BIG SKY CIVIL & ENVIRONMENTAL, INC

May 20, 2026

Mr. Donnie McCurry
Montana Department of Environmental Quality
Petroleum Tank Cleanup Section
P.O. Box 200901
Helena, MT 59620-0901

RE: Groundwater Monitoring Work Plan (WP) for the Petroleum Release at Former Northern Tire, 2 Second Street East, Havre, Hill County, Montana; Facility ID #21-00131 (TID 22171), Release 3589, Work Plan 35124

Dear Mr. McCurry,

Big Sky Civil & Environmental, Inc. (BSCE) has prepared this Groundwater Monitoring Work Plan (WP) for the subject petroleum release site in accordance with the Montana DEQ request letter dated April 29, 2026.

Objectives of Groundwater Monitoring

The objective of groundwater monitoring is to complete compliance monitoring, assess concentrations of petroleum hydrocarbons, and evaluate additional investigation, cleanup, or monitoring necessary to progress the release toward closure.

Work Plan Tasks

- Prior to completion of groundwater monitoring, BSCE will assess the condition of facility monitoring wells and the air sparge and soil vapor extraction (AS/SVE) system for continued operation. Results will be shared with DEQ along with recommendations for maintenance and repairs, if necessary.

- One groundwater monitoring event will be completed at the subject site as defined herein.

- Groundwater samples will be collected as site conditions allow from eight (8) monitoring wells: MW-20, MW-70, MW-NF3, MW-1, HS-3, MW-4, MW-50, and MW-NF2 using low-flow sampling techniques outlined in the Groundwater Sampling Guidance document and per the attached standard operating procedures (SOPs).[1]

- Samples will be sent to Energy Laboratories, Inc. in Helena, MT, and analyzed for:
  - Volatile petroleum hydrocarbons (VPH)
  - Extractable petroleum hydrocarbons (EPH) screen with fractionation if the screen is greater than 1,000 ug/L.

- Lead scavengers (1,2-dichloroethane and ethylene dibromide via EPA methods 8260 and 8011, respectively).

- Investigation derived waste (IDW) will be disposed of per the applicable standard operating procedure (SOP). Purge water will be disposed of according to DEQ's Purge Water Disposal Flowchart. It is anticipated that purge water will be spread out on pavement at the site and allowed to evaporate.

- Fieldwork and related items will be discussed with DEQ's project manager, as necessary, to achieve the work plan objectives.

Schedule & Reporting

- The anticipated work plan implementation schedule is included in the following table.

Work Plan Implementation Schedule	
Groundwater Monitoring	Summer/fall 2026
Groundwater Monitoring Report	December 31, 2026

- After completion of the groundwater monitoring event, a Groundwater Monitoring Report will be prepared in accordance with the Montana Groundwater Monitoring Work Plan and Report Guidance document. At a minimum the report will include: scaled map(s) showing the location of all sampling points and physical features of the site, tabular presentation of groundwater data, a discussion section identifying results of the completed monitoring and conclusions & recommendations to resolve the release. The following will be appended to the report: field sampling forms, analytical lab report, data validation summary form (DVSF) and a release closure plan (RCP).

- Reports and supporting documentation will be submitted following DEQ submittal requirements and using standardized report formats.

Cost Estimate

Attached is a cost estimate for completing the above-mentioned groundwater monitoring, analytical testing and reporting.

