



June 11, 2019

Mr. Donnie McCurry
Montana Department of Environmental Quality
Petroleum Tank Cleanup Section

**Subject: Corrective Action Plan for Contaminated Soil Excavation
Former Floral Park Service Station, Butte, Montana
DEQ Facility ID 47-13226; Release 1786**

Dear Mr. McCurry:

On behalf of Mr. Robert Leipheimer, Water & Environmental Technologies (WET) is submitting this Corrective Action Plan for the excavation and disposal of petroleum contaminated soil at the Former Floral Park Service Station property (Site) located at 2700 Harrison Avenue, Butte, Montana.

SCOPE OF WORK

The scope of work includes excavating contaminated soil, transporting contaminated material to an approved disposal site (to be determined), placing oxygen enhancement chemical pellets in the open excavation, backfilling the affected area with clean fill, compacting the backfilled area, and preparing a report summarizing the corrective actions.

Excavation Area and Decision Criteria

With continuous oversight by WET personnel, Jeffery Contracting of Butte, MT will excavate, transport, and dispose petroleum contaminated soil from the site in the approximate location shown on Figure 1. Approximately 350 to 1,000 bank cubic yards of soil will be excavated. This estimate is based on the following:

- 1) The potential surface areas of the excavation, as shown on Figure 1, and
- 2) Anticipated excavation depth of 9-feet (approximately 1-ft below low seasonal groundwater).

The actual excavation volume will be determined in the field and will be based on the following criteria:

- 1) The aerial extent of soil impacts observed in the subsurface and
- 2) The rate at which groundwater infiltrates into the open excavation.

WET personnel will direct the contractor to terminate the excavation laterally if one or more of the following criteria are met:

- 1) The excavation reaches the Site property boundary,
- 2) Soil impacts appear to decrease to levels below DEQ Risk-Based Screening Levels (RBSLs), or
- 3) Physical barriers are encountered, including but not limited to buildings, signs, and utility poles.

WET personnel will direct the contractor to terminate the excavation at a given depth if one or more of the following criteria are met:

- 1) A physical barrier is encountered that can not be removed with standard excavation equipment, or
- 2) Groundwater is entering the excavation at a rate that would necessitate construction dewatering if the excavation were to proceed to a greater depth.

It is anticipated that the aerial extent of the excavation will be limited by the sidewalks along Harrison Avenue to the west, Cornell Avenue to the south, and the building on-site to the east. It is anticipated that the presence or absence of soil impacts will determine the excavation extent to the north.

Site Control

Temporary construction fencing will be installed around the excavation area to prevent traffic and pedestrian access to the work zone. A portion of the fence will be opened and closed as trucks and equipment enter and leave the work zone. This portion of the fence will be re-secured during work breaks and at the end of every shift.

If determined necessary by the contractor, Cornell Avenue will be closed near the intersection with Harrison Avenue to allow safe entry and exit to and from the site by equipment and haul trucks.

Soil Field Screening

To determine whether soil impacts have decreased below RBSLs, WET personnel will continuously screen soils for petroleum impacts using a hand-held photoionization detector (PID) and the heated headspace method, as well as visual observations of staining and olfactory observations of petroleum odor. Soils lacking indications of petroleum impacts will be segregated and stockpiled on-site and reused for backfill. Soils with visible staining, noticeable petroleum odor, or measured headspace VOC concentrations above 50 parts per million will not be reused as backfill. Clean, excavated soils as well as imported fill material, will also undergo gradation and proctor testing to determine their suitability for use as backfill.

Confirmation Soil Sample Collection and Analysis

If contamination appears to have been removed from an area of the excavation, and soils left in place appear to be below RBSLs, confirmation soil samples will be collected from that area per MDEQ spill cleanup guidance.

If impacts above RBSLs appear to remain once the limits of excavation have been reached, a limited number of soil samples will be collected to document the worst-case petroleum hydrocarbon concentrations of soils left in place. The exact number of samples to be collected from areas with remaining contamination will be determined in the field and will be discussed with DEQ prior to backfilling activities. The samples will be containerized in laboratory-supplied jars and submitted under chain-of-custody to Energy Laboratories in Helena, MT for volatile petroleum hydrocarbon (VPH) and extractable petroleum hydrocarbon (EPH) screen analysis. If EPH screen results exceed 200 ppm the samples will be further analyzed for EPH fractions [without polycyclic aromatic hydrocarbon (PAH) analysis].

After the excavation activities are completed, the excavation will be backfilled with clean fill material from a nearby source and compacted in 12-inch lifts using a remote-controlled, sheep's foot roller. The backfill source will be approved by WET personnel prior to use and will be free of debris and other deleterious material. Backfill material will be compacted to at least 95% of standard proctor density.

During backfilling, Oxygen Release Compound (ORC) Advanced Pellets, manufactured by Regenesis, will be added to backfill in the saturated zone at a rate of approximately 0.2% by weight. This rate results in a total of approximately 580 pounds of ORC pellets. This assumes the excavation extends one foot below the seasonal low groundwater level, the excavation footprint is as shown on Figure 1, and backfill material has a bulk density

of 1.2 tons per cubic yard. The ORC compound is typically packaged in 55-pound bags and can be either mixed with stockpiled material prior to backfilling or applied directly to the base of the excavation during backfilling using the excavator bucket.

