

February 4, 2019

Don Edmisten
Town Pump Inc.
PO Box 6000
Butte, MT 59702-6000

Re: Corrective Action Work Plan
Town Pump #1, Helena, Montana
Facility ID# 25-08706, Release #3373
DEQ Work Plan ID# 33758
Olympus Work Order A1553

Dear Mr. Edmisten:

Olympus Technical Services, Inc. (Olympus) has prepared this work plan for Town Pump Inc. for the Town Pump #1 Station located at 1201 Prospect Avenue, Helena Montana (Site). Montana Department of Environmental Quality (DEQ) issued a letter dated January 16, 2019, requesting additional corrective action and this work plan for the Site. The Site location is shown on Figure 1 and Site features are shown on Figure 2. This work plan includes a description of the scope of work and a detailed cost estimate to complete the work.

Scope of Work

Task 1 – Work Plan Preparation – Prepare this standardized generic application corrective action work plan (AC-07).

Task 2 – Project Management – Project management activities will include preparation for the sampling events, coordination with Town Pump on all field activities, coordination with DEQ project manager, coordination with Helena High School regarding sampling of the irrigation well, project tracking, interim discussions with the DEQ project manager regarding the data as they are generated, and any other required project management activities.

Task 3 – Repair Well MW-3. Well MW-3 was observed to be damaged during the May 2018 groundwater monitoring event. It appears that the monument may have had water in it that froze and shattered the well casing. An attempt will be made to replace the broken casing by removing the monument and digging down to undamaged casing. Well repair will include replacement of the damaged casing and well monument. The well casing will be surveyed for elevation relative to nearby monitoring wells using a total survey station.

Task 4 - Collect Static Water Level (SWL) Measurements from Well MW-6. Groundwater mounding and the largest change in SWL was observed in well MW-6 during the May 2018 groundwater monitoring event. The cause of the mounding is unknown. SWLs will be measured on a monthly basis during completion of this work plan in order to evaluate the persistence of the mounding. It is anticipated that SWL will be measured three times, in addition to the measurement collected during the groundwater monitoring event described in Task 5.

Task 5 – Groundwater monitoring. One groundwater monitoring event will be conducted upon approval and Petrofund obligation of this work plan. Monitoring will include collection of static

water levels in all 19 Site monitoring wells. Groundwater samples will be collected from 8 of the monitoring wells (MW-1, -2, -4, -6, -8, -17, -18, and -19). Groundwater samples will be collected using a bladder pump following low flow sampling procedures. Purge water will be discharged to the ground surface in accordance with the DEQ purge water flow chart. The samples will be analyzed for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH) screen. EPH fractionation will be conducted if the EPH screen results exceed 1,000 micrograms/liter ($\mu\text{g/L}$). Based on historical analytical data, it is anticipated that EPH fractionation analysis may be required on up to 5 groundwater samples. Groundwater samples collected from monitoring wells MW-1, MW-11, and MW-16 will also be analyzed for 1,2-dichloroethane, 1,3-butadiene, and ethylene dibromide. A groundwater sample collected from monitoring well MW-6 will also be analyzed for chlorine and disinfecting byproducts (trihalomethanes and haloacetic acids) in order to better evaluate whether the mounding at that location is related to leaking water supply piping. One field duplicate and one field blank will be collected for quality assurance/quality control purposes and analyzed for the above parameters.

Task 6 – Monitor the Helena High Irrigation Well. Gaining access to the Helena High Irrigation Well has been difficult. Continued efforts will be made to sample that well. An effort will be made to collect the sample during the Task 5 groundwater monitoring; however, based on past access issues, it may not be possible to coordinate the sampling events. The sample will be collected from the hydrant, valve, or tap nearest the well. The volume of water in the piping and well will be estimated and, at a minimum, that volume of water will be purged prior to sample collection. Purge water will be discharged to the ground surface in accordance with the DEQ purge water disposal flow chart. Field parameters (pH, specific conductance, dissolved oxygen, oxidation-reduction potential, and turbidity) will be measured during purging and a sample will not be collected until those parameters have stabilized. The groundwater sample will be analyzed for VPH and EPH screen. If the sampling cannot be conducted in conjunction with Task 5 monitoring, then a field duplicate and field screen will be collected for quality assurance/quality control purposes.

Task 7 – Data Validation. All laboratory analytical data will be validated using DEQ's Data Validation Summary Form.

Task 8 – Buried Utility Construction Information – Additional information regarding buried utility construction materials and depths below ground surface will be gathered to the extent available.

