TETRA TECH

March 11, 2024

Ms. Tammy Walters
The Golden Spike
260 First Street West
Havre, Montana 59501

Subject: **Additional Corrective Action Work Plan**
Golden Spike,
260 First Street West, Havre, Montana;
Facility ID 99-95052 (TID 17259), Release 4603, Work Plan 34755

Dear Ms. Walters:

This letter presents Tetra Tech, Inc. (Tetra Tech) proposed corrective action plan for the above-referenced site (**Figure 1**). Tetra Tech prepared this work plan in response to Montana Department of Environmental Quality's (MDEQ) letter request dated August 3, 2023 (MDEQ, 2023). The MDEQ required the following tasks:

- *Propose a plan to infuse oxygen into groundwater as a remediation option at the Golden Spike Casino.*
- *Install borings as needed to assess the radial influence of the oxygen infusion and/or to serve as infusion points.*
- *Prior to infusion, conduct one round of groundwater monitoring to include intrinsic biodegradation indicators (IBIs) on select wells.*
- *Conduct semi-annual groundwater monitoring post-infusion include IBIs in select wells.*
- *Repair or replace flush mount well protectors as needed.*
- *Validate all laboratory analytical data using MDEQ's Data Validation Summary Form (DVSF) found online under the Guidance dropdown at the Petroleum Tank Cleanup Section (PTCS) webpage (https://deq.mt.gov/cleanupandrec/Programs/petrocleanup).*
- *Discuss ongoing WP tasks and results with MDEQ's project manager; submit written agreed-upon WP modifications as required to complete the WP objectives.*
- *Update the Release Closure Plan (RCP); discuss results with MDEQ's project manager. Use the RCP format found online under the Guidance dropdown at the PTCS webpage (https://deq.mt.gov/cleanupandrec/Programs/petrocleanup).*
- *Prepare and submit a Cleanup Report detailing the results of the investigation. The Report is expected to include all the content outlined in the Cleanup Report format and the following:*

Tetra Tech
7100 Commercial Avenue Suite 4, Billings, MT 59101
Tel 406.248.9161 Fax 406.248.9282 www.tetratech.com

- *Append groundwater monitoring field forms, laboratory analytical data, completed DVSFs, and the updated RCP.*

- Submit WP and reports electronically following the Petroleum Tank Cleanup Section submittal requirements found under the Guidance dropdown at the PTCS webpage (https://deq.mt.gov/cleanupandrec/Programs/petrocleanup).

BACKGROUND INFORMATION

The Former Union Oil Company (The Golden Spike) is located at 260 1st Street West, in the south half of the southeast quarter of the southwest quarter of Section 5, Township 32 North, Range 16 East, Havre, Hill County, Montana (Figure 1). Currently, the site consists of The Golden Spike restaurant and a paved parking lot (Figure 2). The site is bordered to the north, west, and east by commercial properties and to the south by residential properties.

The site is located on alluvial clays, silts, sands, and small gravels of Quaternary age that was deposited in the floodplain of the Milk River (Vuke et al., 2007). Groundwater is present at depths of eight to 11 feet below ground surface (bgs) in these alluvial deposits. Based on previous investigations, the near-surface geology consists of silty sand interbedded with silty clay and sand to a depth of approximately 20 feet bgs (Tetra Tech, 2011). Groundwater flow direction is generally to the northeast toward the Milk River, which is located approximately 2,000 feet north of the site.

Historically, the property was owned and operated by Union Oil Company petroleum as a retail fueling facility from 1958 to 1971. Petroleum tanks and infrastructure associated with the Union Oil Company operation are assumed to be removed at an unknown time. The release of petroleum hydrocarbons was discovered during an upgrade of the USTs in August 1998 (Rocky Mountain Oil, 1998). Groundwater monitoring conducted from 2011 to the most recent event in 2021 have indicated that petroleum hydrocarbon concentrations in groundwater in excess of the MDEQ risk-based screening levels (RBSLs; MDEQ, 2020). RBSL exceedances are present in several on-site monitor wells.

SCOPE OF WORK

The scope of work for this project includes the following five primary tasks: project management, installation of the iSOC Remediation System, monitoring repairs and maintenance, groundwater monitoring, data validation, and reporting. Details of these tasks are described below.

Project Management

This task includes the time necessary for coordination and scheduling of the project with Golden Spike, MDEQ, adjacent landowners, and subcontractors, arranging and tracking waste material disposals, and communications. In addition, the current health and safety plan (HASP) will be updated and revised to address activities in this work plan prior to conducting any 2024 on-site activities.

Installation of iSOC Remediation System

The task includes the installation of the required iSOC Remediation System infrastructure. The ISOC system is comprised of injection wells, one monitoring well, iSOC units, tubing, regulators,

manifold and gas supply.

