



July 1, 2026

Mr. Anthony Bell
Circle K Stores, Inc.
1100 Situs Court, Suite 100
Raleigh, NC 27606

Delivered via email: abell@circlek.com

**SUBJECT: Revised Work Plan to Monitor Petroleum-Contaminated Media
Circle K Store 2746059, 601 Northwest Bypass, Great Falls, Montana
MDEQ Facility I.D. No. 07-13729 (TID 19059); Petroleum Release No. 6497;
WP ID# 35186
Tetra Tech Project No.: 117-082722-26002**

Dear Mr. Bell:

Tetra Tech, Inc. (Tetra Tech) is pleased to submit this work plan for monitoring at the Circle K Store #2746059 located at 601 Northwest Bypass, Great Falls, Montana (**Figures 1 and 2**). This work plan was prepared in response to a request from Christopher Herman of the Montana Department of Environmental Quality (MDEQ) in correspondence dated May 4, 2026 (MDEQ, 2026).

The following work plan presents a brief discussion of the site's history and the proposed scope of work to meet the MDEQ request.

BACKGROUND

Circle K Store 2746059 is located at 601 Northwest Bypass Road, Great Falls, Cascade County, Montana (**Figure 1**). The site consists of a store building, a drive-through car wash, an underground storage tank (UST) basin, and four fuel dispensers (**Figure 2**). Residential properties border the site on the north, and commercial properties on the east, west, and south.

The release was discovered in June 2022. Storage tank contractors working on the electrical lines within the UST basin detected gasoline odor in the gravel, and a sheen was observed on the water inside the tank basin. The tank basin was excavated to approximately four feet below grade or one foot below the top of the USTs. The petroleum hydrocarbon-impacted gravel was excavated, temporarily stored on-site, and, following receipt of laboratory results, disposed of at the Republic Services Landfill in Great Falls, Montana (Tetra Tech, 2022). The tank basin was then dewatered to the excavation level. The petroleum hydrocarbon-impacted groundwater was pumped into a frac tank and later treated and disposed of in the City of Great Falls sanitary sewer (Tetra Tech, 2022). The water observed in the tank basin did not appear to be groundwater, but perched water contained in the UST basin, as the water did not refill the following dewatering. The side walls of the tank basin were composed of clay and sandy clay (Tetra Tech, 2022).

After the dewatering activities, two soil samples and one water sample were collected from the UST basin. The analytical results indicated petroleum hydrocarbon impacts to the soil and groundwater. The reported benzene and C9-C10 aromatics concentrations in the UST basin floor sample exceeded MDEQ leaching to groundwater RBSLs (MDEQ, 2024). The water sample collected within the UST basin indicated multiple MDEQ Risk Based Screening Level (RBSL) exceedances of volatile petroleum hydrocarbons (Tetra Tech, 2022).

In 2023, a remedial investigation was conducted to determine the extent of the release. Soil borings, monitoring well installation, and groundwater monitoring were performed. Analytical results of the soil samples were below laboratory detection limits with the exception of the total extractable hydrocarbons result for boring MW-3 from two to ten feet below site grades, which was observed at a concentration one order of magnitude below the screening level. The groundwater monitoring event results suggest shallow groundwater is not present throughout the site. Only MW-1 and MW-2 were observed with measurable water; the remaining wells were dry. Petroleum hydrocarbon impacts over MDEQ RBSLs were only exceeded in the perched water sample collected from Tank MW located within the UST basin. Petroleum hydrocarbon impacts on perched water appeared limited to the UST basin (Tetra Tech, 2023).

