinquished	By: (2)	Date	Time	Received	By:				Cooler	ID:		-			
									Rec	luest	ed Tı	ırnar	ound Time ai	nd-or Spe	cial Instructions:
Relinquished	By: (3)	Date	Time	Received	By:										
									Temp	Blank	\$°C:+}	4		Chain of (Custody Seal: (Circle)
Relinquished	By: (4)	Date	Time	Received	For	boratory	1 By: 91. 3/04	5			or Ar	nbient	:[]	INTACT	BROKEN ABSENT
		L		P	-	04/0	3124	_		_					

[X 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301 []5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (10) 350-1557 http://www.sgs.com/terms and conditions.htm

REVIEWED Colu

F088_COC_REF_LAB_20190411

FC14511: Chain of Custody Page 1 of 2

Job Number:	fc14511 Client:	SGS ALASKA		Project: 1241194	Project: 1241194				
Date / Time Received:	4/3/2024 9:15:00 AM	Delivery Method:	FED EX	Airbill #'s: 6420 4270 4633	3				
Cooler Temps (Raw Mea Cooler Temps (Cor	asured) °C: Cooler 1: (2.2) rrected) °C: Cooler 1: (3.2)	• •							
Cooler Information 1. Custody Seals Present: 2. Custody Seals Intact: 3. Temp criteria achieved: 4. Cooler temp verification: 5. Cooler media: Trip Blank Information 1. Trip Blank present / cool 2. Trip Blank listed on COC 3. Type of TB Received	Y or N I I I I I I I I I I I I I I I I I I I I I I I I) N/A N/A V	Sample Into 1. Sample Into 2. Samples p 3. Sufficient v 4. Condition 5. Sample re 6. Dates/Tim 7. VOCs hav 8. Bottles rec 9. Compositi 10. Voa Soil 11. % Solids 12. Residual	prmation bels present on bottles: presented properly rolume/containers recv'd for analysis of sample: wov'd within HT tes/IDs on COC match sample label re headspace beived for unspecified tests ing instructions clear Kits/Jars received past 48hrs? Jar Received? Chlorine Present?	Y V V Intact V U U U U U U U U U U U U U				
Misc Information Number of Encores: 24 Test Strip Lot #s: Residual Chlorine Test S Comments	5 Gram 5 Gran pH 0-3:226422 Strip Lot #	npH 10-12: 		lumber of Lab Filtered Metals: Other: (Specify)pH 1.0 -	12.0	22	2221		

SGS - Orlando Sample Receipt Summary

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FC14511: Chain of Custody Page 2 of 2



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Section 6

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

6

Method Blank Summary

Job Number:	FC14511
Account:	SGSAKA SGS North America, Inc
Project:	1241194

	Sample H GLL3074-MB I	F ile ID LL88410.D	DF 1	Analyzed 04/04/24	By JR	Prep Date n/a	Prep Batch n/a	Analytical Batch GLL3074
--	--------------------------	------------------------------	----------------	--------------------------	-----------------	-------------------------	--------------------------	------------------------------------

The QC reported here applies to the following samples:

FC14511-1, FC14511-2, FC14511-3, FC14511-4

CAS No.	Compound	Result	RL	Units Q
74-82-8	Methane	ND	0.50	ug/l
74-84-0	Ethane	ND	1.0	ug/l
74-85-1	Ethene	ND	1.0	ug/l

Page 1 of 1

Method: RSKSOP-147/175

Method Blank Summary Job Number: FC14511

Account: Project:	SGSAKA SGS N 1241194	North Ame	erica, Inc				
Sample GLL3075-M	File ID B LL88442.D	DF 1	Analyzed 04/05/24	By JR	Prep Date n/a	Prep Batch n/a	Analytical Batch GLL3075
The QC rep FC14511-2	orted here applies to	o the follo	owing samples:			Method: RSKS	OP-147/175
CAS No.	Compound		Result H	RL	Units Q		
74-82-8	Methane		ND 0	.50	ug/l		





Blank Spike/Blank Spike Duplicate Summary

Job Number:	FC14511
Account:	SGSAKA SGS North America, Inc
Project:	1241194

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GLL3074-BS	LL88408.D	1	04/04/24	JR	n/a	n/a	GLL3074
GLL3074-BSD	LL88409.D	1	04/04/24	JR	n/a	n/a	GLL3074
GLL3074-BSD	LL88409.D	1	04/04/24	JR	n/a	n/a	G

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FC14511-1, FC14511-2, FC14511-3, FC14511-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	108	93.0	86	98.6	91	6	62-139/30
74-84-0	Ethane	219	185	84	201	92	8	67-141/30
74-85-1	Ethene	290	245	84	274	94	11	68-141/30

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Blank Spike/Blank Spike Duplicate Summary

Job Number:	FC14511
Account:	SGSAKA SGS North America, Inc
Project:	1241194

Sample GLL3075-BS GLL3075-BSD	File ID LL88440.D LL88441.D	DF 1 1	Analyzed 04/05/24 04/05/24	By JR JR	Prep Date n/a n/a	e Pi n/ n/	r ep Batc l a a	h Analytical Batch GLL3075 GLL3075
The QC reported here applies to the following samples: Method: RSKSOP-147/175								
FC14511-2								
CAS No. Con	pound	Sp ug	ike BSP /l ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD

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* = Outside of Control Limits.