Signature

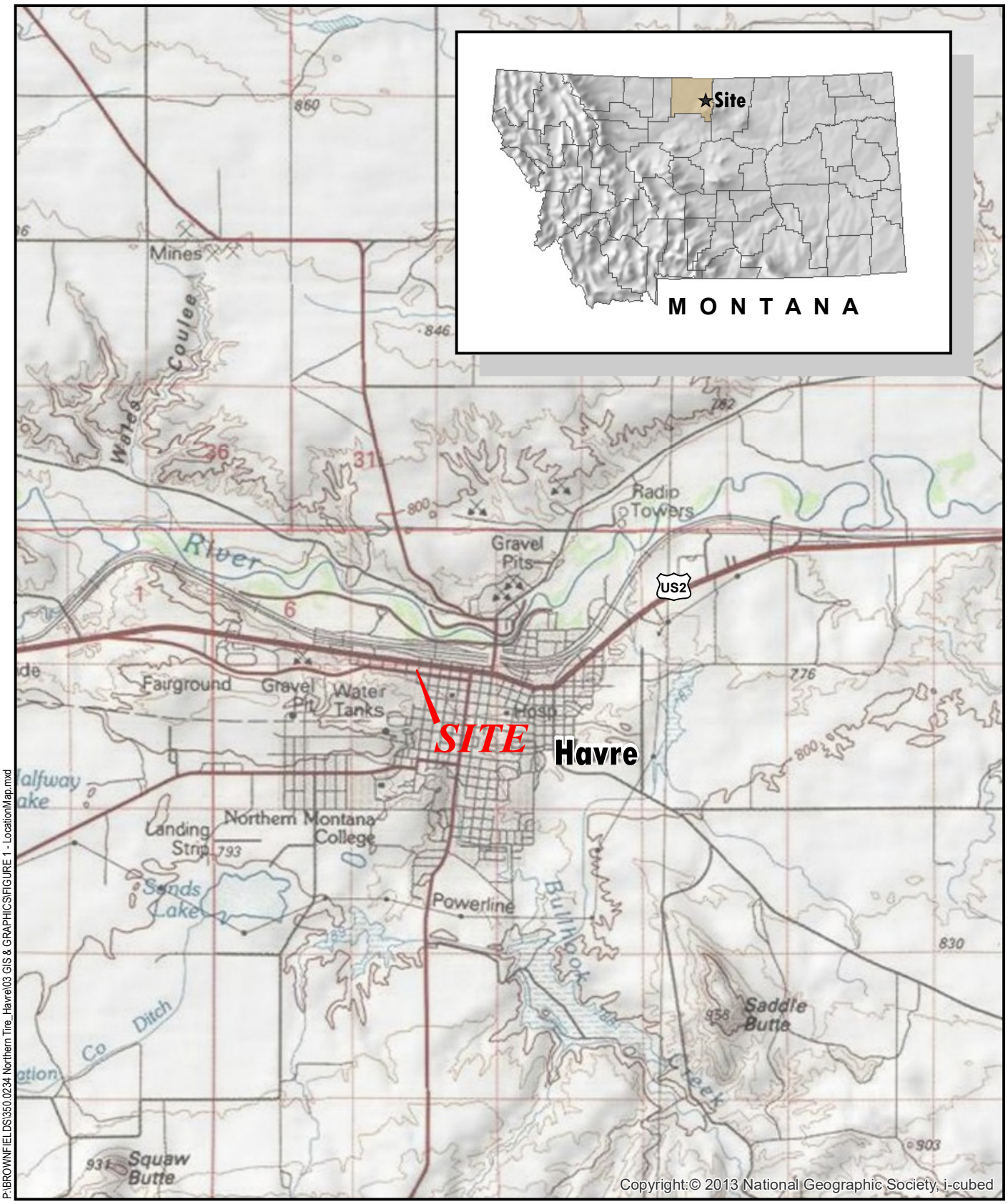
Donnie, thank you for your assistance with this site. Please feel free to contact us with any questions or concerns you may have regarding this Work Plan.

Respectfully,
Big Sky Civil & Environmental, Inc.