- Three injection wells and one monitoring well will be installed using direct push drilling techniques, as shown in Figure 2. Exact locations will be determined after an on-site assessment is conducted based on site-specific access issues, underground utility locates, and safety. As part of the injection well installation, soil borings will be completed approximately 25 feet below ground surface (bgs). Drilling bids are presented in Attachment A.
-
    - Soil samples will be collected from each borehole continuously and logged for soil type, density, moisture content, color, and evidence of petroleum hydrocarbon staining and odor and standard headspace screening techniques with a photo-ionization detector (PID).
    - Three soil samples will be collected from each soil boring for laboratory analysis. One soil sample will be collected from zero to two feet below the ground surface (bgs). One sample will be collected and composited from two to ten feet bgs. Additionally, one sample will be collected in the zone of greatest petroleum impacts (as identified during field screening) or from the top of the saturated zone. Each soil sample will be placed in clean laboratory-supplied containers and submitted to Energy Laboratories in Billings, Montana. The soil samples will be analyzed for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) screen using the Massachusetts Department of Environmental Protection method (MDEP, 2008a & 2008b). Per DEQ guidance, if the EPH concentration in the soil exceeds 200 milligrams per kilogram (mg/Kg), an EPH fractionation analysis is required (MDEQ, 2018). For cost-estimating purposes, it will be assumed that six soil samples will also be analyzed for EPH fractionation.
    - Impacted drill cuttings, as identified by field screening, will be containerized on-site within 55-gallon drums. A soil sample will be collected from the containerized soil and submitted for laboratory analysis of VPH, EPH, and Resource and Conservation and Recovery Act (RCRA) total metals per landfill disposal requirements.
    - Each soil boring will be completed as a well with two-inch diameter Schedule 40 PVC materials. The well screen piping will be 0.010 slot size well screen and installed from 10 to approximately 25 feet bgs. A sand pack of 10-20 silica sand will be placed adjacent to the well screen from the total depth of the boring to approximately two feet above the well screen. A threaded cap will be installed on the bottom of the screen casing. Bentonite chips will be placed from the sand pack to approximately one-foot bgs. The wells will be completed with an eight-inch diameter flush-mount steel protector casing concreted in place. The top of the PVC casing for the monitoring well will be fitted with two-inch diameter water-tight locking plugs.
    -
- The iSOC infrastructure will be installed following the completion of the injection wells. A ground vault will be installed as shown on Figure 2. The ground vault will house the gas cylinders and gas header/regulator.

    - A 3’ x 5’ utility vault will be installed in the landscaped area in front of the Golden Spike on the west side. The utility vault will house the oxygen canisters, regulator, and gauges.
    - A trench will be dug from the utility vault to the three injection wells. Two-inch PVC will be placed in the trench to connect each of the three wells to the vault.

Polyethylene tubing will be inserted through the PVC, connecting the manifold of the oxygen canister to the iSOC unit. The trench will be backfilled with native material and topped with existing landscaping. In areasas with asphalt surfacing, the trench will be saw cut before trenching,,backfilled native material and capped with concrete, matching the existing depth of the asphalt.

- The iSOC units will be placed in each of the three injection wells, secured to the top of the well with nylon braided cord or vinyl-coated wire. At the top of each injection well, an inline iSOC filter will be placed in the polyethylene tubing.

Monitor Well Repairs and Surveying

A Tetra Tech field scientist will locate and assess the condition of the monitoring well network and complete minor repairs as needed. Should more extensive repairs be necessary, Tetra Tech will prepare a cost estimate for that work to be submitted to the MDEQ and PTRCB for approval. Injection and monitoring wells will be surveyed for horizontal coordinates and elevation using GNSS survey and level equipment

Groundwater Monitoring

Three groundwater monitoring events will be conducted under this work plan. One GWM event will be conducted directly after the injection and mw installation. Following the installation and implementation of the iSOC remediation two groundwater monitoring events will be conducted to determine the efficacy of the isoc remediation system

The first groundwater monitoring event will be conducted prior to the initial iSOC infusion of oxygen into the aquifer at the Golden Spike Casino but after the installation of the monitoring well. After the implementation of iSOC remediation strategy, groundwater will be monitored semi-annually. The following describes the methods for groundwater monitoring.

- Depth to groundwater will be measured at all site monitoring wells GS-MW-1 through GS-MW-6 and GS-IW-1 through GS-IW-3, using an electronic product interface probe (Figure 2). The interface probe will be decontaminated between measurements by washing with Liquinox® soap and rinsing with deionized water.

- Groundwater samples will be collected from monitor wells GS-MW-1 through GS-MW-6, . During the initial groundwater monitoring event, samples will be collected from GS-IW-1 through GS-IW-3. For cost estimate purposes it is assumed that all wells will be sampled, and no wells contain LNAPL.

- Before groundwater samples are collected, the wells will be purged using disposable plastic tubing, disposable bladder and a bladder pump. Field parameters consisting of pH, temperature, specific conductance, dissolved oxygen (DO), turbidity, and oxidation-reduction potential (ORP) will be monitored during purging. Purging will continue until these parameters have stabilized using standard low-flow sampling method. Purged water will be discharged on the paved surfaces for evaporation.

- The water samples will be collected from the wells through the bladder pump at the lowest flow rate attainable. The groundwater samples will be placed in laboratory-provided containers, preserved appropriately, transported in an ice-filled cooler, and submitted to Energy Laboratories in Billings, Montana for analysis of VPH and EPHusing the Massachusetts Department of Environmental Protection (MDEP) methods. For cost estimating purposes, it is assumed that four samples will require fractionation during each event.