Soil Disposal

One of two options will be employed for disposing contaminated soil:

- 1) Dispose of the contaminated soil at the Butte-Silver Bow Class C landfill, or
- 2) Landfarm the contaminated soils at a nearby property, contingent upon approval by MDEQ Solid Waste Program. In both instances, representative samples of the contaminated soil will be collected as required.

If soil will be disposed at a landfill, the contaminated soil excavated from the site will be stockpiled at the Jeffery Contracting shop in Butte on impermeable tarps pending characterization and approval for landfill disposal.

If landfarming is chosen, following permitting and approval of the landfarm location, contaminated soil excavated from the release site will be transported directly to the landfarm site and will be treated in accordance with the landfarm permit requirements.

Project Reporting

Upon completion of excavation activities, and within 60-days of receipt of analytical results, WET will prepare and submit a *Standardized Abbreviated Excavation and Disposal of Soils Report* AR-04 that summarizes on-site activities. The report will include figures showing the project location and excavation limits, as well as laboratory analytical reports, summary tables, photographs, and soil disposal documentation.

If the landfarm option is chosen, within 30-days of closure of the landfarm, a *Landfarm Tilling and Sampling Report* (Report AR-06) will be submitted to MDEQ.

SCHEDULE

The soil excavation will commence as soon as feasible after receipt of work plan approval. WET anticipates between 14 and 30 calendar days of preparation time will be required between work plan approval and commencement of field work to reserve traffic control and construction fencing, and apply for a street closure, if needed. WET will notify DEQ of the field schedule at least 10 working days prior to beginning field work.

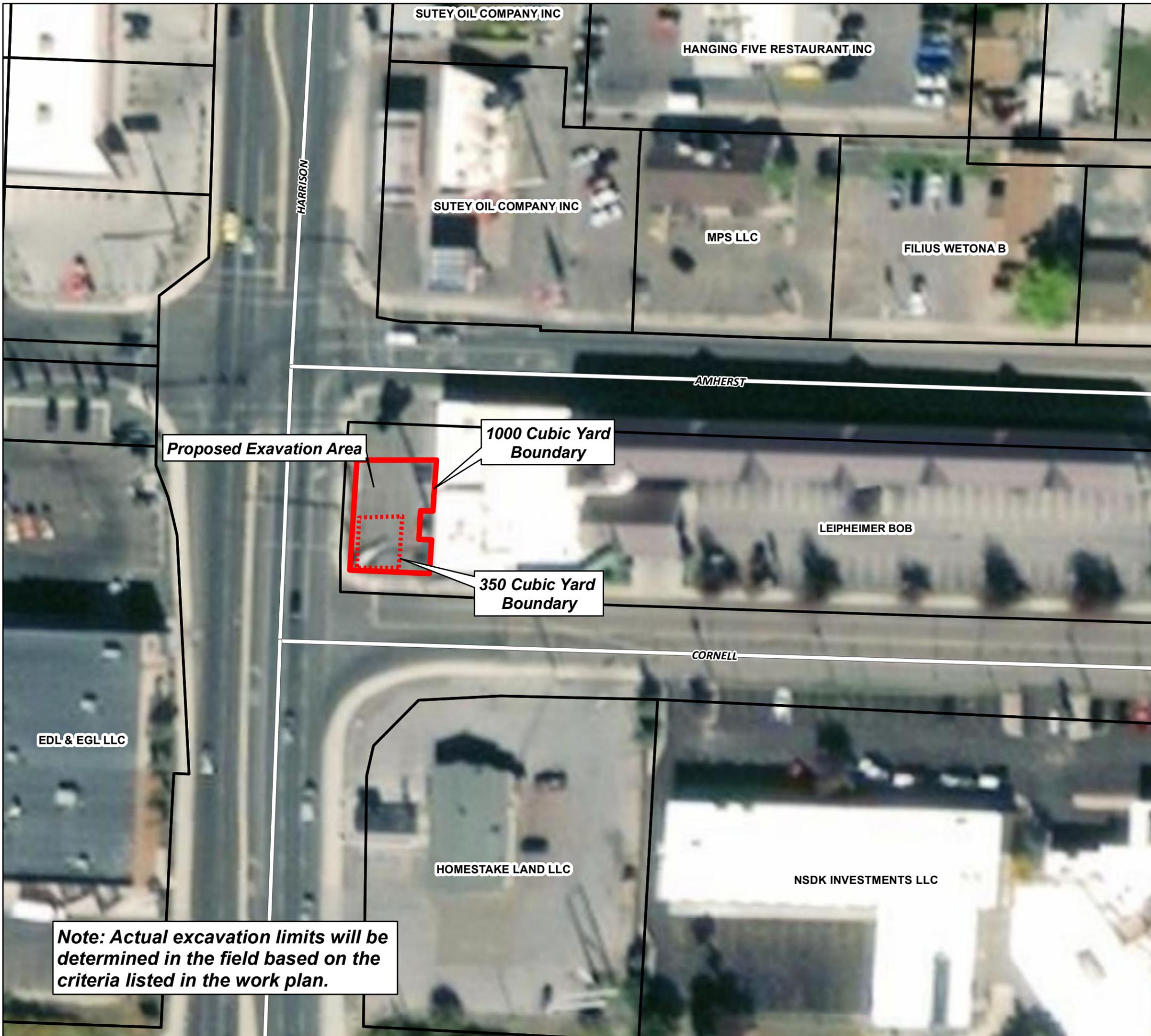
Please call me at 782-5220 if you have any questions.

