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Title: Interim Measure Remedies Performance Monitoring Dashboard

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Key Topic: Other Innovative Analysis

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Client Name: Calumet Montana Refining, LLC (CMR)

Project Name: CMR this Area of Concern-16 (AOC-16) Interim Measure (IM)

Project Location: Great Falls, Montana

Primary Ramboll Project Staff (Office): Midwest Central

ABSTRACT

Background/Objectives:

In 2021, Ramboll installed IM remedies to address historic petroleum releases resulting in Light non-aqueous phase liquid (LNAPL) and dissolved phase groundwater impacts in the AOC-16 area of the CMR's Great Falls, MT facility. IM remedies consist of dual-phase extraction (DPE), LNAPL recovery trench and a passive treatment trench (PTT). To ensure that these IM remedies are achieving their objective, Ramboll developed a robust performance monitoring plan.

Approach/Activities:

A PowerBI dashboard was developed to track performance monitoring data for these IM remedies. Data from various sources such as field measurements, treatment system instrumentation, and laboratory analytical data are input to PowerBI, and the dashboard provides analysis and visualization. Performance monitoring parameters along with other general operational parameters such as system run time, discharge volume, and groundwater/LNAPL depths are shown on the dashboard. This dashboard serves as a data presentation and reporting platform for the stakeholders (CMR and Ramboll).

Results/Lessons Learned:

This dashboard is instrumental in providing a complete picture to our client by integrating and visualizing OMM data from different sources on a single platform. This approach has assisted with evaluating IM remedies performance as well as with troubleshooting efforts. Dashboard has also streamlined our routine reporting needs i.e., graphics are relatively automated and easily extracted, which allows for efficiencies and to be made on time and cost.

Aspect of Work that Relates to Sustainability:

1. The use of the dashboard allows us to monitor remotely and utilize the local maintenance personnel for hands on work when needed. This is a sustainable approach considering the site location and the travel involved.
2. By automating the OMM data management, analysis, and visualization, we are saving significant amount of time and energy.