- Samples from GS-MW-1 through GS-MW-6 will also be analyzed for intrinsic biological indicators(IBIs) including nitrate+nitrite (Method E353.2), sulfate (Method E300.0), dissolved iron (Method E200), dissolved manganese (Method E200), and methane (GC-FID / Kampbell).

- One trip blank and one duplicate sample will be collected with each groundwater monitoring event. Trip blank samples will be analyzed for VPH, and the duplicate samples will be analyzed for VPH, EPH, DCA, and IBIs.

Groundwater monitoring will be conducted semi-annually during 2024 (weather permitting). The events will be scheduled to capture high and low groundwater conditions.

iSOC Remediation System Monitoring and Maintenance

Tetra Tech will visit the site quarterly to keep the iSOC system operational and perform maintenance. The following tasks will be completed each site visit for monitoring and maintenance.

- Evaluate the plumbing and mechanical status of the system to ensure its proper operation.

- Check and record regulator pressure settings for each tank.

- Check gas cylinders for leaks and replace empty gas cylinders as necessary.

- Visual check for bubble activity in each injection well

- Measure DO in MW-6

- If necessary, troubleshoot any iSOC components that are not properly operating.

Data Validation

Each 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, and 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 investigation 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 three separate data validations will need to be completed for this project.

REPORTING

Upon completion of the tasks listed above, Tetra Tech will prepare an interim repot and a final report summarizing groundwater monitoring and the condition of the iSOC System. A release closure plan which will be prepared and updated for the second report. The report will include figures depicting site features and well locations, groundwater sampling results, data validation, and a summary of the analytical results evaluating the effectiveness of the iSOC remediation system.

SCHEDULE AND COSTS

The above tasks will be conducted in 2024-2025 following receipt of project authorization by Golden Spike and MDEQ approval. The work described above will be conducted on a unit cost basis per the attached Cost Estimate Breakdown and Groundwater Monitoring, and Sampling Unit Cost Worksheets included in Attachment A and Attachment B.

PROPOSAL AUTHORIZATION

This work will be conducted in accordance with the terms and conditions of the Professional Services Agreement (PSA) and this work plan may be accepted by signing the attached *PSA* (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. We have forwarded a copy of this work plan to Mr. Donnie McCurry at the MDEQ for your convenience. We appreciate the opportunity to provide you with environmental consulting services.

Sincerely,

Tetra Tech, Inc.

Jake Conver.PE
Senior Engineer

Austin Maphis
Project Geologist

Enclosures:
Figures
Attachment A: Estimated Cost Worksheet
Attachment B: PTRCB Groundwater Monitoring Unit Cost Worksheets
Attachment C: Professional Services Agreement

cc: Donnie McCurry, MDEQ; dmccurry@mt.gov

REFERENCES

EPA, 2017. US Environmental Protection Agency (EPA) Regional Screening Level (RSL) for Composite Worker Ambient Air Table (TR = 1E-06, THQ = 0.1). Regional Screening Levels for Chemical Contaminants at Superfund Sites. June 2017.

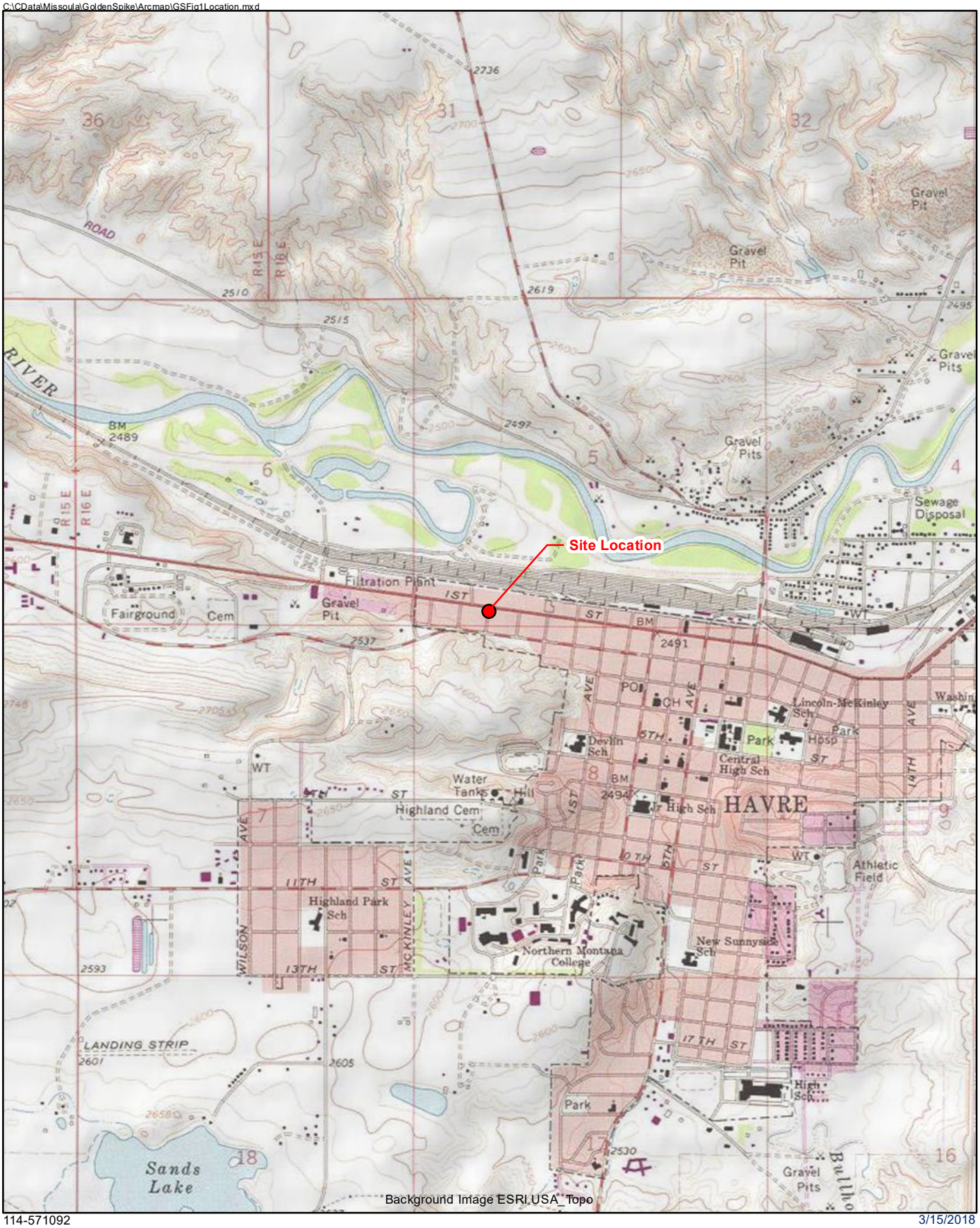
MDEQ, 2023. Additional Corrective Action and Work Plan Requested for the Petroleum Release at Golden Spike, 260 First Street, Havre, Hill County, Montana; Facility ID 21-08068 (TID 22350), Releases 3537 and 5212, Work Plans 34332 and 34331. Letter from Donnie McCurry to Ms. Tammy Walters. August 3.