J. Paxton Ellis, P.E.

cc: Matthew Barkley, PO Box 2417, Havre, MT 59501

SITE MAPS



P:\BROWNFIELDS\350.0234 Northern Tire_Havre\03 GIS & GRAPHICS\FIGURE 1 - LocationMap.mxd

N

0 Feet 5,000

NewFields

Location Map
Former Northern Tire
Havre, Montana
FIGURE 1

P:\BROWNFIELDS\350.0234 Northern Tire Havre\03 GIS & GRAPHICS\Projects\2018 Sep Report Groundwater\FIGURE 2 - Site Map.mxd

0 100
Feet

NewFields

Monitoring Well
November 2023 Groundwater Samples
Limits of Excavation

Note: UST = Underground Storage Tank

Site Map
Former Northern Tire
Havre, Montana
FIGURE 2

Mr. Donnie McCurry
May 20, 2026

STANDARD OPERATING PROCEDURES (SOP)

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Field Sampling Forms & Record Keeping

Each day and at each sample location, all pertinent information pertaining to investigation, remediation and/or monitoring will be recorded on field sampling forms. The sampling forms shall contain enough information that the sampling event could be replicated using the forms alone. Where possible, field sampling forms should consist of fill-in-the-blank style standardized forms. At a minimum, field sampling forms shall include the following:

- Project Information (including the applicable project number)
- Date and time of fieldwork and sample collection
- Onsite personnel and equipment
- Name of sample (refer to SOP-3)
- Sampling procedure(s), especially deviations from the relevant SOPs, approved work plan or SAP
- Laboratory analytical testing to be performed
- All field measurements taken (PID readings, water level measurements, field parameters, etc.)
- Other field observations, if applicable (e.g., petroleum odor/staining or presence of sheen/oil globules)

Field sampling forms shall be maintained by field personnel during use in the field (such as in a log book, binder or clip board). Upon returning to the office, the forms shall be scanned and pdf versions of the document(s) shall be placed in the secure job folder on the company server for future reference and reporting. Original copies shall be placed in applicable log books or file folders.

Equipment

- Field Sampling Forms (fill-in the blank style)
- Writing utensil (typically pen with indelible ink)
- Site map
- Equipment to document location of samples (tape measure, survey equipment, etc.)

Decontamination of Equipment

This section details general decontamination procedures for field equipment. The decontamination procedure outlined below will be performed on all nondedicated and non-disposable sampling equipment that may contact potentially contaminated materials. Field personnel must wear disposable nitrile gloves while decontaminating equipment at the project site and must change gloves between collections of each sample. Every precaution must be taken by personnel to prevent being exposed to contaminants during decontamination procedures.

Equipment

- Liquinox, or other approved product (detergent)
- Wash bins (e.g., five-gallon buckets with lids or other approved containers)
- Sufficient volume of deionized water
- Bristle brush(es) or other device to scrub/clean equipment
- Garbage bags
- Nitrile gloves
- Spray Bottles

Procedure

1. Select an appropriate decontamination area. Consideration should be given as to site traffic patterns, weather conditions (wind), and drainage characteristics (such as storm drain inlets and nearby surface water) to eliminate the unnecessary migration of contaminants.
2. Remove visible debris stuck to equipment via physical means (such as scraping or brushing).
3. Apply the detergent (Liquinox, or other) to the entire surface of equipment.
4. Rinse equipment with clean water in wash bins.
5. Repeat steps 2. thru 4. as necessary.

Dispose of gloves, wash water, and other disposable items in accordance with SOP-10 – Management of Investigation Derived Waste (IDW).

Sample Nomenclature & Chain-of-Custody

Chain-of-custody (COC) procedures document sample collection details and help communicate to the laboratory which samples should be analyzed for which parameters. Typically, the laboratory will provide a chain-of-custody document that will be filled out by field personnel after sampling is completed and before the samples are sent to the lab.

