Waste Management
ENVIRONMENTAL QUALITY

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Guidance on Trust Fund Eligibility for Tank Closures, Initial Abatement, and Corrective Action Excavations

TO: Responsible Parties, Environmental Service Companies, and Consultants

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It has come to our attention that some questions remain regarding what activities may be eligible for reimbursement during tank closures, initial abatement actions, and soil cleanup at sites covered by the *Leaking Petroleum Underground Storage Tank Cleanup Fund* (Trust Fund). This guidance will attempt to help resolve some of the most common issues, and will document how excavation and disposal limits may be approved.

1. What defines the limits of 'Tank Closure'?

Simply speaking, 'Tank Closure' is the removal of a UST system, in part or in whole. This includes the removal of any liquid remaining in the system, removing overlying soils and other structures (concrete, asphalt, canopies, islands, etc.) to get to the system, and any necessary tests of the soil or water underneath the system to look for evidence of a release. [See North Carolina Administrative Code (NCAC) 15A 2N .0800 & .0900 and the UST Section *Guidelines for Site Checks, Tank Closure, and Initial Response and Abatement* (STIRA) Section 5.]

2. What is eligible for Trust Fund coverage during tank closure?

Both General Statute (G.S.) 143-215.94B (d)(2) and 15A NCAC 2P .0402 explicitly prohibit reimbursement for any system removal or replacement cost. This exclusion covers emptying the system and preparing it for removal as well as the disposal of the system components themselves. It also excludes any other effort directly related to the tank removal, such as the management and disposal of construction and demolition debris (concrete, asphalt, canopy components, dispenser island forms, etc.,) as well as the removal, stockpiling, and backfilling of any overburden soils necessary remove the tank from the ground.

The Trust Fund may assist only with costs that are related to assessment or cleanup. 15A NCAC 2N .0803 requires sampling after tank removal to determine whether a release occurred or not. If a new release is actually discovered, the closure sampling is typically eligible as an 'assessment' cost without preapproval. For a site with a known release, necessary samples in areas that were previously inaccessible, such as beneath the tanks, or samples that can be used to evaluate the effectiveness of earlier soil remediation efforts in the tank basin, may be eligible also, but only if those samples were preapproved before the samples were collected.

Additionally, there has been some confusion over how to dispose of any soils overlying the tank that were excavated as part of the tank removal (known as 'overburden'). The costs for handling any clean overburden soils that are removed to gain access to the leaking tank are not eligible for Fund coverage. For overburden that is shown to be contaminated, the Fund will consider the disposal of a minimum amount of soil as an eligible 'cleanup' effort. This eligible disposal volume is extremely limited, and includes only those soils that are necessary to surgically remove the leaking tank or component, as described in the table at the end of this memo. Any other contaminated overburden in excess of this minimal volume cannot be reused as onsite backfill, but the

disposal costs also cannot be claimed against the Trust Fund. Again, as mentioned above, the costs to remove overburden to gain access to the leaking tank are not eligible. Only the 'cleanup' costs represented by the proper disposal of this minimum amount of soil may be reimbursed.

3. What defines the limits of 'Initial Abatement'?

'Initial Abatement' describes the immediate steps taken to clean up a newly-discovered release. This includes efforts to mitigate fire, explosion, or vapor exposure emergencies and, if feasible, to recover any lost petroleum and restore the property to the condition it was in before the release, all done during the initial 90 days following discovery. [See G.S. 143-215.84 & 94E(a), NCAC 15A 2L .0404 & 2N .0703, and STIRA Sections 6 & 7.]

4. Is initial abatement over-excavation always required at the time of tank closure?

Initial abatement over-excavation following tank closure may be appropriate only if:

a. a new release is discovered during the tank closure sampling, *and*
b. it is feasible that an over-excavation of the tank pit could completely recover the discharge and restore the site to its pre-release condition, all within 90 days of the release discovery (15A NCAC 2L .0404(3)).

If a new release from a system is discovered in some way other than a tank closure (leak detection, site checks, property sale inspections, etc.), and a tank closure event is then scheduled more than 90 days later, it could no longer satisfy the second requirement, and, as a result, it would longer be exempt from preapproval as an 'emergency response' under 15A NCAC 2P .0402(b)(9). *[See Question 7 & 8 below.]*

Also, initial abatement over-excavation may not be appropriate despite the potential for a new release at a site:

a. with one or more known releases and existing contamination in the area around the system, as this complicates whether or not closure samples can accurately detect the presence of a new release,
b. where complete recovery and restoration is clearly not possible due to preexisting contamination already known to be beyond the volume of soil that would be acceptable during an initial abatement event,
c. where a new release has contaminated soils that are inaccessible (such as under permanent structures or roadways, etc.,) making recovery and restoration infeasible or impracticable, or
d. where the risk has already been calculated for a pre-existing release and a comprehensive corrective action plan that could address the area of the new release is either being prepared or is currently implemented.