Matrix Spike Summary

Job Number:	FC14511	
Account:	SGSAKA SGS North America, In	с
Project:	1241194	

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FC14504-3MS	LL88416.D	1	04/04/24	JR	n/a	n/a	GLL3074
FC14504-3	LL88412.D	1	04/04/24	JR	n/a	n/a	GLL3074

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FC14511-1, FC14511-2, FC14511-3, FC14511-4

CAS No.	Compound	FC14504-3 ug/l Q	Spike ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	0.50 U	108	95.2	88	62-139
74-84-0	Ethane	1.0 U	219	196	89	67-141
74-85-1	Ethene	1.0 U	290	268	92	68-141

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6.3.1



Matrix Spike Summary

Job Number:	FC14511	
Account:	SGSAKA SGS North America,	Inc
Project:	1241194	

Sample FC14542-3MS FC14542-3	File ID LL88448.D LL88444.D	DF 1 1	Analyzed 04/05/24 04/05/24	By JR JR	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch GLL3075 GLL3075
The QC reported	here applies to	the followi	ng samples:		Μ	lethod: RSKSC	D P-147/175
FC14511-2							

		FC14542	2-3	Spike	MS	MS	
CAS No.	Compound	ug/l	Q	ug/l	ug/l	%	Limits
74-82-8	Methane	0.50 U		108	98.2	91	62-139

6.3.2

Duplicate Summary Job Number: FC14511

Job Number:FC14511Account:SGSAKA SGS North America, IncProject:1241194

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FC14504-1DUP	LL88415.D	1	04/04/24	JR	n/a	n/a	GLL3074
FC14504-1	LL88411.D	1	04/04/24	JR	n/a	n/a	GLL3074

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FC14511-1, FC14511-2, FC14511-3, FC14511-4

CAS No.	Compound	FC14504-1 ug/l Q	DUP ug/l Q	RPD	Limits
74-82-8	Methane	0.50 U	ND	nc	30
74-84-0	Ethane	1.0 U	ND	nc	30
74-85-1	Ethene	1.0 U	ND	nc	30



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Duplicate Summary

Job Number:	FC14511
Account:	SGSAKA SGS North America, Inc
Project:	1241194

Sample FC14542-1DUP FC14542-1	File ID LL88447.D LL88443.D	DF 1 1	Analyzed 04/05/24 04/05/24	By JR JR	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch GLL3075 GLL3075
The QC reported	here applies to	the follow	ving samples:]	Method: RSKS	OP-147/175
FC14511-2							

		FC14542-1	DUP			
CAS No.	Compound	ug/l Q	ug/l	Q	RPD	Limits
74-82-8	Methane	0.50 U	ND		nc	30

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* = Outside of Control Limits.

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	William Watts May 10, 2024	CS Site Name:	Kiewit Pacific Company, 2050 Peger Road, Fairbanks, Alaska	Lab Name:	SGS North America Inc.
Title:	Project Manager	ADEC File No.:	102.38.164	Lab Report No.:	1241194
Consulting Firm:	<i>NORTECH</i> , Inc.	Hazard ID No.:	25680	Lab Report Date:	April 11, 2024

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
 Yes ⊠ No □ N/A □ Comments:
- b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?

```
\mathsf{Yes} \boxtimes \mathsf{No} \Box \mathsf{N/A} \Box
```

Comments: Except for Light Gases (methane, ethane, and ethene) analysis by EPA Method RSK175, all sample analyses were performed by SGS North America Inc. in Anchorage, Alaska. Samples for Light Gases analysis were transferred to SGS-Orlando, Florida network laboratory. The Light Gases analysis was conducted to evaluate natural source zone depletion at the site.

2. Chain of Custody (CoC)

a. Is the CoC information completed, signed, and dated (including released/received by)?

```
Yes \boxtimes No \square N/A \square
Comments:
```

b. Were the correct analyses requested?

Yes No No N/A Analyses requested: DRO by AK102, VOCs by EPA Method 8260D, PAHs by EPA Method 8270E SIM, and Natural Attenuation Parameters: Methane/Ethane/Ethene by EPA Method RSKSOP 147/175, Nitrate and Sulfate by EPA Method 300.0, and Total and Dissolved Iron and Manganese by EPA Method 6020B.

Comments:

3. Laboratory Sample Receipt Documentation

a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes \boxtimes No \square N/A \square Cooler temperature(s): 2.1° C and 3.2° C

Sample temperature(s): Click or tap here to enter text. Comments:

b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- c. Is the sample condition documented broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
 Yes ⊠ No □ N/A □
 Comments: The samples were received in good condition.
- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
 Yes □ No □ N/A ⊠
 Comments: There were no discrepancies.
- e. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

4. Case Narrative

- a. Is the case narrative present and understandable?
 Yes ⊠ No □ N/A □
 Comments:
- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes No N/A Comments: 1241124004(1757750MS) (1757754) MS 300.0 - Anions - MS recovery for sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

1241124002(1757749MSD) (1757756) MSD 300.0 - Anions - MSD recovery for sulfate is outside of QC criteria. Refer to LCS for accuracy

requirements.