Equipment

- Chain-of-Custody form (provided by the laboratory or project-specific)
- Chain-of-Custody seals
- Writing utensil (pen with indelible ink)

Procedure

Standard chain-of-custody procedures will be used during fieldwork and collection of samples including but not limited to:

- Recording the date and time of sample collection, number/type of samples and sample names on sampling containers and the chain of custody (COC). Sample names shall be in accordance with the approved work plan (WP) or site-specific sampling and analysis plan (SAP).
- Filling out all other required information in fill in the blank areas of COC (project, job number, sample media, number of containers, requested analyses, etc.)
- Place COC form inside a plastic bag within each cooler being transported to the laboratory. For details regarding packaging coolers see SOP-4. After packaging, place COC seals on cooler opening along with shipping tape.
- If using a mail courier to ship samples, they will not fill out COC forms; rather the coolers can be tracked using online tracking.
- Maintain copies of COC forms; scan forms and file in a secure manner (see SOP-1) for subsequent reporting and future reference.

Preparation, Packaging, & Shipping Samples

The following section identifies standard procedures for preparation of samples, packaging coolers and shipping samples. Most samples must arrive at the laboratory at a temperature of less than 4° Celsius, in good condition and with the proper preservation.

Procedure

- Sample containers are supplied by a state-certified laboratory.
- Preservative, if necessary, should be placed in the sample container during collection and samples should be placed on ice immediately following collection.
- After a sample is collected, the required information should be filled out on the side of the container, on the applicable field sampling form, and on the chain-of-custody document.
- For transportation to the laboratory, samples should be placed upright in a cooler (coolers are typically provided by the laboratory) and packaged with ice and other appropriate packaging materials (bubble-wrap, absorbents, sample sleeves, etc.) to ensure breakage of the samples does not occur during transportation.
- After the samples are packaged in the cooler, place the chain-of-custody document in the cooler, close the cooler and place a signed/dated chain-of-custody seal over the opening. Finally, place a shipping label on the top of the cooler and tape it shut with packaging tape.

Soil Investigation & Sampling

Surface vs Subsurface Soils
For the purposes of this SOP, surface soils are considered to be 0'-2' below ground surface (bgs) whereas subsurface soils are considered to be >2' bgs. Soil samples collected for environmental investigation should not straddle the zone between surface soils and subsurface soils.

Photo-ionization Detector (PID) Measurement

- Perform blank and span calibrations of the PID using 100 ppm isobutylene compressed gas. Consult the operating manual if necessary.
- The standard PID lamp is 10.6 eV. Modifications to the lamp can be made if stipulated in the approved work plan or SAP.
- Place a consistent quantity of soil in a Ziploc bag (approximately 100 grams) and seal. Allow the sample to be heated for a consistent amount of time (typically 3-5 minutes) by the ambient air. Open the bag slightly and place the probe of the PID into the bag, measure and record the peak reading. Consistency between different samples is imperative as this will help determine the highest concentration relative to one another.

Soil Boreholes

Completion of boreholes is common practice and provides a cost effective means of obtaining soil samples that are representative of subsurface conditions at a site. The size, type and depth of boreholes should be defined in the approved work plan or SAP. Common types of drill rigs are as follows: hollow stem auger, air-rotary, sonic, direct-push technology, among others.

Equipment

- Site map with borehole/sample locations, blank borehole logs, and writing utensil
- Sampling containers (provided by laboratory), packaging and shipping supplies (including ice)
- PID, nitrile gloves, sampling spatula/knife
- Personal protective equipment (see health and safety plan [HASP])

Procedure

- Prior to displacing any soils, and at least 2-business days in advance, utility locate requests shall be submitted via the Montana one-call notification center (800-424-5555). If necessary, a private utility locator should identify private underground utilities (electric lines, sanitary sewer services, etc.).
- Boreholes are situated at a site in accordance with the approved work plan or SAP. Locations may have to be modified if conflicts exist. Note any modification on field sampling forms including measurements from site features for subsequent reporting and future reference.
- Utilize decontaminated equipment for completion of boreholes in accordance with SOP-2 or other approved subcontractor decontamination procedures (steam cleaning, etc.)
- During drilling, collect continuous soil samples using appropriate means for the drilling technology and field screen the soils using a PID. Note PID reading and any pertinent observations (staining/odors) on soil boring logs. Log lithologic conditions using the Unified Soil Classification System (USCS); refer to ASTM-D2488-09a for additional information.