Monitoring wells MW-5 through MW-7 were installed at the site on March 24 and 25, 2025. VPH and EPH concentrations were not observed above MDEQ RBSLs in soil samples collected from the borings. Groundwater monitoring events were performed on April 29, 2025 and September 9, 2025. Water was not observed in wells MW-3, MW-5, MW-6 and MW-7 on April 29, 2025 and was not observed in wells MW-3, MW-6, and MW-7 on September 9, 2025. Several VPH constituents observed above MDEQ RBSLs was limited to the water samples collected from Tank MW during the April and September 2025 sampling events. Based on these results, Tetra Tech recommended continued semi-annual monitoring of water and that a petroleum mixing zone (PMZ) be established for this site (Tetra Tech, 2026).

SCOPE OF WORK

This project's general scope of work is as follows:

WATER MONITORING

Tetra Tech will conduct two water monitoring events at the site. The sampling events will be scheduled approximately six months apart. The following table summarizes the scope of work for the two water monitoring events.

Table 1: Water Monitoring Summary Table

Task Description	Monitoring Well/Parameter List
Depth to Water Measurements	MW-1 through MW-7, Tank MW
Monitoring Wells to be Sampled	Tank MW (1 duplicate sample), MW-2, MW-5, MW-6, and MW-7
Water Quality Stabilization Parameters	Parameter / Stabilization Range • pH: ± 0.1 units, • Temperature: $\pm 10\%$, • Dissolved Oxygen: $\pm 10\%$ or 3 consecutive measurements less than 0.5 mg/L, • Specific Conductivity: $\pm 3\%$, • Oxygen Reduction Potential: ± 10 millivolts, and • Turbidity: $\pm 10\%$ or 3 measurements less than 5 NTU
Sample Collection Criteria	• When water quality parameters are within the stabilization range listed above. • After purging three well volumes from monitoring well with maximum purge time of one hour
Laboratory Analyses	• VPH by Montana Method MADEP • Dissolved Ferrous Iron by Method E200.8 • Dissolved Manganese by Method E200.8 • Sulfate by Method E300.0 • Nitrates/Nitrites by Method E353.2 • Methane by Method 8015M

The following methods will be used for collecting static water level measurements and water sampling. Standard operating procedures (SOPs) are included in **Attachment A**.

- Each monitoring well will be purged using the low-flow, slow-purge pumping method, with a submersible bladder pump or a peristaltic pump, and dedicated polyethylene tubing. During purging, field instruments will analyze the water for water quality stabilization parameters of pH, temperature, dissolved oxygen, specific conductivity, oxidation-reduction potential, and turbidity. A sample will be collected when the water quality parameters stabilize within ranges specified in Table 1. If water quality parameters do not stabilize, then the well will be sampled after purging three well volumes. If three well volumes cannot be purged within one hour, then purging will be discontinued and a sample will not be collected. Purge water will be containerized by the *Disposal of Untreated Water from the Monitoring Wells Flow Chart* and disposed of appropriately following receipt of laboratory results (MDEQ, 2015). The pump will be

decontaminated between wells using a Liquinox® solution followed by a triple rinse technique. Additionally, a new bladder or tubing will be installed between sampling each well.

- Water samples will be collected from wells Tank MW, MW-2, MW-5, MW-6 and MW-7 using a submersible bladder pump or peristaltic pump and dedicated polyethylene tubing. Water samples will be analyzed for VPH using the Montana Method based on the Massachusetts Department of Environmental Protection (MADEP) methods (MDEQ, 2024). The samples will also be analyzed for intrinsic biodegradation indicators (IBIs). The IBIs include dissolved ferrous iron (Method E200.8), dissolved manganese (Method E200.8), sulfate (Method E300.0), nitrates/nitrites (nitrate plus nitrite as nitrogen; Method E353.2), and methane (SW8015 Modified). A duplicate sample will be collected from Tank MW during each sampling event. Also, a trip blank will accompany the sample cooler during sampling and shipment. The duplicate and trip blank samples will be analyzed for the same constituents as the natural samples.