- c. Were all the corrective actions documented?
 Yes □ No □ N/A ⊠
 Comments: No corrective actions were necessary.
- d. What is the effect on data quality/usability according to the case narrative? Comments: There is no effect on data quality or usability according to the case

narrative.

5. Sample Results

- Are the correct analyses performed/reported as requested on CoC?
 Yes ⊠ No □ N/A □
 Comments:
- b. Are all applicable holding times met?
 Yes ⊠ No □ N/A □
 Comments:
- c. Are all soils reported on a dry weight basis?
 Yes □ No □ N/A ⊠
 Comments: There were no soil samples submitted with this work order.
- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
 Yes ⊠ No □ N/A □

Comments:

e. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

6. QC Samples

- a. Method Blank
 - Was one method blank reported per matrix, analysis, and 20 samples? Yes ⋈ No □ N/A □ Comments:
 - ii. Are all method blank results less than LOQ (or RL)?
 Yes ⊠ No □
 Comments:

- iii. If above LoQ or RL, what samples are affected? Comments: No samples are affected. Method blank results are below LOQs.
- iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes $\hfill\square$ No $\hfill\square$ N/A $\hfill\square$ Comments: No samples are affected. No data flags are necessary.

v. Data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

 Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- ii. Metals/Inorganics Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- iii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) Yes ⊠ No □ N/A □ Comments:
- iv. Precision Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
 Yes ⊠ No □ N/A ⊠

Comments: Click or tap here to enter text.

- v. If %R or RPD is outside of acceptable limits, what samples are affected? Comments: No samples are affected.
- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes \Box No \Box N/A \boxtimes Comments: No samples are affected. No data flags are necessary.

vii. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes \Box No \boxtimes N/A \Box Comments: MS/MSD samples were not required for this project, and the lab did not run a MS/MSD for DRO, VOCs, and PAHs with the batch. According to the lab, when there is not sufficient volume for MS/MSD analyses an LCS/LCSD is run.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- iii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
 Yes ⊠ No □ N/A □ Comments:
- iv. Precision Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

- v. If %R or RPD is outside of acceptable limits, what samples are affected? Comments: No samples are affected.
- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes \Box No \Box N/A \boxtimes Comments: No samples are affected. No data flags are necessary.

vii. Is the data quality or usability affected?

Yes \Box No \Box N/A \boxtimes Comments: Data quality and usability are not affected.

- d. Surrogates Organics Only or Isotope Dilution Analytes (IDA) Isotope Dilution Methods Only
 - Are surrogate/IDA recoveries reported for organic analyses field, QC, and laboratory samples?
 Yes ⊠ No □ N/A □

Comments: Click or tap here to enter text.

- ii. Accuracy Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
 Yes □ No □ N/A ⊠
 Comments: Click or tap here to enter text.
- iv. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.

e. Trip Blanks

- Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- ii. Are all results less than LoQ or RL? Yes ⊠ No □ N/A □ Comments: Click or tap here to enter text.
- iii. If above LoQ or RL, what samples are affected? Comments: No samples are affected.
- iv. Is the data quality or usability affected?
 Yes □ No □ N/A ⊠
 Comments: Data quality and usability are not affected.
- f. Field Duplicate
 - i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

 $\mathsf{Yes}\,\boxtimes\;\;\mathsf{No}\,\square\;\;\;\mathsf{N/A}\,\square$

Comments: Field duplicate pair MW-3/MW-300 was submitted with this laboratory work order.

ii. Was the duplicate submitted blind to lab?

Yes \boxtimes No \square N/A \square Comments: Click or tap here to enter text.

 iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X \ 100$$

Where R_1 = Sample Concentration

 R_2 = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

 $\mathsf{Yes} \square \mathsf{No} \boxtimes \mathsf{N/A} \square$

Comments: Thirteen analytes were detected in the duplicate pair. Five analytes had RPDs greater than the 30% recommended for water ranging from 31.9% to 85.6%. The associated well was pumped dry, was slow to recharge, and purge water from the well exhibited petroleum odor. The RPD exceedances are attributed to non-homogenous sample matrix.

iv. Is the data quality or usability affected? (Explain)

Yes 🛛 No 🗆 N/A 🗆

Comments: Data quality and usability are not adversely affected. The higher value of each detected analyte in the duplicate pair was consistent with previous sampling events and was used for decision purposes.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected? Yes ⊠ No □ N/A □

Comments: Click or tap here to enter text.

- ii. Are all results less than LoQ or RL?
 Yes ⊠ No □ N/A □
 Comments: Click or tap here to enter text.
- iii. If above LoQ or RL, specify what samples are affected. Comments: No samples are affected.
- iv. Are data quality or usability affected? Yes □ No □ N/A ⊠

Comments: Data quality and usability are not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?

Yes 🛛 No 🗆 N/A 🗆

Comments: No additional flags or qualifiers are necessary for this work order.