- For analytical testing, place soil in sampling containers provided by the lab. Compact soils to minimize headspace. In addition, minimize handling soil for samples to be analyzed for VOCs in order to prevent volatilization and/or biodegradation. Place sample on ice immediately following collection.
- Decontaminate sampling equipment between collections of samples in accordance with SOP-2.

Monitoring Well Installation and Construction

Monitoring well installation is conducted following completion of soil boreholes and must be completed by a Montana-licensed well installation contractor. Well construction details including materials, screened intervals, and surface completion is typically identified in the approved work plan or SAP.

Equipment

- Monitoring well construction materials (from contractor):
  - Schedule-40 polyvinyl chloride (PVC) piping (solid and screened)
  - J-plug
  - Sand pack (typically 10/20 silica sand)
  - Bentonite (powder or chips)
  - Traffic-rated flush-mount watertight surface seal
  - Concrete mix and related equipment
- Well construction logs and writing utensil

Procedure

- After completion of the soil borehole, the well installation contractor will convert the borehole into a monitoring well. Care shall be taken to ensure well construction details are consistent with the approved work plan of SAP particularly pertaining to screened intervals.
- Typical construction details are as follows: two-inch (2”) diameter polyvinyl chloride (PVC) piping (screened and solid). The annular space surrounding the well screen is backfilled with sand pack to ~1’ above the screened interval, and the solid casing is backfilled with bentonite (powder or chips).
- Note final construction details on well construction diagram forms. Including any deviations from the approved work plan or SAP.
- Surface completion is typically flush-mount, traffic-rated, watertight surface seals (well enclosures) set in a concrete collar.
- Candles or traffic cones shall be placed immediate surrounding newly installed wells so that they are given a minimum of 24-hours to harden and cure prior to allowing vehicular traffic.

Monitoring Well Development

During well installation, silts, clays and other soils may become entrapped in the well. Well development is completed to remove silts/soils, to increase the productivity of the well and to aid with equilibration of water levels. To develop a monitoring well, purging is completed with the goal of producing water with low turbidity. Purging should be completed with a pump or bailer capable of disturbing the water column in order to remove entrapped soils.

Equipment

- Equipment to access well enclosure (e.g., socket wrench, flat head screwdriver, rubber mallet)
- Disposable plastic bailer (or other approved pump)
- Bailer chord
- 5-gallon bucket
- Turbidity meter
- Oil/water interface probe
- Well development forms with writing utensils
- Decontamination supplies

Procedure

- Access the well using necessary tools/equipment.
- Complete well development according to any details in the approved work plan or SAP.
- Typically, development of a well is completed using a 2” disposable plastic bailer. Care shall be taken to ensure the bailer does not break free of the bailer chord and become lost down the well.
- During purging of the well, record the volume of water produced, the estimated rates of pumping, water level measurements, the initial and final turbidity readings, and other pertinent information on field forms.
- Dispose of purge water and other IDW in accordance with SOP-10 and the disposal of untreated purge water flow chart from the Montana Department of Environmental Quality (DEQ).

Groundwater Investigation and Sampling

The Montana Department of Environmental Quality (DEQ) Groundwater Sampling Guidance document should be reviewed prior to completion of groundwater sampling. Low-flow sampling is the preferred sampling procedure, details of which are generally included below. No purge, multiple volume purging, passive sampling and other methods may be utilized if approved by DEQ or as detailed in the approved work plan or SAP.