DATA VALIDATION

The analytical data package will include a summary report that cross-references the sample identification with the laboratory identification and identifies variations from standard operating procedures; laboratory analytical results; quality control data, which may include but is not limited to surrogate recoveries, initial and continuing calibration blanks and spikes, method blanks, laboratory control blanks, laboratory spikes, and matrix spike and matrix spike duplicates; FID chromatograms; chain of custody form(s); and a sample receipt checklist. Additionally, data validation will be included with the groundwater monitoring report and will follow MDEQ's data validation guideline as per <https://deq.mt.gov/Portals/112/Land/StateSuperfund/Documents/DataValidationReport.pdf>. It is anticipated that one data validation will be completed for this project.

REPORTING

A monitoring report will be prepared and submitted to MDEQ after the second monitoring event and validation of laboratory data. This report will present the field and analytical results of both monitoring events and compare laboratory analytical results to MDEQ RBSLs. Conclusions and recommendations detailing site conditions, and the extent and magnitude of the plume will be discussed, along with a to-scale map presenting necessary site information. Additionally, a Release Closure Plan (RCP) will be prepared to evaluate the potential path for closure of the release.

SCHEDULE AND BUDGET

Tetra Tech will schedule this work within three business days upon receiving formal authorization by Circle K Stores, Inc. and the MDEQ. The work described above will be conducted on a unit cost basis per attached cost estimate (**Attachment B**). This site is eligible for reimbursement through the Montana Petroleum Tank Release Compensation Board (PTRCB).

AUTHORIZATION

This work will be conducted in accordance with the terms and conditions of the Master Consulting Services Agreement between Holiday Companies and Tetra Tech, Inc. dated March 28, 2017. This work plan may be accepted by signing the attached *Work Authorization #30 (Attachment C)* and returning a copy to our Billings office. If you have questions or comments regarding this work plan, please call us at (406) 248-9161. For your convenience we have forwarded a copy of this work plan to Mr. Christopher Herman (MDEQ).

We appreciate the continuing opportunity to provide Circle K with consulting services and look forward to hearing from you. Please call if you have any questions or comments regarding this work plan.

Sincerely,

Tetra Tech, Inc.



Steven A. Marie, PE
Senior Engineer



Paul E. Lemire
Senior Scientist

SAM/PEL

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Rev 1.docx

cc: Christopher Herman-MDEQ, christopher.herman@mt.gov

Attachments: Figures

Attachment A: Standard Operating Procedures

Attachment B: Cost Estimate

Attachment C: Work Authorization #30

REFERENCES

MDEQ, 2015. Disposal of Untreated Purge Water from Monitoring Wells. July 27.

MDEQ, 2024. Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases, February.

MDEQ 2026. Work Plan Requested to Monitor Petroleum-Contaminated Media at the Circle K Store 2746059 (Former Holiday 59), 601 Northwest Bypass, Great Falls, Cascade County, Montana; Facility ID 07-13729 (TID 19059), Petroleum Release 6497, Work Plan 35186. May 4.

