Corrective Action Plan 34892

Gasamat #573

211 6th Avenue North

Shelby, MT 59474

Facility ID# 51-00104, Release# 3333, WP ID# 34892

Prepared for:

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WCEC Project No. 10-7596-70

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1.0 Introduction

West Central Environmental Consultants (WCEC) has prepared this corrective action plan (CAP) for the Gasamat #573 facility (Facility ID# 51-00104, Release# 3333, Work Plan 34892 as requested by the Montana Department of Environmental Quality (MTDEQ) in a letter dated June 20, 2024. This facility is currently operated as a gas station & convenience store.

1.1 Site Location

The Gasamat #573 facility is located at 211 6th Avenue N. in Shelby, Montana. A site location map is included as Figure 1 and a current site details map is included as Figure 2. The Public Land Survey System (PLSS) description for the site is the NW/4, NW/4, NW/4 of Section 28, T32N, R2W. The approximate geographic coordinates are Latitude 48.5086°, Longitude -111.8630°. Township, range, and section information was obtained using the United States Geological Survey (USGS) Shelby, Montana 1:24,000 Quadrangle. The site is located within the Marias River Hydrologic Unit.

1.2 Geologic/ Hydrogeologic Setting

The surficial geology in the area of the facility consists of Quaternary alluvium and colluvium consisting mainly of locally derived sand, gravel, and reworked material from glacial till (Lopez, 2002). Native soils underlying the facility consist of clay except in areas of historic utility disturbances, excavations, or in areas occupied by the UST system. Groundwater at the facility is typically between 0 and 2 feet below grade. A drain was reportedly installed along the eastern edge of the facility in 6th Avenue N. by the fire department and connected to the storm water system at the corner of US Highway 2 and 6th Avenue N. This drainpipe was bedded in gravel at the time of installation and may affect subsurface drainage at the facility.

2.0 Scope of Work

2.1 Required Scope of Work

The Scope of Work requested by the MTDEQ consists of:

- Perform one year of semi-annual groundwater monitoring during high and low groundwater conditions.
- Monitor groundwater at facility monitoring wells. Determine appropriate monitoring wells to gauge fluid levels and obtain groundwater samples. The selected wells should adequately define groundwater elevations, flows, and provide sufficient analytical data to assess site remediation. Sample all wells using DEQ's Groundwater Sampling Guidance.
- Analyze groundwater samples for petroleum constituents as required by the Montana Risk-Based Corrective Action Guidance for Petroleum Releases. In addition, have groundwater samples analyzed for intrinsic biodegradation indicators (IBIs).
- Dispose of purge water according to the Disposal of Untreated Purge Water from Monitoring Wells flowchart.
- Validate all laboratory analytical data using DEQ's Data Validation Summary Form (DVSF.
- Discuss ongoing WP tasks and results with DEQ's project manager; submit written agreed-upon WP modifications as required to complete the WP objectives.
- Prepare and submit an Interim Data Submittal (IDS) for each interim groundwater monitoring event. The IDS is expected to include the discussion, data, tables, and figures described in the Groundwater Monitoring Work Plan and Report Guidance for Petroleum Releases.
- Prepare a Release Closure Plan (RCP); discuss results with DEQ's project manager. DEQ expects the RCP to cover the Release investigation, cleanup, and monitoring information.
- Prepare and submit one Groundwater Monitoring Report detailing the method and results of all groundwater monitoring events completed under this WP. The Groundwater Monitoring Report is expected to include at a minimum the following:
    - Use the report format found under the Guidance dropdown at the PTCS webpage1.
    - Discussion of the monitoring method results, deviations from the approved work plan, assessment of attenuation rates (onsite and offsite), recommendations, and conclusions.
    - Cumulative groundwater data tables.

- Updated site features and potentiometric surface maps.
- An updated Release Closure Plan (RCP) based on the monitoring results.
- Append groundwater monitoring field forms, laboratory analytical data, completed DVSFs, and the updated RCP.