MDEQ, 2020. Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases. Montana Department of Environmental Quality. Helena, Montana. June.

Vuke, S.M., Porter, K.W., Lonn, J.D. Lopez, D.A., 2007, *Geologic Map of Montana*, Montana Bureau of Mines and Geology: Geologic Map 62C. Scale 1:5000,000.

FIGURES

C:\CData\Missoula\GoldenSpike\Arcmap\GSFig1Location.mxd



114-571092

3/15/2018

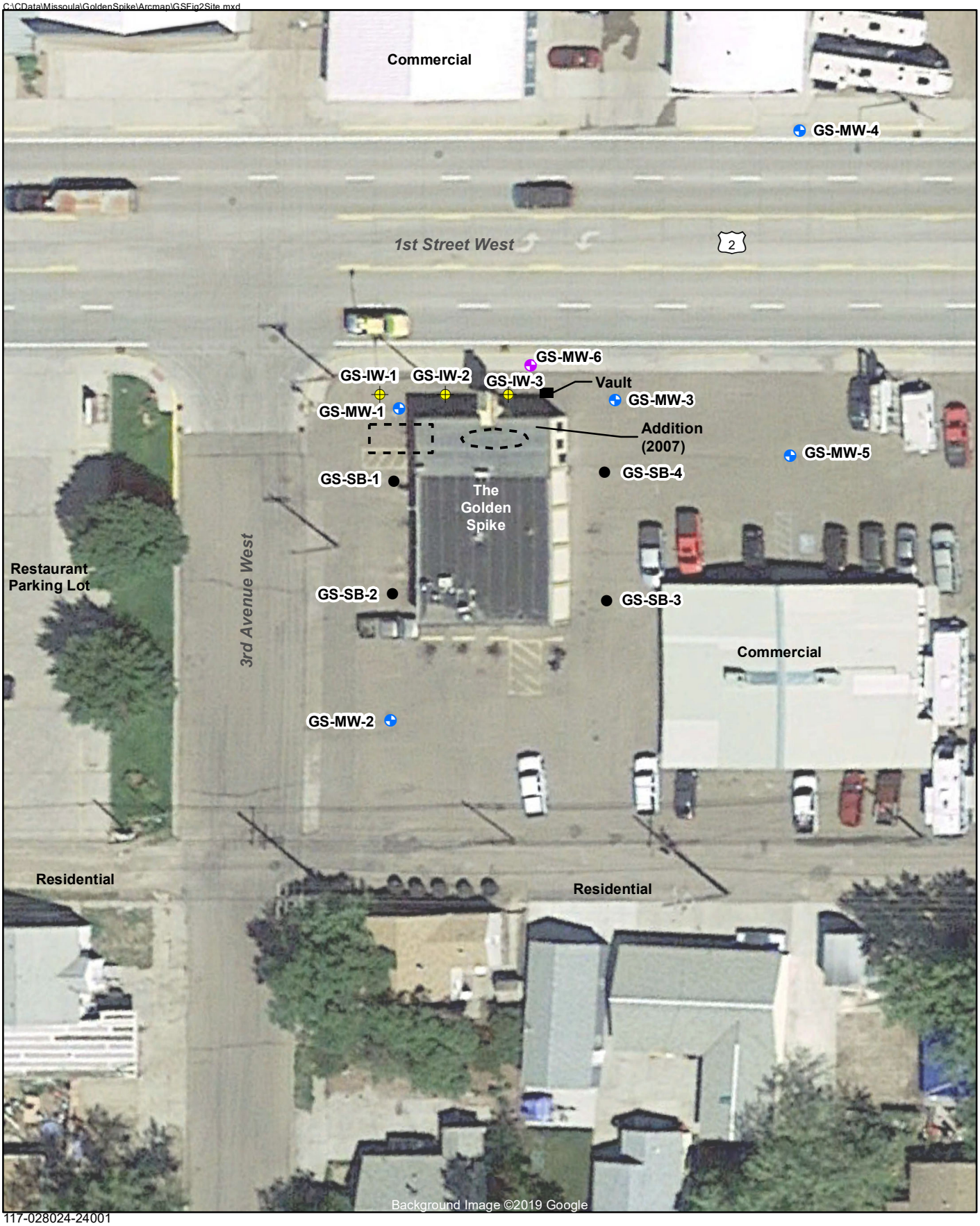
N

Miles

0 0.5

Figure 1
Site Location Map
Former Union Oil (The Golden Spike)
260 First Street West
Havre, Montana

C:\CData\Missoula\GoldenSpike\Arcmap\GSFig2Site.mxd



117-028024-24001
2/14/2024

N

Feet
0 1:500 50

- Monitoring Well Location
- Proposed Monitoring Well Location
- Soil Boring Location
- Injection Well Location
- Former UST and Dispenser Island Locations

Figure 2
Site Layout
Former Union Oil (The Golden Spike)
260 First Street West
Havre, Montana

TETRA TECH

ATTACHMENT A

Estimated Cost Worksheet

TETRA TECH

ATTACHMENT B

PTRCB Groundwater Monitoring Unit Cost Worksheets

Cost Estimate Expl. | Site Information | Work Plan Tasks | Help

Groundwater Monitoring and Sampling Unit Cost Worksheet

Task	Events												Totals		
	1		2		3		4		5		6				
	Units	Unit Cost	Units	Unit Cost	Units	Unit Cost	Units	Unit Cost	Units	Unit Cost	Units	Unit Cost	Units	Unit Cost	Total Cost
Sampling Frequency	Semi-Annual														
Work Plan Type	AC-07														
Work Plan Preparation														/work plan	
Project Management														/hr	
Mobilization/Demobilization [1]														/mile	
Field Work															
Fluid Level Measurements [2]			3	$45.75	3	$45.75							6	$45.75 /well	$274.50
Groundwater Monitoring Setup [3]	1	$200.00	1	$200.00	1	$200.00							3	$200.00 /site/day	$600.00
Groundwater Monitoring (<25ft total depth) - Peristaltic [4]														/well	
Groundwater Monitoring (<25ft total depth) - Bladder [5]	9	$225.00	6	$225.00	6	$225.00							21	$225.00 /well	$4,725.00
Groundwater Monitoring (25-50ft total depth) - Bladder [5]														/well	
Groundwater Monitoring (50-75ft total depth) - Bladder [5]														/well	
Groundwater Monitoring (75-100ft total depth) - Bladder [5]														/well	
Groundwater Monitoring - No Purge [6]														/well	