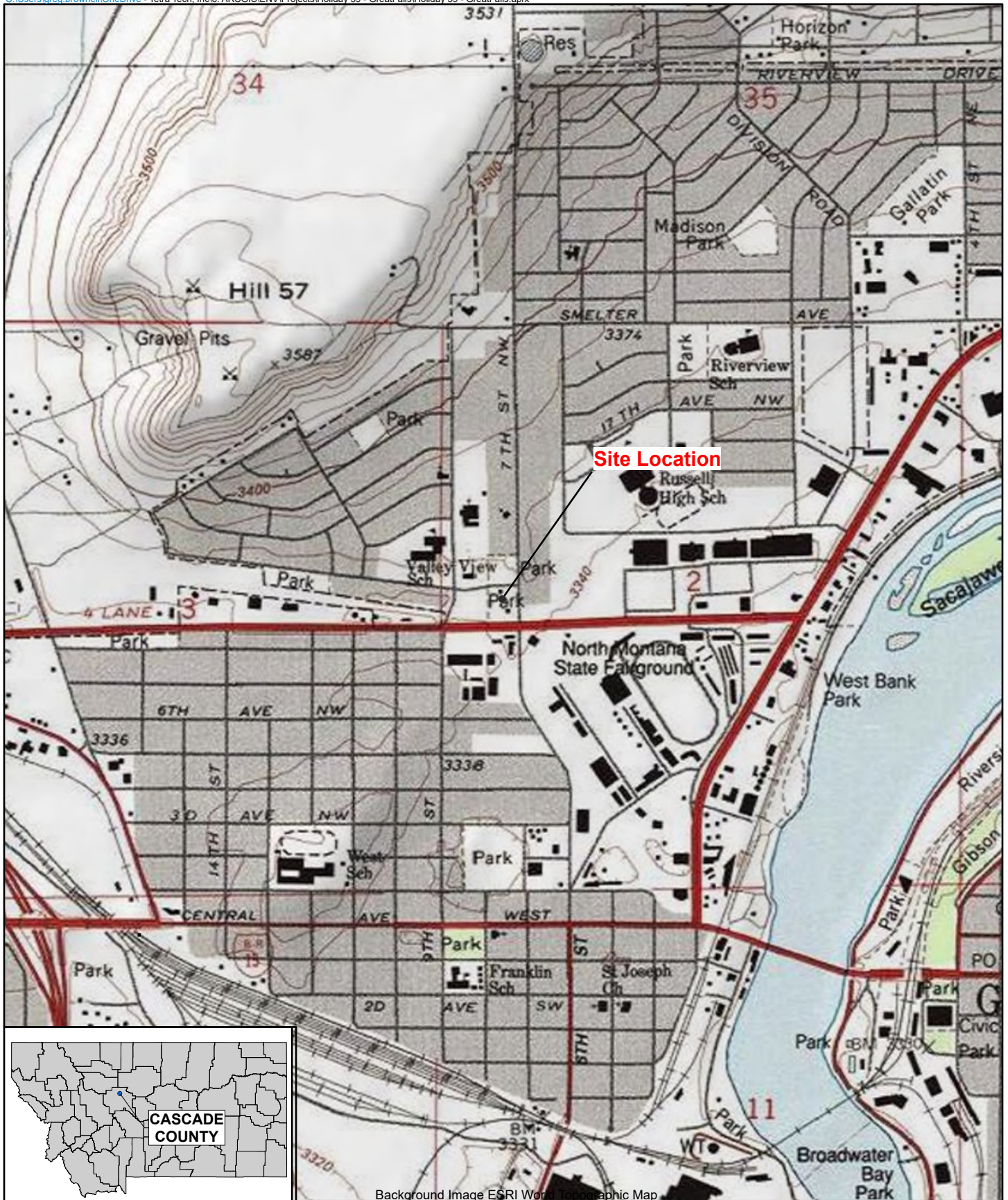
Tetra Tech 2022. Petroleum Release Notification – 30 Day Form, Circle K Store 2746059, 601 Northwest Bypass, Great Falls, Montana. August 4.

Tetra Tech, 2023. Remedial Investigation Report, Circle K Store 2746059 (Former Holiday 59), 601 Northwest Bypass, Great Falls, Montana, DEQ Facility ID 07-13729; Release 6497, Work Plan 34628. November 16.

Tetra Tech, 2026. Remedial Investigation Report, Circle K Store 2746059, 601 Northwest Bypass, Great Falls, Montana, DEQ Facility ID 07-13729, Release 6497, Work Plan 34922. February 3.

