

**GUIDELINES FOR DISPOSITION AND TREATMENT OF PETROLEUM
CONTAMINATED SOILS
FROM UNDERGROUND STORAGE TANK SITES**

Improper disposition and aeration of petroleum-contaminated soils from leaking underground storage tank (LUST) sites in close proximity to residential and environmentally sensitive areas could present a direct or potential threat to human health and the environment. This document represents advisory guidelines set by the Executive Secretary (UST) of the Utah Solid and Hazardous Wastes Control Board when soil management activities are proposed at any facility.

As outlined in Utah Admin. Code Section R311-204-2, the Executive Secretary reviews and approves closure plans, which include information concerning management of petroleum contaminated soils. If a closure plan (or corrective action plan for LUST sites) indicates that a specific form of soil management or disposal will be performed at a facility, the Executive Secretary will require additional information concerning this activity. Because of the potential for improper management of petroleum contaminated soils, the following information should be provided to the Executive Secretary (UST) for review*.

GENERAL SOIL MANAGEMENT GUIDELINES AND CONDITIONS FOR CONSIDERATION:

All underground storage tank owners/operators who are planning to close their tank systems should plan for the possibility that they will be generating contaminated soils during the removal process. Proper disposal of the soil should be arranged before beginning any removal activities to minimize the concerns discussed above. If aeration is not proposed as part of the closure plan, but later proposed following any activity which will probably generate contaminated soil, then the responsible party must immediately take the following actions upon the overexcavation or generation of the impacted soils:

- the contaminated soils should be placed on an impermeable liner (to minimize leaching of the contamination into the ground);
- the contaminated soils should be covered by an impermeable liner (to minimize both emissions of volatile hydrocarbons to the atmosphere, and to limit potential human contact); and,
- the site should be secured from the general public to minimize any potential exposure.

* *A staff member from the UST compliance section will assist you in meeting the UST closure requirements. If petroleum contaminated soils are reported or confirmed at the site, a project manager from the LUST section will be assigned to assist you. Contacting the appropriate person will save time and avoid confusion. If you have questions about what to do, call either section at (801) 536-4100.*

The proposed soil aeration plan is discussed in more detail below. The following items provide general considerations which must be satisfied or completed prior to submitting the proposal. If the following conditions at a site cannot be met, it is doubtful that approval for the actual aeration would be granted by the Executive Secretary (UST). If that is the case, and you cannot satisfy the following conditions, then you should start making arrangements for the proper disposal of the soil at an acceptable facility.

If you can meet the following conditions, and plan on submitting a proposal as discussed below, and if you have already generated any contaminated soil, it is important that any stockpiled soil should be properly managed pending either the aeration approval, or other final disposition of the soil.

- The owner/operator or responsible party of the underground storage tank system is responsible for notifying and obtaining approval from the Local Health Department, the Utah Division of Air Quality, and Local Fire Agency prior to any soil management or treatment activity. The Executive Secretary (UST) will require the documentation of these approvals from other agencies prior to considering granting final authorization of any soil treatment activity. In the event that the other agencies do not approve of the aeration plan, or, even if they have approved the plan, but the Executive Secretary (UST) does not approve of the proposed plan, then the owner will be required to dispose of the soil properly at an acceptable disposal facility. It should be noted that these guidelines do not preempt or supersede any other federal, state or local law, ordinance or jurisdiction.
- If the aeration plan is not approved by any of the agencies involved, including the Executive Secretary (UST), then proper disposal of the contaminated soil at an approved facility will need to occur within **30** days of the disapproval.
- Contaminated soils should not be placed in direct contact with groundwater/surface water or in an area which may impact groundwater/surface water. Soils should not be placed near structures, utility conduits, or other conduits (such as irrigation ditches, water wells, or surface/subsurface drainage systems) that may serve as pathways for migration of contamination.
- Contaminated soils should be placed on level ground, on an impermeable liner, cordoned off, and bermed to reduce the potential health risks and prevent runoff from leaving the site. Contaminated soils should be placed such that the environment cannot be affected or degraded.
- Contaminated soils should not be placed in close proximity to the general public. The placement of the soils must provide sufficient distance from nearby residences and buildings to prevent potential health risks or nuisance to surrounding populations. The area used for the treatment of the soils should be secured to prevent access by the general public. In addition, the contaminated soils should be covered by an impermeable liner (to minimize both emissions of volatile hydrocarbons to the atmosphere, and to limit potential human contact).

PROPOSAL FOR SOIL MANAGEMENT OR AERATION:

- The notification to the DERR must be in the form of a written underground storage tank closure plan, or leaking underground storage tank corrective action plan which is to be submitted for the Executive Secretary's review and approval, disapproval, or conditional approval. The proposal should give specific information about the following:

- Verification of the approval from the other referenced regulatory agencies.
- Documentation that the conditions discussed above have been satisfied.
- The methodology or treatment technology to be used for the soil management activity.
- The sampling plan to be used to monitor the progress of the soil treatment activities (e.g., frequency of sample collection, type of samples collected, analytical methods to be used, and certified samplers and laboratories to be used).
- The proposed final disposition (or the final disposal location to be used) of the soil.
- A vicinity map and site map providing a complete graphical description of the facility and the land surrounding the facility. The maps should be drawn to scale with proper orientation (showing a North arrow) and should be no larger than 11" x 17". The maps should provide the following information:
 - The facility address or location, with an appropriate scale (e.g., bar scale with 1 inch = 20 feet, etc.) and North arrow.
 - Underground utilities (e.g., water supply, sewer or septic systems, natural gas lines, storm drains, power lines, and telephone lines).
 - Property boundaries, on-site buildings, on- and off-site land use, and any adjacent buildings surrounding the property where the soil treatment will occur.
 - Location of soil stockpile(s) and proposed treatment area(s).
 - Land features surrounding the site including; lakes, rivers, streams, irrigation canals, wetlands, slope of land surface, irrigation, agricultural or other types of water wells, etc.
- The maximum volume and concentration of the contaminated soils to be treated should be indicated in the proposed plan. If the approved levels of volatile emissions are exceeded during the soil management activity, a revised plan must be submitted to the DERR for approval prior to treatment of the exceeded amounts.

IMPLEMENTATION OF THE APPROVED TREATMENT PLAN:

- Any deviation from the plan, which was approved by the Executive Secretary, should be submitted in written form and approved prior to implementation.
- Progress reports (in regards to their content and frequency of submittals) for the implemented soil treatment technology or plan are to be submitted to the DERR in accordance with the approval letter issued by the Executive Secretary.
- Once the soil treatment activities are completed, submit a proposal to conduct final confirmation sampling to verify meeting established cleanup levels. Upon meeting cleanup levels, document the same to the DERR by providing the required information as outlined in the approval letter (e.g., sampling, reporting, disposal and other related issues), and request a closure letter for the soil management area. If cleanup levels have not yet been met, additional treatment or work may be required prior to site closure.