Modifiers															
Groundwater Monitoring - Low Yield Modifier [7]	9	$25.00	6	$25.00	6	$25.00							21	$25.00 /well	$525.00
Groundwater Monitoring - IBI Modifier [8]	9	$25.00	6	$25.00	6	$25.00							21	$25.00 /well	$525.00
Groundwater Monitoring - Filters [9]														/filter/well	
Contaminated Purge Water - Offsite Disposal [10]														/each	
Duplicate Sample Modifier [11]														/each	
Other Services															
Other Service (please specify)														/each	
Other Service (please specify)														/each	
Lodging & Per Diem (Lodging - actual only)															
Lodging: # of people 1														/person/night	
Food: # of people 1														/person/day	
(Breafast $7.50, Lunch $8.50, Dinner $14.50)															
Laboratory Analysis [12]	Semi-Annual														
Volatile Petroleum Hydrocarbons (VPH)	10	$120.00	7	$120.00	7	$120.00							24	$120.00 /sample	$2,880.00
Extractable Petroleum Hydrocarbons (EPH)															
EPH "screen"	10	$75.00	7	$75.00	7	$75.00							24	$75.00 /sample	$1,800.00
EPH "fractions"	4	$140.00	4	$140.00	4	$140.00							12	$140.00 /sample	$1,680.00
Polycyclic Aromatic Hydrocarbons (PAHs)														/sample	
Lead Scavengers															
Ethylene dibromide (EDB)	10	$130.00	7	$130.00	7	$130.00							24	$130.00 /sample	$3,120.00
1,2-Dichloroethane (DCA)	10	$140.00	7	$140.00	7	$140.00							24	$140.00 /sample	$3,360.00
Drinking Water - EPA 524.3														/sample	
Intrinsic Biological Indicator Analyses (IBI)	10	$220.00	2	$220.00	2	$220.00							14	$220.00 /sample	$3,080.00
Other Analytical Methods Trip Blank	2	$130.00	2	$130.00	2	$130.00							6	$130.00 /sample	$780.00
Other Service (please specify)														/each	
PTRCB sampling fee [13] ($10.00 allowed)	10	$10.00	7	$10.00	7	$10.00							24	$10.00 /sample	$240.00
Report Preparation															
Groundwater Monitoring Report - Type [14-15]															
Groundwater Monitoring Report - Base Cost [14]														/report	
IBI Modifier [16]														/event	
Additional Wells Modifier [17]														/event	
Release Closure Plan (RCP) Preparation [18]															
Create RCP														/RCP-C	
Update RCP														/RCP-U	
														Monitoring & Sampling Subtotal:	**$23,589.50**