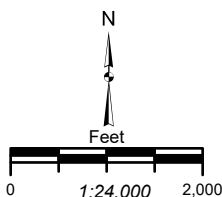


FIGURES



Background Image ESRI World Topographic Map

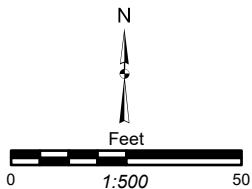
117-082722-26002
6/1/2026



Location Map
Circle K Store No. 2746059
601 Northwest Bypass
Great Falls, MT
Figure 1



117-8153013B
6/23/2025



Monitoring Well

Site Map
Circle K Store #59
601 Northwest Bypass
Great Falls, MT
Figure 2



ATTACHMENT A

STANDARD OPERATING PROCEDURES

STANDARD OPERATING PROCEDURE EQUIPMENT DECONTAMINATION

The purpose of this section is to describe general decontamination procedures for field equipment in contact with mine/mill tailings, soil, or water. During field sampling activities, sampling equipment will become contaminated after it is used. Sampling equipment must be decontaminated between sample collection points if it is not disposable. Field personnel must wear disposable latex or vinyl gloves while decontaminating equipment at the project site. Change gloves between every sample. Every precaution must be taken by personnel to prevent contaminating themselves with the wash water and rinse water used in the decontamination process.

Table A-1 lists equipment and liquids necessary to decontaminate field equipment.

The following should be done in order to complete thorough decontamination:

1. Set up the decontamination zone upwind from the sampling area to reduce the chances of windborne contamination.
2. Visually inspect sampling equipment for contamination; use stiff brush to remove visible material.
3. The general decontamination sequence for field equipment includes: wash with Liquinox or an equivalent degreasing detergent; deionized water rinse; deionized water rinse; rinse with sample water three times.
4. Rinse equipment with methanol in place of the nitric rinse if sampling for organic contamination. Follow with a deionized water rinse.
5. Decontaminated equipment that is to be used for sampling organics should be wrapped in aluminum foil if not used immediately.
6. Clean the outside of sample container after filling sample container.

Alternatively, field equipment can be decontaminated by steam cleaning and rinsing with deionized water.

All disposable items (e.g., paper towels, latex gloves) should be deposited into a garbage bag and disposed of in a proper manner. Contaminated wash water does not have to be collected, under most circumstances. If vehicles used during sampling become contaminated, wash both inside and outside as necessary.

TABLE A-1. EQUIPMENT LIST FOR DECONTAMINATION

5-gallon plastic tubs	Liquinox (soap)
5-gallon plastic water-container	Hard bristle brushes
5-gallon carboy DI water	Garbage bags
1-gallon cube of 10% HNO ₃	Latex gloves
1-gallon container or spray bottle of 10% Methanol or pesticide grade acetone for organics	Squeeze bottles
	Paper Towels

**STANDARD OPERATING PROCEDURE
FIELD MEASUREMENT OF GROUND WATER LEVEL**

1. Well probe should be calibrated annually or as needed. Note any corrections to well probe measurements on field forms.
2. Check well probe prior to leaving for field for defects by placing probe in water and testing buzzer and light. Repair as necessary. Make certain the well probe, a tape measure calibrated to tenths of feet and extra batteries are in the carrying case.
3. Measure all wells (monitoring and domestic) from the top of the well casing in the north quadrant or from a designated measuring point, as appropriate. Measure and record distance from measuring point to ground level. Make sure measuring point is labeled on well, so future measurements can be made from the same location.
4. Obtain a depth to water from measuring point to the nearest hundredth of a foot. Record data on appropriate field forms.
5. Decontaminate well probe between each measurement by rinsing with deionized water. Additional decontamination, such as *Liquinox*® scrubbing, may be required for certain wells; consult the project work plan.

**STANDARD OPERATING PROCEDURE 46
LOW-FLOW (MINIMAL DRAWDOWN) GROUNDWATER SAMPLING**

EQUIPMENT:

oil/water interface or water level probe	pH meter
coolers and ice	specific conductance meter
sample bottles	peristaltic or submersible pump
preservatives	dissolved oxygen meter
decontamination equipment and fluids	oxidation-reduction potential meter
filter apparatus	temperature meter
indelible marker	field sampling forms
flow through cell	

All sampling equipment shall be inspected for damage, and repaired if necessary, prior to arriving on-site.

