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SAMPLING & ANALYSES WORKPLAN

For the Junction City Yard

28612 High Pass Road,
Junction City, OR 97448

DEQ USTC File No.20-90-4036

DEQ Facility ID No. 3517

Date: 4/013/24

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1.0 Introduction

Site description

The Junction City Yard, located at 28612 High Pass Road, Junction City, OR has been used as a shop by Lane County since 1952. The site was previously agricultural land.

Environmental Background

According to the 1991 Corrective Action Plan the employees found diesel in Flat Creek related to surface spills. Lane County employees also indicated diesel, from the onsite UST, was contaminated with water. This led to the 1991 Corrective Action Plan. Groundwater movement was documented to range from directly west to directly south.

2.0 Proposed Subsurface Investigation – Location and Methodology

Two geotechnic holes designated D-1 and D-2 would be constructed as described below. The locations are seen below.

VICINITY MAP





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Location D-1 is approximately 15 - 20 feet northeast of the monitoring well MW-3 location. The purpose of the boring is to determine the vertical extent of petroleum contamination and total lead concentration in the area with highest total petroleum concentration in 1991 (S10). The boring will be advanced to 10 feet below ground surface or 4 feet below the uppermost aquifer, whichever is greater. A soil sample will be collected at the level with highest apparent total petroleum concentration. A second sample will be collected below the contaminated zone or just above the soil/groundwater interface, whichever is shallower. If no indications of petroleum are encountered a soil sample shall be collected at 9 – 10 feet (previously established as the level with highest total petroleum). A temporary monitoring well will be installed in the boring and a groundwater sample will be collected with peristaltic pump.

Location D-2 is approximately 15 - 20 feet south of the MW-3 location and as close to the fence as possible. The purpose of the boring is to determine the magnitude of shallow impacted soil for ecological scoping. The boring will be advanced to 4 feet below ground surface. A soil sample collected from the level with highest apparent TPH concentration. If no indications of petroleum are encountered a soil sample shall be collected at 1.5 feet bgs.



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3.0 SAMPLING METHODOLOGY

3.1 Soil Sampling Methodology

Subsurface soil samples will be collected as described by ASTM 6282 - 98 "Standard Guide for Direct Push Soil Sampling for Environmental Site Characterization". A steel sample tube equipped with a polyethylene liner and cutting head is advanced into the soil with a hydraulic ram. The sample tube is approximately two (2) inches in diameter and up to five (5) feet long. After the sample tube is retracted, the filled liner is extracted and cut lengthwise to expose the soil sample. The soil is screened for indicators of petroleum (odor, staining, sheen). A Photoionization Detector (PID) will be passed over the freshly exposed core to screen vapor concentrations.

A Drill Core Data Sheet (DCDS) is completed with a description of soil type, core interval, actual interval collected, moisture content, odors, PID measurements, and visible petroleum contamination. Samples collected for laboratory analyses are listed with the collection interval.

Soil samples are collected directly into glass jars and sealed with teflon-lined caps. Soil jars are filled completely to limit headspace and the loss of volatiles. Samples for volatile analyses will be collected with a 10-cubic centimeter polyethylene sampler and placed into a VOA vial with containing the appropriate preservative. The participating laboratory will provide glass jars, polyethylene sampler, and VOA vials.

3.2 Groundwater Sampling Methodology

A temporary monitoring well will be constructed in groundwater borings consisting of 3/4-inch PVC casing flush-threaded to a 5-foot long prepacked screen with 0.010-inch slots. The groundwater level will be measured at 10 to 15 minute intervals until consecutive measurements are within 0.01 feet. Groundwater samples will be collected with a peristaltic pump using high density polyethylene (HDPE) and silicon tubing. The tubing shall be replaced at every sample location.

The well will be purged for several minutes to reduce turbidity. Groundwater samples will be collected into 1-liter glass bottles, 250-milliliter polyethylene bottles, and 40-milliliter VOA vials with the appropriate preservative. VOA vials will be inverted and tapped to verify that no air is trapped inside.

Water samples will immediately be placed into an iced cooler and delivered to the laboratory with a Chain-of-Custody that documents sampling date, time, sampler, and list of requested analyses. Soil and water samples will be stored in separate coolers to prevent breakage during shipment.

3.3 Field Quality Control

One in ten soil and groundwater samples will be collected in duplicate for quality control purposes. Due to limited sample volume, only a duplicate for volatile analytes will be collected for soil samples. For water samples a duplicate will be collected for all constituents analyzed.

One field blank sample will be collected from equipment used to collect groundwater samples.

Trip blank samples will be prepared by the analytical laboratory contracted for the analyses to travel with sample containers. A maximum of one (1) groundwater samples, one duplicate, and one trip blank are anticipated.

A decontamination blank shall be included if water sampling equipment is shared between locations.



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4.0 Analytical Schedule

Soil and water samples from D1 shall be analyzed for Gasoline range hydrocarbons (TPH-Gx) and Diesel range hydrocarbons (TPH-Dx) by the Northwest Method for Total Petroleum Hydrocarbons (NW-TPH-Gx and NW-TPH-Dx, respectively), and total lead by EPA Method 6010.

The soil sample from D2 shall be analyzed TPH-Gx and TPH-Dx by NW-TPH-Gx and NW-TPH-Dx; and total lead by EPA Method 6010. Additional analyses for volatile organic compounds (VOCs) by EPA Method 8260 will be performed if TPH-Gx is reported over 120 milligrams per Kilogram (mg/Kg). Additional analyses for polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270 SIM will be performed if TPH-Dx is reported over 2,500 mg/Kg.

5.0 Reporting

The following will be included in the report submitted as a result of the proposed sampling event:

1. The analytical data will be presented in tables and
2. Field screening data, when used to help guide on-site actions before and during events, will be included.
3. Conceptual site model shall be created based on the data.

Regards,

Jame Harrell, BS, FE