Additional Conditions/Comments/Costs:

Additional Lab Costs: Environmental impact Fee 2 x $15.00, Sample Disposal Fee- 24*2=$48

Additional Costs Subtotal:	**$78.00**
Grand Total:	**$23,667.50**

If you require assistance, call 406-444-9710

Submit completed form to:

Petroleum Tank Release Compensation Board

PO Box 200902, Helena MT 59620-0902

TETRA TECH

ATTACHMENT C

Professional Services Agreement

PROFESSIONAL SERVICES AGREEMENT

PROJECT: Golden Spike - Additional Corrective Action Work Plan **JOB #:**

CLIENT: Golden spike

ADDRESS: 260 Frist Street West

Havre, Montana

CONTACT: Ms. Tammy Walter **TEL:** 406-265-3165 **e-mail:** goldenspike1997@hotmail.com

CONSULTANT: **TETRA TECH, INC. ("TETRA TECH")**

ADDRESS: 7100 Commercial Ave. Suite 4

Billings, MT 59101

CONTACT: Jake Conver **TEL:** (406) 248-9161 **e-mail:** jake.conver@tetratech.com

PROJECT DESCRIPTION: Additional Corrective Action including installation of soil borings and ISOC technologies.

☒ **SCOPE OF SERVICES (Attachment)** ☐ **SCHEDULE (Attachment)** ☐ **ADDITIONAL PROVISIONS (Attachment)**

COMPENSATION:

☐ **LUMP SUM**. Compensation for these services shall be a Lump Sum of $____.

☒ **TIME AND MATERIALS**. Compensation for these services will not exceed $107,721.11 without written authorization and will be based on the following option (per the attached Estimate of Professional Services or List of Hourly Rates), plus Reimbursable Expenses (Other Direct Costs (ODC's) and lower tier subcontractors) times a factor of 1.2.

In the event services beyond those specified in the Scope of Services and not included in the compensation above are required, TETRA TECH shall submit a fee estimate for such services and a contract modification shall be negotiated and approved by the Client prior to any effort being expended on such services.

SCHEDULE OF PAYMENTS: TETRA TECH shall be paid monthly on the basis of invoices submitted. These invoices will be for the portion of the agreed upon compensation earned by TETRA TECH during that month. Lump Sum will be based on percent of effort completed as estimated by TETRA TECH, TETRA TECH shall be paid for all invoices within 30 days of submittal. In the event the Client disputes the invoice or any portion thereof, the undisputed portion shall be paid to TETRA TECH based on contractual terms. Invoices not in dispute and unpaid after 30 days shall accrue interest at the rate of one and one half percent per month. See Standard Conditions for invoices unpaid after 60 days. TETRA TECH reserves the right to stop work for non-payment of invoices after 60 days. **Remit to: Tetra Tech, Inc., P. O. Box 911674, Denver, CO 80291-1674. Credit card payments are not accepted.**

For all other payments, Tetra Tech, Inc. Accounts Receivable Point of Contact is Frieda Vilhauer at (303) 664-4621 or OGA.ECA.AccountsReceivable@TetraTech.com

Client Accounts Payable Point of Contact: .

EXECUTION: Execution of this document by duly authorized representatives of TETRA TECH and Client, including TETRA TECH's Standard Conditions (attached) and any attachments, Additional Provisions as indicated, and addenda, represents the entire Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended or modified by written instrument, but such instrument is valid only upon signature by both parties. Neither TETRA TECH nor Client shall assign, transfer, or encumber any rights, duties, or interests accruing from this Agreement without the express prior written consent of the other.

CLIENT:		**CONSULTANT:**	**TETRA TECH, INC.**
BY:		**BY:**	Jake Conver
SIGNATURE:		**SIGNATURE:**	
TITLE:		**TITLE:**	Senior Engineer/Project Manager
DATE:		**DATE:**	

Tetra Tech, Inc. Standard Conditions

Credit Review. The provision of Services under this Agreement is subject to Tetra Tech's initial and continuing credit review of Client. If requested by Tetra Tech, Client shall furnish financial information to Tetra Tech for the purpose of determining Client's creditworthiness. Any financial information furnished to Tetra Tech shall be treated by Tetra Tech as Confidential Information. Tetra Tech may also rely on information obtained from independent parties (e.g., Dunn & Bradstreet). If Tetra Tech determines that a financial security is warranted, Tetra Tech reserves the right to require that Client provide a financial guarantee in a form reasonably acceptable to Tetra Tech (e.g., Letter of Credit, Payment Bond, retainer, monthly pre-payment, etc.). If Client fails to provide the requested guarantee within fifteen (15) business days following such request, Tetra Tech shall have the right to decline to accept any new Work, and to suspend the provision of Services until the day such guarantee is provided to Tetra Tech. Client's continued failure to provide the requested guarantee may result in the termination of the Agreement.

