



Contaminated Material Management Plan (CMMP)- For Generic Use including Utility Construction

Delaware Department of Natural Resources and Environmental Control
(DNREC)
Remediation Section (RS)

The purpose of this generic CMMP is to provide general guidance to utility companies or others as directed and/or approved by DNREC-RS for the safe handling of contaminated materials (soil and groundwater) at DNREC Sites contaminated or potentially contaminated with hazardous substances and/or petroleum. The CMMP addresses the management of material related to soil excavation activities to be performed for installation or replacement of underground utilities by workers under their own utility company contract or for use as directed by DNREC-RS.

Background

There are hundreds of sites contaminated or potentially contaminated with hazardous substances that are being addressed by DNREC Remediation Section (RS) and thousands of sites contaminated or potentially contaminated with petroleum releases from underground and aboveground storage tanks that are being addressed by DNREC Tanks Program. These sites are at different stages of investigation and cleanup process and the amount of information regarding contamination at these sites varies. Some sites are at the beginning of the investigation and have only limited information whereas at other sites the remedy is in place such as a cap. Sites with remedy in place such as engineered cap might have special instructions on the advisory ticket to contact DNREC prior to excavation.

Intrusive Activities

Intrusive activities are defined as activities penetrating the existing ground surface which include, but are not limited to:

- Excavation and proper material management (soil and groundwater) associated with trenches for utility excavation due to utility installations or utility system repairs.
- Backfilling excavated areas.
- Management of underground storage tanks (USTs) and associated piping, components, and foundations, if encountered.
- Excavation of landscaped areas or site grading.

Excavation, Handling and Management of Contaminated Materials

The contaminant of concern for the site where excavation is taking place will be listed in the advisory. However, some of these sites are in the initial stages of investigations and may not have a detailed list. It is not possible to sample every location on a site, so there is potential for encountering contamination other than the ones listed. So, the following measures should be taken as standard procedures.

Soil

The advisory for the ticket should give a general idea of what types of contaminants are likely to be encountered during the excavation. The advisory may also provide any special information about the site such as there is a 1 to 2 feet thick soil cap present at the site. The advisory should be consulted to determine how to handle the excavated soil.

Soil that is excavated or disturbed at a location with known Volatile Organic Compounds (VOCs), semi volatile Organic Compounds (SVOCs), gasoline, or diesel contamination will require special treatment in the following cases. These contaminants are generally identifiable by characteristic petroleum odors or staining.

-If these signs are identified during excavation, and the soil is not immediately scheduled to be reused in the excavation, soil should be stockpiled on top of double 6 mil thick polyethylene sheeting and be covered with a similar material at the end of each workday and secured by weights to minimize removal of the cover by wind. If the soil is stored in the staging area for more than 14 days after stockpiling, the excavator will install silt fencing around the stockpile and temporarily stabilize using DNREC approved best management practices.

-If the purpose of the excavation is to install or replace a water supply line, organic impacted soils (i.e., petroleum, chlorinated solvents, etc.) cannot be reused in the excavation without DNREC approval. Clean imported soil and the use of non-permeable materials including water mains and organic-resistant gaskets are standard practices in these cases.

-Any non-reusable soils generated that are not going to be used to fill the excavation should not be considered as "clean fill". These soils need to be characterized prior to off-site disposal. Contact DNREC person listed on your ticket for coordination on testing and soil disposal requirements.

-In the event that soil is heavily contaminated with petroleum compounds to a point that there is free product mixed with the soil or grossly contaminated with other contaminants indicated by heavy staining or strong odor, backfilling activities cannot proceed without DNREC approval.

If the advisory indicates inorganic contamination in soil such as metals only and the excavated soil does not show indication of contamination determined using visual, olfactory, or instrumental evidence then the soil can be put back into the excavation.

If the advisory indicates that a 1- or 2-foot-thick cap is present at the site, then the soil encountered in the upper 1 or 2 feet of the excavation should be separated from the rest of the soil generated from the excavation. This clean soil is required to be put back on the excavation as an upper fill, as encountered prior to excavation. In this way, we can minimize exposure to deeper potentially contaminated soils.

Fill/Debris Material

If visually contaminated, the debris materials (timber, treated wood, railroad ties and/or concrete) encountered during excavation activities will be segregated and stockpiled on 6 mil polyethylene sheeting. If debris material is determined to be hazardous, it will be managed following RCRA generator, transportation, and disposal requirements.