GENERAL PROCEDURE – LOW FLOW (MINIMAL DRAWDOWN) PURGING:**Depth to Groundwater and LNAPL Thickness Measurements**

Prior to purging or sampling each well, the depth to groundwater and light non-aqueous phase liquids (LNAPL) thickness (if present) will be measured. Depth to groundwater will be measured using a water level electric probe. LNAPL thickness will be measured using an oil/water interface probe. All probes will be decontaminated prior to use in accordance with our standard operating procedures for decontamination. The depth to groundwater and free product thickness data will be recorded on a groundwater water sampling log for each well.

Puls and Barcelona (1995) recommend that well depth be obtained from well logs. Measuring the bottom of the well casing will cause re-suspension of settled solids from the formation and require longer purging times for stabilization. Measure the well depth, if necessary, should be completed after sampling is completed.

Pre-Sampling Activities:***Wells without LNAPL***

Purging will be conducted using a peristaltic or submersible pump. The intake of the pump will be placed at the approximate midpoint of the saturated screened interval. Water will be purged from the well at a rate that will minimize drawdown in the well and will keep the water level at least 6 inches above the pump intake. Puls and Barcelona (1995) recommend that drawdown be kept to <0.3 feet. Frequent measurements of depth to groundwater will be required to set pump flow rates.

Dissolved Oxygen (DO), oxidation-reduction potential (ORP), temperature (T), pH, and specific conductance (SC) will be monitored during the purging of each well. These parameters will be measured using field meters and a flow-through cell. Data will be recorded on the groundwater sampling log for each well. Measurements should be recorded periodically.

Purging will continue until pH, SC, and DO stabilize. Stabilization is achieved after all parameters have stabilized for three successive readings. The stabilization criterion is based on three successive readings of the water quality field parameters; the following are the criteria which must be used:

Parameter	Stabilization Criteria
pH	± 0.1 pH units
Temp	± 10% degree Celsius (°C)
SC	± 3% microSiemens per centimeter (uS/cm)
ORP	± 10% millivolts (mV)
DO	± 10% milligrams per liter (mg/L) or 3 consecutive measurements less than 0.5 mg/L
Turbidity	±10% or 3 measurements less than 5 NTU

All field instruments will be calibrated prior to sample collection. Instruments will be checked against standards daily. Instruments will be recalibrated as needed. Calibration notes will be kept on daily field logs.

Wells with LNAPL

Wells with LNAPL will be purged following the procedures presented for purging wells without LNAPL. However, the intake of the purge pump will be placed 18-24 inches below the base of LNAPL. The pump intake will be sealed and lowered to the correct sample depth. The seal will then be removed and purging started.

Depth to the base of LNAPL will be measured frequently during purging to establish flowrate. Flowrate will be adjusted to keep drawdown to <0.3 feet.

Field parameters will be measured during purging as described for purging wells without LNAPL. Purging will continue until field parameters have stabilized.

COLLECTING WATER QUALITY SAMPLES:

1. Generally, wells shall be sampled from the least contaminated to the most contaminated, if known. Open well, noting condition of well, and measure water level (SOP GW-3).
2. Use new disposable or dedicated pump tubing for each well.
3. Sampling Monitoring Wells
 - Collect a water quality sample, using the purge pump and tubing at the same pumping rates for purging.
4. If sampling for dissolved metals, field filter sample using a disposable filter.
5. Label each sample container with project number, sample location, well owner, date, military time, sampler's initials, preservative, and analysis required. For inorganics samples, rinse sample containers, without preservatives, three times with sample water before final collection.
6. Pour the sample into the appropriate sample containers and any needed preservatives in

accordance with SOP GS-6 or the project field sampling plan. Also see ("Handbook for Sampling and Sample Preservation of Water and Wastewater", EPA-600/4-82-029; "Guidelines Establishing Test Procedures for the Analyses of Pollutants Under the Clean Water Act", 40 CFR 136; and "Test Methods for Evaluating Solid Wastes," EPA SW-846). A few common sample preservatives are listed below:

