pennsylvania
INSURANCE DEPARTMENT

Underground Storage Tank Indemnification Fund
Bulletin 8: Soil Excavation During Interim Remedial Actions

The purpose of this Bulletin is to provide guidance to claimants and their agents (e.g., Pennsylvania Department of Environmental Protection (DEP) certified installers, consultants) with respect to soil excavation as part of an interim remedial action (IRA). This policy is not intended to apply to soil excavation performed as part of corrective action in conformance with a DEP-approved Site Characterization Report/Remedial Action Plan.

When a release occurs from a regulated underground storage tank (UST) system and the release is reported to the DEP, the corrective action process applies under Pennsylvania Code, Title 25, Chapter 245, Subchapter D, and, compliance with Section 245.306, Interim Remedial Actions, must be implemented as necessary and appropriate. Appropriate regulatory and guidance references are attached as Table 1.

The term "interim remedial action" is not specifically defined in Act 32 of 1989, Chapter 245 or guidance. However, the criteria for and components of IRAs are clear from the context of the documents cited in Table 1. Chapter 245.306(a) states "…the responsible party shall immediately initiate the following interim remedial actions necessary to prevent or address an ***immediate*** threat to human health or the environment…" (emphasis added). The word "immediate" is the key to this phrase. In addition, Section 245.306(b)(1) states that "at sites where free product recovery, regulated substance removal or contaminated soil excavation is performed, the responsible party shall…conduct recovery, removal, storage, treatment and disposal activities in a manner that prevents the spread of contamination into previously uncontaminated areas."

As noted above, with regard to the excavation of soil, Chapter 245.306(a)(3) states that "the interim remedial action may include excavation of the soils" in order to "prevent ***further*** migration of the ***regulated substance***" (emphasis added). Chapter 245.306(b)(1) states contaminated soil removal should be conducted "in a manner that prevents the spread of contamination into previously uncontaminated areas". The key here is preventing further migration of the regulated substance itself (e.g., gasoline through the soil), not simply removing impacted soils. This concept of mitigating emergencies, immediate threats and preventing migration of regulated substances is further referenced in the Technical Guidance Manual which indicates that it is

appropriate to remove "product-saturated" soil; that is, not simply soil impacted by the regulated substance.

Specific activities associated with IRAs are discussed on page IV–88 of the Technical Guidance Manual which states "all appropriate interim remedial actions must be taken in order to ***bring a release under control***" (emphasis added). Specific tasks and activities that are appropriate IRAs as listed in Chapter 245 and the Technical Guidance Manual are shown on Table 2.

As noted above, the discovery of contaminated soil is not in and of itself justification for soil excavation as an IRA. This is reinforced on Page 15 of the Closure Requirements for UST Systems (April 1, 1998) which describes actions associated with extensive contamination: "Extensive contamination is defined as contamination which extends more than three feet beyond the tank system in any direction, or impacts water in the excavation. Additional site characterization and corrective action will be required in cases of extensive contamination. In this circumstance, the requirements of the corrective action process regulations [Chapter 245] must be followed." In other words, the UST closure guidance document is not recommending soil excavation IRAs simply because extensive contamination exists, but rather that the provisions of the corrective action process regulations (Chapter 245) be followed.

The fact that contaminated soil will be left in place prior to the initiation of a formal remediation undertaken under an approved Remedial Action Plan is contemplated and discussed in the corrective action process regulations. Chapter 245.310(a)(4)(v)(F) discusses the reporting of IRAs in the Site Characterization Report. This portion of the regulations indicates that "where excavation of contamination soil is performed…the rationale for terminating soil excavation where the ***contaminated soil has not been excavated***, including the volume of contaminated soil remaining in place, and a description of what steps will be taken to address the soils that remain unexcavated." (emphasis added). It is clear from this section of the regulations and from the UST Closure guidance that it is appropriate to leave contaminated soil in place prior to formulating and submitting a Remedial Action Plan for DEP review and approval.