3.0 Groundwater Monitoring

3.1 Groundwater Monitoring & Sampling

WCEC will conduct semiannual monitoring from site wells VEW-1, SP12, SP13, and SP14 during high and low groundwater conditions. Groundwater samples will be collected using low flow sampling protocols in accordance with DEQ's Groundwater Sampling Guidance. Samples collected during the events will be analyzed for VPH, EPH, and IBIs (soluble iron, soluble manganese, sulfate, nitrate+nitrite, methane, ammonia, and TDS) during both semiannual events. Historical sampling events have shown that lead scavengers (1,2-dicloroethane and ethylene dibromide) are in compliance with RBSLs and further analysis of these constituents is not needed. Depth to water measurements will be collected from all site wells during each monitoring event. Groundwater quality parameters (pH, DO, conductivity, temperature, salinity, and ORP) will be obtained using a flow through cell attached to a peristaltic pump. Field parameters will be collected from all monitoring wells that are sampled during each event. Groundwater samples will be preserved in accordance with the analytical method, packed on ice and shipped to Energy Laboratory in Helena, Montana. WCEC will use the Montana DEQ Disposal of Untreated Purge Water from Monitoring Wells flowchart to determine the required method of purge water disposal. Based on historic sampling events it is anticipated that purge water will be applied to an unpaved surface at the facility. If the flow chart requires additional handling based on unanticipated site conditions WCEC will contact Montana DEQ and submit a Form 8 cost adjustment to the PTRCB.

4.0 Report Preparation

4.1 Release Closure Plan

WCEC will complete an RCP evaluation of cleanup alternatives and assessment of future compliance monitoring needed to achieve closure of the release. The release closure plan will be included as an appendix of the remedial investigation report.

4.2 Data Validation

WCEC will complete the MTDEQ – Waste Management and Remediation Validation Summary Form. Data validation is a standardized review process for judging the analytical quality and usefulness of a discrete set of chemical data and is necessary to ensure that data is without bias, has an accuracy greater than the screening levels, and is of a quality that allows for its use in drawing conclusions and making recommendations for additional remedial actions. The completed data validation forms for each sampling event will be included as an appendix to the remedial investigation report.

4.3 Interim Data Submittal

WCEC will submit an interim data submittal (IDS) following the initial groundwater monitoring event. This IDS will include a discussion of the data obtained during the sampling event, cumulative data tables, a site details map, and potentiometric surface maps for the sampling event. The IDS will be submitted within 60 days of receipt of laboratory analytical from the sampling event.

4.4 Groundwater Monitoring Report

WCEC will submit a groundwater monitoring report to the MTDEQ within 60 days of receipt of laboratory analytical from the second semiannual event. The report will include a brief site history, description of site location and geolithology, and a summary of all remedial actions conducted under corrective action plan 34892. WCEC will include cumulative tables for groundwater elevations, groundwater chemistry, and analytical results. Maps will be provided detailing the site location, tank basin and associated piping, utilities, extent and magnitude of current hydrocarbon impacts, potentiometric surface plots for each sampling event, and monitoring well locations. The complete laboratory analytical reports will be included as appendices of the groundwater monitoring report. This report will discuss options identified in the RCP and make recommendations for additional remedial actions to bring the site to closure.

5.0 Time Line and Cost

The attached *Estimated Cost Spreadsheet – Corrective Action Plan 34892* details anticipated project costs to complete the scope of work required by the MTDEQ [Appendix A]. WCEC will complete the tasks under this work plan as follows:

Event 1: Groundwater sample collection from VEW-1, SP12, SP13, and SP14. Samples will be analyzed for VPH and IBIs. Depth to water measurements will be collected from all site wells (1 staff scientist, 1 vehicle).

IDS: Detailed in Section 4.3

Event 2: Groundwater sample collection from VEW-1, SP12, SP13, and SP14. Samples will be analyzed for VPH and IBIs. Depth to water measurements will be collected from all site wells (1 staff scientist, 1 vehicle).

Groundwater Monitoring Report: Detailed in section 4.4

WCEC requests a work plan completion date from the Montana DEQ of December 15, 2025. The scope of work outlined in this work plan will be conducted following approval of the MTDEQ.