Changes. Client may request changes to the scope of Services by altering or adding to the Services to be performed. If Client so requests, Tetra Tech will provide to Client a proposal for the changes setting forth an adjustment to the Services and compensation for the requested changes. Client must approve out of scope work before Tetra Tech will proceed with work. If project conditions change materially from those observed at the site or described to Tetra Tech at the time of proposal, Tetra Tech is entitled to a change order equitably adjusting its Services and compensation.

Standard of Care. Tetra Tech will render services in a professional manner and use that degree of care and skill ordinarily exercised under similar conditions by environmental consultants practicing in the same or similar locality of the services provided. Tetra Tech MAKES NO WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, RELATING TO ITS SERVICES AND DISCLAIMS ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Preservation of Samples. Tetra Tech shall not be obligated to preserve samples of soil, rock, or water obtained from the project site(s) for longer than thirty (30) days after the issuance of any document that includes, but is not limited to, the data obtained from those samples. Client agrees to receive any such sample material for its sole, lawful storage, treatment, or disposal at any time after expiration of the 30-day term.

Information. Tetra Tech shall not be liable for any errors, omissions, or inaccuracies which result from its reliance on information provided by Client or third parties.

Permits and Government Relations. Unless specifically provided otherwise, Client shall secure all necessary site related approvals, permits, licenses, and consents necessary to commence and complete the Services. Tetra Tech shall act only as an advisor in all governmental relations.

Site Conditions. Client acknowledges that environmental, geologic, and geotechnical conditions can vary from those encountered at the times and locations where data are obtained by Tetra Tech. Because the available data are limited, the Client acknowledges that there is some level of uncertainty with respect to the interpretation of these environmental, geologic, and geotechnical conditions, despite the professional care and skill applied by Tetra Tech. Client shall disclose in writing to Tetra Tech any hazardous substances which it knows or which it reasonably suspects are or may be present at or contiguous to the site or which may otherwise affect the Services. If any previously undisclosed hazardous substances or conditions are discovered or reasonably suspected by Tetra Tech during performance of the Services, Tetra Tech may, at its discretion, suspend the Services until reasonable measures can be taken to protect from such hazardous substances or conditions and the scope of the Services, terms and conditions, schedule and compensation are adjusted accordingly. Tetra Tech and Client may, at their discretion, terminate the Agreement.

Indemnification of Parties. Tetra Tech and Client shall indemnify and hold harmless the other and their employees, from and against legal liability for all losses, damages, and expenses to the extent caused by their negligent acts, errors, or omissions. In the event such losses, damages, or expenses are caused by the joint or concurrent negligence of Tetra Tech and Client, they shall be borne by each party in proportion to its own negligence under comparative fault principles. In no event shall Tetra Tech, its officers, directors, and employees be liable for and Client agrees to defend, indemnify and hold harmless, all at its cost and expense, Tetra Tech, its officers, directors, and employees from and against all liabilities, claims, demands, losses, costs, damages, actions, suits or other proceedings (including, but not limited to, any air, ground or water pollution or environmental impairment) by whomsoever made, including claims for bodily injuries, death and physical property loss or damage brought or prosecuted in any manner arising out of or in any manner related to Tetra Tech's performance of the Services that may be made or brought against Tetra Tech for: (i) any claims or causes of action arising out of the ownership, transportation and/or disposal of any contaminated materials; (ii) any claims or causes of action arising out of subsurface conditions or damage to subsurface structures whether owned by Client or any third party, the presence or location of which were not revealed to Tetra Tech by the Client in writing prior to the commencement of Tetra Tech's performance, (iii) any claims or causes of action arising under the Resource Conservation and Recovery Act as amended, the Toxic Substances and Control Act, as amended and the Comprehensive Environmental Response, Compensation and Liability Act, as amended; (iv) any third party claims or causes of action; and (v) any expenses incurred by Tetra Tech in connection therewith (including reasonable attorney's fees), as such expenses are incurred.

Limitation of Liability. Neither party hereto, nor its affiliates, its subcontractors, or vendors of any tier, shall be liable to the other party or its affiliates in any action or claim for loss of profit, loss of product, loss of use or for any other indirect, consequential or special damages, even if caused by the sole or concurrent negligence of such party and even if advised of the possibility thereof. Client agrees that in consideration of the contract price and the comparative levels of risk taken, all claims for indemnification or contribution from Tetra Tech shall be limited to the lesser of the amount paid Tetra Tech as total compensation for the applicable Services and $50,000. All claims against Tetra Tech shall be deemed waived unless made by Client in writing and received by Tetra Tech within six months after Tetra Tech has completed that portion of the Services with respect to which the claim is made. Any limitation on or exculpation from liability afforded Tetra Tech by this Agreement shall be applicable regardless of whether the action or claim is based in contract, tort (including negligence), statute, strict liability or otherwise, and shall likewise limit the liability of Tetra Tech' affiliates, subcontractors and vendors of any tier and their respective officers, agents and employees.