Due to the immediacy of the need for IRAs, DEP regulations allow for the commencement of excavation at the responsible party's discretion and prior to the submission of a Site Characterization Report or Remedial Action Plan. **The IRAs are not intended to replace corrective action or to eliminate the need for the Remedial Action Plan. Excessive soil excavation as**

part of interim remedial action can lead to costs that are not necessary and reasonable.

USTIF has seen over-excavation as an IRA that involves thousands of tons of soil. A clear justification (including representative and extensive soil sampling and analysis of excavated soil as well as supporting photographic documentation) is required by USTIF when extensive IRAs are implemented rather than remedial action in accordance with an approved Remedial Action Plan. USTIF will only reimburse for the eligible, necessary and reasonable corrective action costs as part of an IRA or a DEP-approved Remedial Action Plan.

Normal documentation supporting reimbursement for eligible claims must be submitted (For example, excavation contractor invoices and soil disposal invoices). It is presumed that larger soil excavation IRAs are not reasonable and necessary unless a clear and compelling case is made to the contrary. The clear and compelling case will include all necessary information including, at a minimum the following:

- photographs of the tanks if present and removal activities, if any
- soil, groundwater, waste water, and all other waste disposal or recycling documentation
- laboratory reports and supporting information - grab samples of the soil that is excavated as part of the IRA collected in place prior to being excavated. (Composite samples or soil pile samples are not acceptable as part of the justification for a large soil excavation IRA.)
- field notes
- a narrative of the IRA activities

It is USTIF's policy that UST pea stone and soil excavation up to the limits expressed below are presumed to be reasonable and necessary as part of a UST system closure by removal or other IRA.

- Single or multiple UST systems with combined capacity up to and including 10,000 gallons – 400 tons
- Single or multiple UST systems with a combined capacity greater than 10,000 gallons – 500 tons

Larger amounts of pea stone and soil will be presumed not to be reasonable and necessary unless a clear and compelling case can be made to the contrary.

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Table 1
References for Interim Remedial Actions consisting of soil excavation associated with regulated USTs:

- Section 245.306 (Interim Remedial Actions)
- Section 245.309(b)(1) regarding whether additional IRAs are necessary to abate an imminent hazard to human health or the environment
- Section 245.310 (a)(4)(v)(F) regarding the explanation for terminating soil excavation implemented as an IRA and addressing it instead of in the Remedial Action Plan.
- The Technical Guidance Manual (Section IV E)
- The April 1, 1998 Closure Requirements for Underground Storage Tank Systems guidance document in a peripheral manner

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Table 2
Specific Interim Remedial Actions

Section IV-E, the Technical Guidance Manual lists the following actions to mitigate emergencies or immediate threats:

- checking for and venting product vapors from sewer lines or buildings that have been impacted;
- calling emergency personnel such as local fire and public safety officials for assistance where fire, explosion or safety hazards exist;
- relocating residents until potentially explosive vapors have been reduced;
- restricting access to the site by nonessential personnel and establishing a buffer area around the site;
- recovering free product leaking into subsurface structures such as basements and sewers;

The Technical Guidance Manual also lists actions to prevent further release of the regulated substance:

- removing product from the storage tanks;
- removing the storage tanks;
- excavating ***product-saturated*** soils (emphasis added);
- removing free product on the water table;
- recovering product from the excavation;
- establishing booms in or interceptor trenches along streams, gullies, or drainage ways where surface water has been or may be impacted; and
- identifying and sampling affected water supplies or water supplies with the potential to be affected.

Chapter 245.306 lists the following actions to mitigate emergencies or immediate threats:

- remove the regulated substance from the tank;
- mitigate fire explosion and safety hazards posed by the vapors and free product;
- identify and sample affected water supplies or water supplies with the potential to be affected

Chapter 245.306 also lists actions to prevent further migration of the regulated substance:

- excavate soil to prevent the “further migration of the regulated substance”
- immediately initiate free product recovery