Task 9 – Prepare a Release Closure Plan (RCP) – An RCP will be prepared using the DEQ RCP format. Preparation of this RCP will be complex as it covers over twenty years of investigations and various remedial actions completed by multiple consultants.

Task 10 – Prepare a Generic Applications Report (AR-07) – The report will include:

- Discussion of field activities, data interpretation, and recommendations.
- Groundwater gradient and plume maps for MTBE and benzene.
- Tabulated cumulated groundwater data.
- Appended RCP and Data Validation Summary Form.

Cost Estimate

We propose to complete the above scope of work in accordance with the attached cost schedule. The cost estimate in this proposal is based on representative hourly rates for various categories of personnel and expected project expenses. Our invoices will reflect actual charges

based on the applicable schedules and may differ from the cost estimate in this proposal. Should you authorize these Services, you will be invoiced monthly, on a time and materials basis in accordance with this cost estimate. Should unforeseen circumstances arise and warrant further work and additional costs, Olympus will contact you prior to further efforts. Any changes to our agreement must be mutually agreed and in writing.

Schedule

Site work will commence following DEQ approval of this work plan and the obligation of funds by the Petroleum Tank Release Compensation Board for the scope of work. Olympus will notify Town Pump and the DEQ at least one week in advance of any site work. The scope of work described above is anticipated to take four months from commencement.

We appreciate the opportunity to work on this project. Please contact me should you have any questions.

Sincerely,
Olympus Technical Services, Inc.

Preston Chase
Staff Scientist

Attachment: Cost Estimate

Petroleum Tank Release Compensation Board Groundwater Monitoring and Sampling Unit Cost Worksheet

Contractor Information

Company Name:
Address:
City, State, Zip:
Cost Estimator: Phone:

Signature: Date:

Project Information

Site Name: Facility ID#
Address: Release #
City: WP ID#

Monitoring Well Details

Total Number of Wells at Site
Number of Water Level Measurements Only ⁽²⁾
Number of Wells to be Monitored/Sampled ⁽³⁾
Well Casing Diameter (inches)
Average Depth to Groundwater (ft)
Average Depth of Wells (ft)

Well Purging Method

- Hand Bailing
- Peristaltic Pump
- Submersible Pump
- Micropurge
- No Purge
- Other (please specify)

Monitoring/Sampling Interval

Estimated Start Date:
 Quarterly # of events
 Semi-annual # of events
 Annual # of events
 Other # of events (specify)

Other Services

- Free Product Recovery
- Groundwater Well survey
- Wellhead retrofit/reconstruction
- Other (please specify)

Cost Estimate Explanation:

⁽¹⁾ Mobilization/Demobilization: Includes all costs and mileage to transport equipment, materials, and personnel to and from the site location. More than one mobilization event will require justification and pre-approval by the DEQ-PTCS and Board staffs. This item should be on a per mile unit rate.

⁽²⁾ Water Level Measurements: Includes all costs (labor, equipment, materials, and well consumables) to measure groundwater depth, collect other groundwater information from well, and decontaminate equipment. The well monitoring costs should be on a per well basis and does not include purging and sampling of the well.

⁽³⁾ Well Monitoring/Purging/Sampling: Includes all costs (labor, equipment, materials, and well consumables) to monitor (see above), purge, sample groundwater, decontaminate equipment, take water level measurements and handle disposal of contaminated purge water. The cost should be on a per well basis.

⁽⁴⁾ Laboratory Analysis: Includes all laboratory costs for all wells, for duration of project. It is realized that some laboratory analyses will not be conducted for every event and that the well sampling frequency may change.

⁽⁵⁾ PTRCB Sampling Fee: Includes all costs related to management of the sample including: sample container, cooler, packing, shipping, handling, sample preservation, and office related handling charges. The sample is defined as the laboratory ID number on the laboratory invoice.

⁽⁶⁾ Report Preparation and Project Management: Includes all costs (labor and materials) project management, report preparation, and report submittal, including all office related costs, per groundwater sampling event.

