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Re: Remedial Investigation Work Plan for the Petroleum Release at Town Pump, Inc., 417 N. Whitehall Street (West Side), Whitehall, Jefferson County, Montana; Facility ID 22-03645 (TID 22528), Release 6678, Work Plan ID 34991

Section 1: Cover Letter

Per Montana Department of Environmental Quality (DEQ) requested work plan #34991, AJM Incorporated (AJM) has prepared the following work plan outlining the soil and groundwater investigation at the Town Pump in Whitehall, MT to determine the hydrocarbon impact extent from release #6678. This work plan discusses the construction of four (4) groundwater monitoring wells on the west side of North Whitehall Street near the former Town Pump underground storage tank (UST) basin.

Town Pump Whitehall is located at 415 N. Whitehall Street, Whitehall, MT. The legal description for the site is Section 33 Township 2 North, Range 4 West.

Section 2: Facility History/Release Background

The current operator is Town Pump and has eleven active fuel systems, five gasoline underground storage tanks (UST) and six diesel USTs. The facility has a history as a fueling operation, beginning circa 1976 when underground storage tanks (USTs) were installed. During the operation of this fuel station, there has been a couple underground storage tank (UST) releases, all of which have been reported and addressed. Previous releases at this location include releases #3572 (resolved), #4955 (resolved), and #6242 (resolved). Release 6639 is on the east side of North Whitehall Street that is currently being resolved separately.

Surrounding land usage includes primarily commercial properties, residential properties, and undeveloped land. To the north, there are commercial properties and I90, to the east is Whitehall High School (approximately 500ft), to the south begins the residential area of Whitehall and west is an undeveloped hillside.

Section 3: Summary of Facility Conditions

Whitehall is located north of the Jefferson Rivers. Nearby well data sourced from the Groundwater Information Center (GWIC) show two wells Mayne (irrigations) and Cowdrey (domestic), view GWIC well logs in Appendix B. Information from these nearby wells indicate groundwater to be at approximately 10-12ft below ground surface (bgs). The soil characteristics include rocky clay from 0 to

12ft bgs and then sandy gravel once groundwater is reached. This demonstrates the likelihood of a semi-confined aquifer with a relatively fine clay cap. Groundwater flow is expected to be toward the Jefferson River to the southeast or toward Whitetail Deer Creek to the east. Groundwater fluctuation may be impacted by local irrigation activity.

Section 4: Work Plan Maps

See Appendix A for all work plan site maps.

Section 5: Objectives of Investigation

The purpose of this soil and groundwater investigation is to determine the extent and magnitude of the hydrocarbon impact near the recently removed fuel systems. Stained soil and odors were observed during the removal of the seven USTs located on the west side of the road near the previous store. The primary location of impacted soils was found under the unleaded USTs located north of the store, tank #2482 and tank #2481, with soil impacts under the northern two dispensers/piping. During the removal, approximately 40 yards of soil was removed from under the UST basin and under the fuel piping. When removing soil from the former UST basin, petroleum hydrocarbon impact was observed in the groundwater. Secondary source impacts in the soils were removed as best as possible as the impacts were at 12 feet bgs and the removal of a significant amount of overburden would not be appropriate for additional soil removal.

Therefore, AJM recommends the construction of four monitoring wells and collecting soil boring samples during the well installation around the former piping (Task 1) and four quarterly groundwater sampling events collected from all monitoring wells (Task 3).

Section 6: Minimum Work Plan Tasks

TASK 1 – SOIL BORING

Up to four soil borings are proposed to collect soil samples for laboratory analysis during the well construction. These samples will be collected from the areas of most impact, determined by in field analysis using heated heat space sampling and a photoionization detector (PID), and another sample collected at the soil water interface. Up to two soil samples per boring will be collected with a total of 8 samples total. Samples will be sent to an accredited laboratory under a Chain of Custody and within an ice cooler to be analyzed for volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH). A complete soil boring cost estimate, bid spec sheet, and contractor bids can be found in Appendix B.

TASK 2 – MONITORING WELL INSTALLATION

AJM proposes installing up to four (4) monitoring wells to be installed near the former fuel system area to determine groundwater characteristics. Recommended wells include one upgradient well, two wells under the former fuel system impacted areas to determine highest groundwater impact concentrations, and one downgradient well is recommended to evaluate the extent of the plume.

TASK 3 – GROUNDWATER SAMPLING

Once monitoring wells are constructed, AJM will develop each well with standard well development practices including surging and purging sediment from the well boring and casing. After the well has been established, samples will be collected and sent to an accredited laboratory for EPH and VPH from all monitoring wells and lead scavengers from monitoring wells nearest the former UST gasoline basin on the west side of the street.

EPH and VPH samples will be collected quarterly for the first year to determine the extent and magnitude of groundwater concentrations to provide a better understanding of the groundwater characteristics.

TASK 4 – SOIL EXCAVATION AND DISPOSAL
During the UST system removal, approximately 40 yards of impacted soil has been stockpiled onsite and awaiting disposal at the Logan Landfill. A waste tracking profile has been completed and is on file with the landfill manager. Attached cost estimate includes the subcontractor price to excavate the impacted soils and to properly dispose. A brief summary of excavation and disposal will be included in the complete remedial investigation report submitted toward the workplan end.

Section 7: Investigation Methods, Equipment, Technology, and Personnel

Utility Locate
Prior to soil boring, both public and private utility locates will be performed to help prevent damage to public and onsite utilities.