Equipment

- Field sampling forms with writing utensil
- Oil/water interface probe
- Multiparameter probe
- Pump and required tubing/equipment for operation (typically peristaltic pump or bladder pump)
- RV or marine Battery
- Five-gallon bucket
- Decontamination supplies
- Stopwatch and graduated cylinder
- Equipment to open well enclosure
- Sample containers and packaging equipment (including ice)

Procedure

- Don nitrile gloves.
- Calibrate the mulitparameter probe according to operating manual
- After opening the well enclosure, measure and record the water level using the oil/water interface probe.
- Review the well construction details and the water level measurement to determine the depth of the pump/tubing for purging and sampling. Generally, the pump intake shall be situated near the center of the screened interval of the well casing.
- Begin purging the well. Before, during and after sampling, record necessary information on field sampling forms.
- Measure and record water level measurements and field parameters (dissolved oxygen, pH, temperature, conductivity, oxidation-reduction potential and turbidity) in five minute intervals. Change purge rates on pump until water levels stabilize.
- The Groundwater Sampling Guidance document states that “stabilization is considered achieved when three consecutive readings are within the following ranges:”

Water Quality Indicator Parameter	Stabilization Range
pH	± 0.1 units
Specific Conductance	± 3%
Dissolved Oxygen (DO)	± 10%
Turbidity	± 10%
Oxidation/Reduction Potential (ORP)	± 10 millivolts

Generally, if greater than 2’ of water level drawdown is encountered during purging (using rates less than or equal to 0.20 L/min), then samples will be collected prior to stabilization of water levels and/or field parameters in order to minimize the hydraulic stress on the well and levels of turbidity in the sample. This

should be coordinated with the project manager prior to completion. Note any modifications to low-flow sampling mentioned above on field sampling forms.

- Following stabilization, collect samples using containers supplied by the laboratory. If necessary, apply appropriate preservatives to sample containers and collect VOA vials for analysis of volatile organic compounds (VOCs) with zero headspace.
- Label sample jars, field sampling forms, and chain-of-custody documents with appropriate information.
- Immediately place samples one ice and in the sample cooler. Minimize exposure to sunlight and oxygen to avoid volatilization and biodegradation.
- Complete decontamination of sampling equipment as necessary (see SOP-2).
- Dispose of purge water and other IDW in accordance with SOP-10 and the disposal of untreated purge water flow chart from the Montana Department of Environmental Quality (DEQ).

References

Montana Department of Environmental Quality, 2018. *Groundwater Sampling Guidance.* https://deq.mt.gov/files/Land/LUST/Documents/downloadables/GWSamplingGuidance-FINAL.pdf

Management of Investigation Derived Waste (IDW)

The procedures outlined below are for management and disposal of waste generated during environmental investigation. Typically, disposable items are disposed of via the dumpster and hauled to the landfill. If additional considerations are necessary, this will be identified in the approved work plan or SAP.

This procedure assumes that the IDW and other waste is non-hazardous waste. Hazardous waste should be handled and disposed of according to the Resource Conservation and Recovery Act (USEPA) as well as 40 CFR 264 and 265.

Equipment

- 55-gal steel or plastic drums (department of transportation [DOT] approved containers) or other approved containers
- Shovel
- 15/16” socket wrench
- Labels or labelling markers
- PPE as identified in the HASP

Procedure

- Clean soil as determined by field observations, PID readings, and analytical results may in certain instances be spread onsite or used to abandon boreholes. Check with the project manager and DEQ, if necessary.
- Purge water from groundwater monitoring and well development will be disposed of according to the untreated purge water flow chart from the Montana Department of Environmental Quality (DEQ).
- While drilling soil boreholes, place contaminated soil cuttings in 55-gal DOT drums. Drums will remain onsite until approval from the landfill is received to dispose of the material.
- Do not place disposable items in drums (such as gloves, clothing, etc.)
- Do not fill drums completely full (to allow for expansion of materials, if any).
- Adequately close drums depending on the style of container.
- Label the drums with contents, date for generation of IDW, contact information for consultant, and other project information.
- Once approval is received, haul soil to the landfill and dispose.

Superfund Requirements

Management of IDW from state or federal superfund sites will be addressed in the Site-Specific SAP.