Groundwater Monitoring and Sampling Unit Cost Worksheet

Task	Unit Cost	Number of Units	Total Cost
Work Plan Preparation	\$696.00	1	\$696.00
Project Management	\$112.00 /hr	20	\$2,240.00
Mobilization/Demobilization ⁽¹⁾	\$10.63 /mile	40	\$425.20
Field Work			
Water Level Measurements ⁽²⁾	\$54.00 /well	14	\$756.00
Well Monitoring/Purging/Sampling ⁽³⁾	\$234.36 /well	8	\$1,874.88
Other Service (please specify) <input type="text" value="Irrigation well sampling"/>	\$169.50	1	\$169.50
Other Service (please specify) <input type="text" value="Well Repair & Survey"/>	\$1,859.40	1	\$1,859.40
Lodging & Per Diem (Lodging – actual only)			
Lodging: # of people <input type="text"/>	/person per day	<input type="text"/>	\$0.00
Food: # of people <input type="text"/> (\$23.00 max a day allowed)	\$23.00 /person per day	<input type="text"/>	\$0.00
Laboratory Analysis ⁽⁴⁾			
Volatile Petroleum Hydrocarbons (VPH)	\$120.00 /sample	13	\$1,560.00
Extractable Petroleum Hydrocarbons (EPH)			
EPH “screen”	\$75.00 /sample	13	\$975.00
EPH “fractions”	\$150.00 /sample	5	\$750.00
BTEX/MTBE/Naphthalene only-method:	/sample	<input type="text"/>	\$0.00
Polyaromatic Hydrocarbons (PAHs)	/sample	<input type="text"/>	\$0.00
PTRCB sampling fee (\$10.00 allowed) ⁽⁵⁾	\$10.00 /sample	13	\$130.00
Other (please specify) <input type="text" value="Lead Scavengers"/>	\$220.00 /sample	5	\$1,100.00
Other (please specify) <input type="text" value="DBPs"/>	\$325.00 /sample	1	\$325.00
Report Preparation ⁽⁶⁾			
Quarterly	/report	<input type="text"/>	\$0.00
Semi-annual	/report	<input type="text"/>	\$0.00
Annual	\$2,960.00 /report	1	\$2,960.00
Other (Please specify) <input type="text" value="RCP (\$6,816.00), Buried Utility Corridor Info (\$896.00), Data Validation (\$224.00)"/>	\$7,936.00	1	\$7,936.00
Monitoring & Sampling Total:			\$23,756.98

Additional Conditions/Comments/Costs:

Work plan preparation and project management is for well repair, monitoring well sampling, irrigation well sampling, utility corridor investigation, and RCP preparation. Mobilization includes 8 events for various tasks.

If you require assistance, call 406-444-9710
Submit completed form to:
Petroleum Tank Release Compensation Board
PO Box 200902, Helena MT 59620-0902

Olympus Technical Services, Inc. Cost Estimate

Date: 2/4/2019

Client: Town Pump

Project Name: Town Pump #1, Helena, MT

Olympus Project/Proposal No.: A1553

ODC 7%

Task 1 - Work Plan Preparation

Labor	Quantity	Unit	Rate	Cost
Senior Project Scientist/Engineer	4	Hours	\$146.00	\$584.00
Staff Scientist/Engineer	1	Hours	\$112.00	\$112.00
			Labor Subtotal	\$696.00

Task 1 Total: \$696.00**Task 2 - Project Management**

Labor	Quantity	Unit	Rate	Cost
Staff Scientist/Engineer	20	Hours	\$112.00	\$2,240.00
			Task 2 Total:	\$2,240.00

Task 3 - Repair Well MW-3**Task 3a - Mobilization**

Mobilization miles	10	miles	\$10.63	\$106.30
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Task 3b - Repair Well MW-3

Labor	Quantity	Unit	Rate	Cost
Staff Scientist/Engineer	4	Hours	\$112.00	\$448.00
Technician III	8	Hours	\$100.00	\$800.00
			Labor Subtotal	\$1,248.00

Materials & Equipment

	Quantity	Unit	Rate	Cost
Development pump	1	Day	\$72.60	\$72.60
Total survey station	1	Day	\$165.00	\$165.00
Water Level Probe	1	Day	\$52.80	\$52.80
Padlock	1	Each	\$21.00	\$21.00

Materials & Equipment Subtotal \$311.40

Other Direct Charges (ODC)

	Quantity	Unit	Rate	ODC*	Cost
Well Supplies, various	1	Each	\$300.00		\$300.00

Other Direct Charges Subtotal \$300.00

Task 3b Total: \$1,859.40

Task 4 - Collect Static Water Level Measurements from Well MW-6

Task 4a - Mobilization, 3 Events

Mobilization miles	15 Miles	\$10.63	\$159.45
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Task4b - Static Water Level Measurements, 3 Events