- Dissolved Metals Add 3-4 ml. Nitric Acid to 500 ml. sample
- Nutrients Refrigerate to 4°C; Add 3-4 ml. Sulfuric Acid to 500 ml. sample
- Common Ions Refrigerate to 4°C
- Hydrocarbon VOA Refrigerate to 4°C; Add HCl to lower pH to 2 (see SOP-42)
- Diesel Range Organics Refrigerate to 4°C; Add 80 drops (4ml) HCl

For additional bottling and sample preservation information, consult the project field sampling plan.

7. For volatile analyses, add preservative to the sample vial and fill vials at the rate of 100 milliliters per minute (24 seconds for 40 milliliter vial); form a positive meniscus over vial brim and cap. After capping, invert vial, gently tap and look for air bubbles. If bubbles are present, un-cap vial, add more water and repeat procedure.
8. If required by the project work plan, perform field parameter tests including pH, SC, DO, ORP, and temperature on water sampled from the well. Record field measurements on field forms.
9. Complete the necessary shipping and handling paperwork, and record all pertinent information on field sampling form.

SAMPLING DOMESTIC WELLS

1. Turn-on household fixture (preferably an outside faucet without a hose connected) that is on the well-side of any household water conditioning device.
2. Calculate the volume of water to be evacuated. Measure the discharge rate from the faucet in a graduated 5 gallon bucket, or other suitable container, to compute the rate of discharge. Calculate the time needed to evacuate the predicted volume from the well. Record all measurements and calculations on field forms.
3. Samples should be collected directly from hydrant or faucet and prior to entry of the water through any water conditioning devices. Do not collect samples through rubber hoses.

REFERENCES:

Puls, R.W. and Barcelona, M.J., 1995. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures. USEPA Office of Research and Development, Office of Solid Waste and Emergency Response. EPA/540/S-95/504, December.



ATTACHMENT C

WORK AUTHORIZATION #30



WORK AUTHORIZATION

TO: Circle K Stores, Inc.

FROM: Tetra Tech, Inc.

WORK AUTHORIZATION NO.: 30CO1

PROJECT TITLE: *Revised Work Plan to Monitor Petroleum Contaminated Media*

PROJECT LOCATION: *Circle K Store No. 2746059, 601 Northwest Bypass, Great Falls, Montana*

Pursuant to the terms and conditions of the Master Consulting Services Agreement dated *March 28, 2017*, this Work Authorization hereby authorizes *Tetra Tech* to perform the specific services and under the particular conditions set forth herein:

1. **SCOPE OF WORK:** *Per the Scope of Work attachment hereto.*
2. **COMPENSATION:** *Cost Estimate for the Work Plan to Monitor Petroleum-Contaminated Media in the amount of \$19,831.60.*
3. **BILLING SCHEDULE:** *Monthly*
4. **TIME FOR COMMENCEMENT:** *July 2026*
5. **TIME FOR COMPLETION:** *April 2027*
6. **REPORTING REQUIREMENTS:** *Summary report.*
7. **OTHER PROVISIONS:** *None*

Upon execution of this Work Authorization, Client and Tetra Tech agree to bound by and comply with all the terms and conditions contained in the above referenced Consulting Services Agreement, except as modified by the specific terms and conditions, if any, contained herein.

APPROVED AND ACCEPTED BY:

Circle K Stores, Inc.
(Client)

Tetra Tech, Inc.
(Consultant)

Signed: _____

Signed: 

Name: _____

Name: Steven Marie

Title: _____

Title: Senior Engineer

Date: _____

Date: 06/17/26

Phone: _____