Soil Sample Collection
Up to 8 soil samples are proposed to be collected from monitoring well soil borings. All samples will be collected following AJM's approved Quality Assurance Project Plan (QAPjP) on file with the DEQ with the established MDEQ Quality Assurance Plan (QAP).

The samples will be collected from the sampling core of the geo-probe drilling system via typical clear plastic sleeves. Using olfactory, visual and photoionizing detector readings (heated head space), two soil samples from each borehole may be collected. The anticipated depths to collect soil samples will be between 2-12ft. These depths will allow for proper analysis following the Montana DEQ. Up eight (8) samples may be collected and delivered to an accredited laboratory for extractable and volatile petroleum hydrocarbons (EPH and VPH).

Decontamination protocol will be used between each sample collection to mitigate any cross contamination between samples. Samples will be immediately placed on ice, documented using a laboratory approved chain of custody (COC) and sent to an accredited laboratory for petroleum constituent analysis as required by the Montana Risk-Based Corrective Action Guidance for Petroleum Site maps showing site location and approximate well boring locations can be found in Appendix A.

Groundwater Monitoring Well Construction
An auger rig will be used to construct wells to 25 feet bgs (or 10 feet beyond first water contact as applicable) in the approximate locations shown on Figure 2 and the monitoring wells will be constructed as follows:

- Slotted 2-inch flush-threaded sch 40 casing with 0.02 slot from 20 to 5 feet bgs.
- Solid flush-threaded casing from 5 to 1-foot bgs.
- 10/20 Colorado silica sand from bottom of borehole to 4 feet bgs.
- Bentonite from 4 to 2 feet bgs, sand to 1-foot bgs.
- 8" steel well box cemented in place.
- Locking caps will be placed on each well.

Monitoring wells will be developed after well construction to purge silt and sediment ensuring a viable sample can be sent to an accredited laboratory. A downhole 2-stage submersible pump will be used to develop the wells to remove silt and sands. This will include surging the tubing and removing both water and silt from the 2-inch diameter wells until water flow has cleared to less than 10 Nephelometric Turbidity Units (NTU). Purged groundwater may need to be stored in 55-gallon drums

for appropriate disposal of water. It is predicted that 50 gallons of water will be purged from each well.

A Professional Land Survey (PLS) company will be contracted to conduct a survey of the area and tie-in well head elevations into a local USGS benchmark. Street curbs along with both underground and overhead utilities, fuel system lines and buildings will also be incorporated into the PLS work. This will provide AJM with A-CAD figures so that groundwater flow direction and gradient can be calculated along with potential future work at the facility and prevent damage to underground utilities.

Groundwater Sampling
Four groundwater sampling events will occur quarterly for the first year with the production of three interim data submittals after each event and a final groundwater monitoring report after the final sampling event. During sample events, static water levels and field parameter data will be obtained from all wells listed. During well purging, the data collection will include temperature, pH, dissolved oxygen, conductivity, turbidity and ORP. Once the above parameters are within the range of Montana DEQ guidance document specifications, groundwater samplings will be collected. Sampling will be conducted in the 2-inch wells with a peristaltic pump with low flow controller. When using the peristaltic pump, new 1/4-inch HDPE tubing will be used. Appropriate labeling, cooling, and chain of custody protocols will be followed. Samples will be delivered under chain of custody to an accredited laboratory for analysis.

All water produced from this sampling process will be allowed to evaporate on the asphalt and no on-site storage is currently planned. Should significant sheen or free phase product be observed, the DEQ and PTRCB will be contacted to determine course of action. All non-dedicated equipment used for purging, sampling, or depth measurements will be decontaminated with an Alconox wash solution, followed by a distilled water triple rinse prior to each use.

Section 8: Scheduling and Reporting

REPORT WRITING
Following the collection of soil samples and the construction of groundwater monitoring wells, an Abbreviate Soil Boring and Monitoring Well Installation Report (AR-03) will be submitted to the DEQ. Following each groundwater sampling event, an Interim Data Submittal will be produced. After the collection of the four sample rounds, a Remedial Investigation Report (RIR-01) will be submitted including the following:

- Summary of disposal of excavated soils from the former UST area.
- Discussion of soil and groundwater investigative methods and results.
- Evaluation of the available soil and groundwater data to assess the need for intrusive investigation of potential exposure pathways (e.g., vapor intrusion, utility corridor, etc.).
- Conclusions and recommendations of remedial action(s) required to resolve the release.
- Cumulative soil and groundwater data tables.
- Append boring logs, well completion diagrams, groundwater field forms, laboratory analytical data, completed Data Validation Summary Forms, and the Release Closure Plan.
- The Report will follow all guidelines found on the Montana DEQ under the Guidance dropdown at the PTCS webpage.
- The report will include data reported under an AR-03 Abbreviated Soil Boring and Groundwater Monitoring Well Installation Report and groundwater monitoring data from the initial sample event.
- A Release Closure Plan will be created.

Work discussed in this work plan is estimated to be completed December 2026. A cost estimate for the soil boring, monitoring well, sampling and report writing have been completed for the above-described work and can be found in Appendix B. Work at Whitehall Town Pump can begin upon written approval by the DEQ. Please do not hesitate to call if there are any questions or if we can provide any additional information.

Sincerely,

Lars Heinstedt

AJM Incorporated
Lars Heinstedt, Staff Scientist

Dennis Franks

AJM Incorporated
Dennis Franks, President

Section 9: Appendices for Work Plan

Appendix A

Site Location

Site Map

Figure 1
Town Pump Whitehall
Whitehall, Jefferson County, Montana

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Figure 2
Town Pump Whitehall
Soil Boring and Monitoring Well Locations

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