Labor	Quantity	Unit	Rate	Cost
Technician III	1.5	Hours	\$100.00	\$150.00
			Labor Subtotal	\$150.00
Materials & Equipment	Quantity	Unit	Rate	Cost
Water Level Probe	1.5	Hour	\$8.00	\$12.00
			Materials & Equipment Subtotal	\$12.00
			Task 4b Total:	\$162.00
			Cost/Well:	\$54.00

Task 5 - Groundwater Monitoring, SWL only for 11 Wells, Sample 8 Wells

Task 5a - Mobilization, Work will take two days, two mobilization events

Mobilization Miles	10 Mile	\$10.63	\$106.30
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Task 5b - Static Water Level Measurements, 11 wells

Labor	Quantity	Unit	Rate	Cost
Technician III	5.5	Hours	\$100.00	\$550.00
			Labor Subtotal	\$550.00
Materials & Equipment	Quantity	Unit	Rate	Cost
Water Level Probe	5.5	Hours	\$8.00	\$44.00
			Materials & Equipment Subtotal	\$44.00
			Task 5b Total:	\$594.00
			Task 5b Cost/Well:	\$54.00

Task 5c - Sample 8 Monitoring Wells

Labor	Quantity	Unit	Rate	Cost
Technician III	12	Hours	\$100.00	\$1,200.00
			Labor Subtotal	\$1,200.00
Materials & Equipment	Quantity	Unit	Rate	Cost
Conductivity/DO/pH Meter Flow Through	1.5	Days	\$85.80	\$128.70
Vinyl tubing	320	Ft	\$1.00	\$320.00
Water Level Probe	1.5	Days	\$52.80	\$79.20
Pump - Bladder	1.5	Days	\$66.00	\$99.00
Bladders - Polyethylene	8	Each	\$6.00	\$48.00
			Materials & Equipment Subtotal	\$674.90
			Task 5c Total:	\$1,874.90
			Task 5c Cost/Well:	\$234.36

Task 5d -Analytical Costs

Materials & Equipment	Quantity	Unit	Rate	Cost
VPH Analysis	10	Each	\$120.00	\$1,200.00
EPH Screen Analysis	10	Each	\$75.00	\$750.00
EPH Fractions	5	Each	\$150.00	\$750.00
Lead scavengers	5	Each	\$220.00	\$1,100.00
Chlorine	1	Each	\$25.00	\$25.00
Disinfectant Byproducts	1	Each	\$300.00	\$300.00
Analytical Fees	10	Samples	\$10.00	\$100.00
Task 5d Total:				\$4,225.00

Task 6 - Monitor Helena High Irrigation Well**Task 6a - Mobilization**

Mobilization Miles	5	Mile	\$10.63	\$53.15
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Task 6b - Sample Irrigation Well

Labor	Quantity	Unit	Rate	Cost
Technician III	1.5	Hours	\$100.00	\$150.00
Labor Subtotal				\$150.00
Materials & Equipment	Quantity	Unit	Rate	Cost
Conductivity/DO/pH Flow Through Meter	1.5	Hour	\$13.00	\$19.50
Materials & Equipment Subtotal				\$19.50
Task 6b Total:				\$169.50

Task 6c -Analytical Costs

Materials & Equipment	Quantity	Unit	Rate	Cost
VPH Analysis	3	Each	\$120.00	\$360.00
EPH Screen Analysis	3	Each	\$75.00	\$225.00
Analytical Fees	3	Samples	\$10.00	\$30.00
Task 6c Total:				\$615.00

Task 7 - Data Validation

Labor	Quantity	Unit	Rate	Cost
Staff Scientist/Engineer	2	Hours	\$112.00	\$224.00
Task 7 Total:				\$224.00

Task 8 - Buried Utility Construction Information

Labor	Quantity	Unit	Rate	Cost
Staff Scientist/Engineer	8	Hours	\$112.00	\$896.00
Task 8 Total:				\$896.00

Task 9 - Prepare Release Closure Plan

Labor	Quantity	Unit	Rate	Cost
Senior Project Scientist/Engineer	16	Hours	\$146.00	\$2,336.00
Staff Scientist/Engineer	40	Hours	\$112.00	\$4,480.00
Task 9 Total:				\$6,816.00

Task 10 - Prepare a Generic Applications Report

Labor	Quantity	Unit	Rate	Cost
Senior Project Scientist/Engineer	8	Hours	\$146.00	\$1,168.00
Staff Scientist/Engineer	16	Hours	\$112.00	\$1,792.00
Task 10 Total:				\$2,960.00

Project Total: \$23,863.30