USTs, ASTs, and Piping

If USTs, ASTs, or associated piping are encountered during any of the intrusive activities at the site, they will be properly drained of liquids, removed, decontaminated, and disposed offsite in accordance with the Delaware Regulations Governing Underground Storage Tank Systems or the Delaware Regulations Governing Aboveground Storage Tank Systems. If a regulated UST or piping associated with a regulated AST or UST is discovered, you must contact the DNREC Tanks Program. In general, if any component of an AST or UST system is encountered, the DNREC Tank Program can be contacted at 302-395-2500 to answer any questions.

Groundwater

If groundwater is encountered during excavation activities, the utility company is responsible for obtaining a wastewater discharge permit prior to dewatering activities from the appropriate local and state agency. All dewatering operations require DNREC approval. Please contact DNREC Water Supply Section for permits at 302-739-9945. For the City of Wilmington, all dewatering fluids are required to be routed into one of the designated sanitary sewer manholes approved by the City in accordance with the Wastewater Discharge Permit. Initial pretreatment of the groundwater may include a sedimentation tank, a filtration unit, an oil/water separator, or a carbon filtration unit, if necessary, before discharging into the sewer system. Water pumped from the excavation shall be treated, as necessary, to meet the discharge concentrations specified by the wastewater permit issue by the City or a state agency.

Health and Safety

The intrusive activities shall be conducted under the guidance of the Health and Safety (H&S) plan of each utility company. The H&S plan should indicate what level of training the worker would need such as OSHA 24-hour HAZWOPER training or 40-hour HAZWOPER training. In general, a modified level D OSHA personal protective equipment (PPE) within the project area is required. However, a higher level of protection may be required based on the contaminants as indicated in the H&S plan. The excavator shall provide adequate protective measures to limit potential public exposure to environmentally impacted materials.

Transportation of Contaminated Materials

a) Soil Disposal

1. Contaminated soil shall either be loaded or temporarily stockpiled in preparation for loading into dump trucks or trailers by the excavator. The excavator is responsible for monitoring the loading and stockpiling the soil. The soil will be transported to a DNREC approved disposal location and copies of completed waste manifests shall be forwarded to DNREC contact listed in the ticket.
2. The trucks shall be loaded so that the solids are at least six (6) inches below the top of the trailer bed.
3. The trucks shall be covered during transport.
4. The excavator should remove accumulated material from the truck tires prior to the trucks leaving the site. Soil removed from the truck tires shall be collected and managed as per the specifications of this plan.
5. The excavator shall keep all roadways entering and leaving the site free from soil. If necessary, a tracking pad or street sweeper will be used to prevent any soil tracked on roadways from trucks leaving the site.
6. A manifest record should be kept by the excavator.

b) Fill/Debris Materials

1. Excavator should be responsible for transportation and disposal of all concrete, asphalt, metal, and untreated wood resulting from the excavation. If debris material is determined to be hazardous, it will be managed following RCRA generator, transportation, and disposal requirements. Copies of Completed waste manifests shall be forwarded to DNREC contact listed in the ticket.

c) Petroleum Contaminated Water and Oil (if encountered)

1. Petroleum contaminated water will be pre-treated, as necessary, and then pumped to a treatment water plant or sewer system if applicable and permitted.
2. The transporter of any recovered oil will be a fully licensed, insured and permitted company to transport petroleum contaminated liquids in the State of Delaware.
3. The excavator is responsible for keeping all disposal records as appropriated.

Site Restoration

Restoring the site conditions to conditions prior to excavation activities is a requirement to protect the integrity of any remedy in place. Therefore, after excavation is complete, the utility company is required to restore the site to a condition that prevents potential contact with contaminated materials.

-Procedure for backfilling: The upper 1 to 2 feet of clean soil indicated in ticket as a cap needs to be put back on the excavation as an upper fill.

-Impervious surfaces (asphalt, concrete, etc.): Asphalt and concrete from utility trenches must be restored to a previous excavation condition of the cap. This would prevent exposure to the soil underneath the cap.

-Landscaped areas: materials from the landscape areas at sites with cap must be restored to a condition previous to excavation. This would prevent exposure to the soil underneath the cap.

Emergency Utility Repair

For emergency utility repairs, except for water lines replacement or installation, reusing the onsite excavating materials from the utility trench back into the trench is an acceptable procedure for DNREC. However, if evidence of contamination was detected and if possible, the soil should be stockpiled. If that is not possible, soil can be temporarily put back in the excavation, but DNREC should be informed by the next working day. However, if free product is encountered during the excavation, the excavator should contain the material and notify DNREC emergency response team immediately.

Further Support

For further support regarding safe handling of contaminated materials please contact DNREC. For best response select the DNREC Tanks Program for petroleum related contamination, or the Remediation Section for non-petroleum related contamination:

- **DNREC Tanks Program:**
302-395-2500
- **DNREC Remediation Section:**
302-395-2600
- **DNREC Emergency Response Team:**
800-662-8802