Insurance. Tetra Tech will maintain the following levels of insurance during the term of this Agreement. Client will be named as an additional insured on the Commercial General Liability and Automobile Liability insurance policies.

a. Worker's Compensation (and Employer's Liability Insurance) — as required by applicable state statute.
b. Commercial General Liability — $1M per occurrence for bodily injury, including death and property damage, and $2M in the aggregate.
c. Automobile Liability — minimum of $1M combined single limit for bodily injury and property damage.
d. Professional Liability (E&O) and Professional Pollution Liability and Contractors' Pollution Liability — $1M each claim and in the aggregate.

Confidential Information. Tetra Tech will not knowingly disclose to others any confidential information furnished by the Client in connection with this project. Any information which the Client intends to be covered by this paragraph shall be clearly marked "confidential." These restrictions do not apply to information that: (i) Tetra Tech had in its possession prior to disclosure by the Client; (ii) becomes public knowledge through no fault of Tetra Tech; (iii) Tetra Tech lawfully acquires from a party not under any obligation of confidentiality to the client; or (iv) is independently developed by Tetra Tech. Tetra Tech and its personnel will not publish, in any technical articles or otherwise, information obtained from this project in a manner that would be identifiable with this project without the prior written consent of the Client.

Ownership of Documents. Drawings, specifications, reports, programs, manuals, or other documents, including all documents on electronic media, prepared under this Agreement are instruments of service and are, and shall remain, the property of Tetra Tech. Tetra Tech will retain all common law, statutory, and other reserved rights, including the copyright thereto. Tetra Tech shall not be held liable for reuse of documents or modifications thereof by the Client or its representatives for any purpose other than the original intent of this Agreement, without written authorization of and appropriate compensation to Tetra Tech.

Termination. Either Tetra Tech or Client may terminate this agreement, for whatever cause, by giving seven (7) days' written notice to the other party. Upon such termination, Client shall pay Tetra Tech the costs that Tetra Tech has paid and incurred to the effective date of termination, including any obligations, commitments and unsettled claims plus any charges due and owing by the Client as of the date of termination to include reasonable termination expenses.

Governing Law and Disputes. The validity, interpretation, and performance of this Agreement shall be governed by and construed in accordance with the laws of the State of California, without regard to conflict of law provisions. In the event of a dispute between the parties regarding performance of any obligation arising under this Agreement, the parties shall attempt in good faith to resolve the dispute through negotiation. If the dispute cannot be settled through negotiation within 14 days after written notice of the dispute is given by one party to the other, then upon service of a written demand by either party, the parties agree to try in good faith to settle the dispute by mediation under the Commercial Mediation Rules of the American Arbitration Association. Mediation shall take place in a mutually agreed location, and the costs of mediation shall be borne equally by the parties. If within 30 days after service of a written demand for mediation, the mediation does not result in settlement of the dispute, then upon service of a written demand by either party, any unresolved dispute shall be decided by litigation in a state or federal court located in Los Angeles County Superior Court.

Relationship of Parties. Tetra Tech will act solely as an independent contractor of the Client and not as the Client's agent for any purpose. Neither Tetra Tech nor Client may enter into any agreement or assume any obligation for the other, and nothing herein may be construed to establish any partnership, joint venture or principal-agent relationship between Tetra Tech and the Client.

Third Party Beneficiaries/Reliance. There are no third party beneficiaries of this Agreement and no third party may rely upon the obligations herein or upon the findings of any report produced hereby. This Agreement does not create or confer any legal claim or cause of action in favor of any party not a signatory to this Agreement and the obligations and legal duties imposed on any party by this Agreement are owed exclusively to the other party or parties and are not owed to any party not a signatory to this Agreement. Upon the written request of Client, Consultant may, at its sole option, allow third parties to rely on the findings of any report reports or study prepared by Tetra Tech, provided such parties sign and return, unmodified, Tetra Tech's reliance agreement.

Force Majeure. Tetra Tech will have no liability for any failure to perform or delay in performance due to any circumstances beyond its reasonable control, including, but not limited to, strikes, riots, wars, fire, flood, explosion, epidemics, acts of nature, acts of government, labor disputes, delays in transportation or inability to obtain material or equipment. In the event of any delay in performance due to any such circumstances, the time for performance will be extended by a period of time necessary to overcome the effect of such delay and an equitable adjustment shall be made to Tetra Tech's compensation..

Assignment. This Agreement may not be assigned or otherwise transferred by the Client without Tetra Tech's prior written consent and any such attempted assignment or transfer shall be void.

Ethics and Business Practices. Both parties shall comply with all applicable local, state, and federal regulations and laws, ordinances, rules, and regulations, as well as the U.S. Foreign Corrupt Practices Act, UK Bribery Act, or other law as the may apply.

Entire Agreement. The written Agreement constitutes the entire Agreement between the Client and Tetra Tech. It supersedes all prior written or oral agreements, or contemporaneous communications with respect to the subject matter thereof, and has not been induced by any representation, statements, or agreements other than those herein expressed. No change or any of the terms or conditions herein will be valid or binding on either party unless in writing and signed by an authorized representative of both parties. If any of the provisions hereof are invalid under any applicable statute or rule of law, such provisions are, to that extent, deemed omitted, but these terms and conditions will remain otherwise in effect.

Include any attachments checkmarked on the Front Page.

- *SCOPE OF SERVICES (Attachment)*
- *SCHEDULE (Attachment)*
- *ADDITIONAL PROVISIONS (Attachment)*