Sincerely,

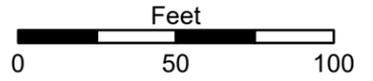
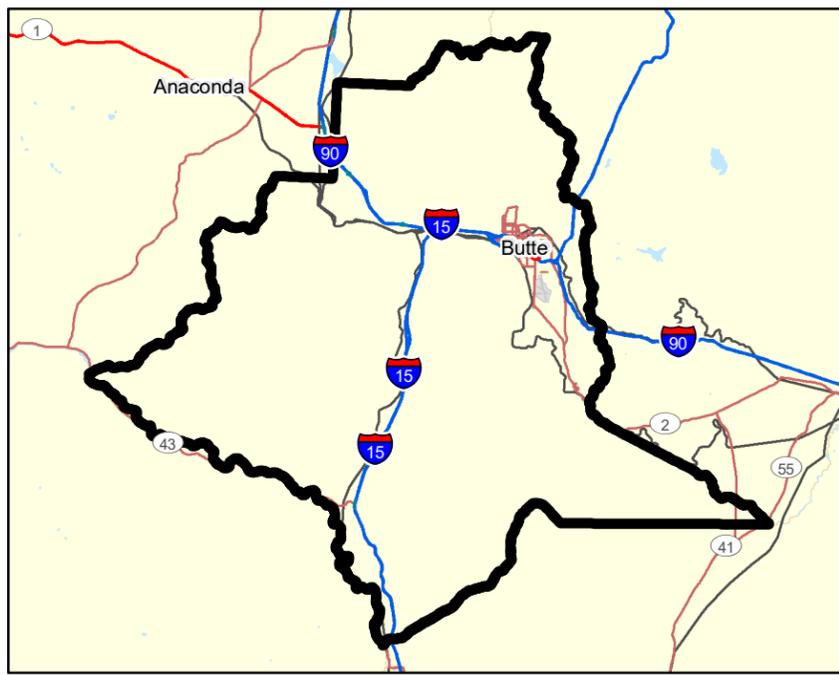
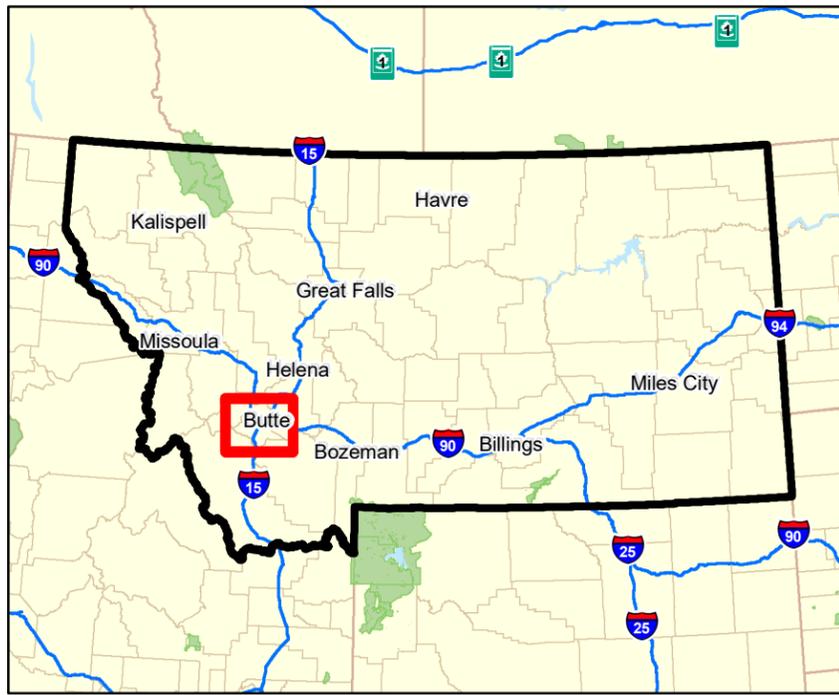


Steve Nicholls, PE
Senior Engineer

Attachments: Figure 1 – Proposed Excavation Area



Note: Actual excavation limits will be determined in the field based on the criteria listed in the work plan.





Proposed Excavation Area
Butte-Silver Bow County MT

Job#: LeipheimerM01	FIGURE 1
Date: 6/10/2019	
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