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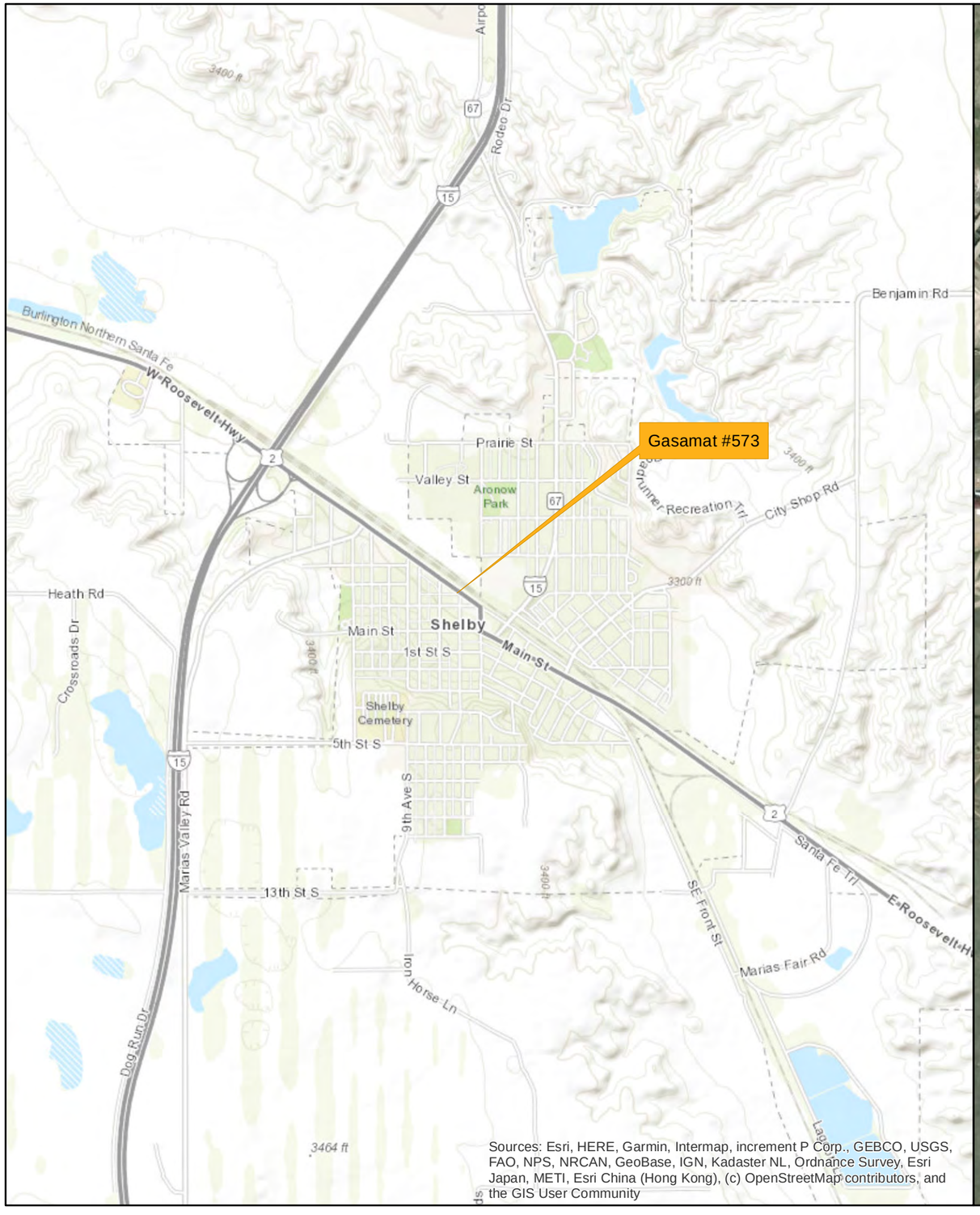

PROJECT #: 10-7596-70	**Site Location Maps**
DATE: 03/07/19	**Gasamat #573** **211 6th Avenue N.** **Shelby, MT**
DRAWN BY: NGO	
ORTHOPHOTO DATE: 07/15/11	

WCEC ENVIRONMENTAL CONSULTANTS

FIGURE 1

SP 3
SP 13
SP 11
SP 3
SP 12
VEW 2
VEW 1
SP 14

Legend

N

- Monitoring Well
- Over Head Power
- Natural Gas
- Telephone Line
- Water Line
- Drain Tile Storm Sewer

Feet 1 in = 25 ft

25 12.5 0 25

Gasamat #573
211 6th Avenue N.
Shelby, MT 59474

Site Details Map

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FIGURE 2