This does not mean that excavation is not a reasonable cleanup strategy following a tank closure at an existing release site. Often, the removal of the system provides an opportunity to reach contaminated soils that were inaccessible while the system was in place. However, not all excavations after a tank closure event can satisfy the requirements of 'initial abatement' or be justified as an 'emergency response' for exemption from the preapproval requirements. In these instances, a defensible a 'corrective action' excavation may be appropriate, but it must be preapproved by the Incident Manager and Trust Fund Auditor to remain eligible for reimbursement.

5. Does a new incident number at a preexisting site mean there is a new release requiring initial abatement over-excavation?

Whenever a new release is confirmed at a preexisting site, the Regional Office may choose to simply incorporate the new release into an existing incident already assigned to that site, or it may assign a new incident number to allow for separate tracking of information that is specific to the new release. Having a new incident number assigned in and of itself does not mean that it is feasible that the new release could be fully recovery and restored to clean conditions, particularly where you have a commingled plume. In some cases, that may be true, such as the discovery of a new release that is located on part of the property isolated from any previous incident. The over-excavation of that isolated release may lead to 'clean closure' of that 'occurrence', separate from any other remaining incidents onsite. In other situations, it may be more cost-effective to incorporate the cleanup of even an isolated release into the overall site corrective action, depending on site conditions.

Additionally, please note that Trust Fund eligibility is assigned based on the number of 'occurrences' (as defined in 15A NCAC 2P .0202(b)(8)) at a single 'facility' (per G.S. 143-215.94A(3a)), regardless of the number of releases detected or incident numbers assigned at that site.

6. What activities require preapproval to be eligible for Trust Fund reimbursement?

G.S. 143-215.94E(e5)(2) states that "the Department shall specify those tasks for which preapproval is required." This was done through 15A NCAC 2P .0402(b)(9), which states that preapproval is required for all cleanup tasks except "assessment activities or for costs determined by the Division to be related to emergency response actions."

The "assessment activities" defined under 15A NCAC 2L .0408 (i.e., the Comprehensive Site Assessment, or CSA) now also require preapproval per the requirements added in Session Law 2004-124. That law amended what is now G.S. 143-215.94E(e5) to require site prioritization based upon the Fund balance and the site risk, which is determined prior to the start of the CSA phase. Thus, preapproval is required for the CSA itself. This has similar complications for the cleanup of new releases where the site risk is known from a previous release.

7. Which tasks fall under these preapproval exemptions?

Currently, preapproval is not required for an immediate emergency response (listed below) and any necessary risk assessment (most commonly, but not necessarily, defined by the Limited Site Assessment, or LSA). The UST Section considers the following to be emergency conditions that do not require preapproval:

a. any reasonable and necessary immediate response to a fire, explosion, or vapor hazard,
b. the initial sampling of at-risk water supply wells,
c. providing bottled water for contaminated potable wells within 24 hours (third party deductibles apply),
d. recovering free product found on the ground surface or floating on a surface water body within 14 days,
e. one initial recovery event for free product in a monitoring well (greater than 0.01' in thickness), and
f. the initial over-excavation of contaminated soils in an attempt to completely recover any lost product and restore the site to pre-release conditions following the discovery of a new release (i.e., initial abatement) within the schedule and limits defined in the STIRA Guidelines and Reasonable Rate Document (RRD).

Any work done under these exemptions must still be justified as reasonable and necessary in the claim, and any unreasonable costs will be denied (for instance, excessive over-excavation at a site where recovery and restoration was clearly infeasible). However, within the limits defined below, you do not need to wait for formal preapproval to conduct necessary time-sensitive emergency responses or before completing the site risk assessment (LSA).

8. What qualifies initial abatement over-excavation as an 'emergency' versus other digs?

G.S. 143-215.84(a) requires that, where feasible and practicable, release recovery and site restoration must be started immediately following the discovery of a new release. Due to the 'emergency' nature of this immediate response, preapproval is not required for limited initial abatement over-excavations if conducted within the 90-day initial abatement reporting window defined in 15A NCAC 2L .0404(3). Once that 90-day period is complete, the excavation of soils is no longer considered to represent an 'emergency response', and any additional cleanup or assessment activities not directly related to one of the other exempt conditions listed above must be preapproved to remain eligible for reimbursement.

Also, remember that whenever preapproval isn't required, emergency work still must be justified as reasonable and necessary in the claim for anything to be reimbursed. Since these costs are not discussed in advance with the UST Section via a preapproval, the justification ends up being done *after* the money has already been spent. Also note that the limits set on initial abatement over-excavation tonnage in the STIRA Guidelines and RRD are maximum thresholds, not guaranteed allowances. The initial abatement over-excavation only covers the removal of contaminated soils, so the excavation should cease in any direction where clean soils are consistently encountered, and the emergency exemption as a whole expires once it becomes apparent that the excavation cannot

satisfy the recovery and restoration requirements of 15A NCAC 2L .0404(3) as described in Question 4 above. Corrective action excavations continued after this point should be formally preapproved by the Incident Manager and Trust Fund Auditor.

9. What is considered to be a reasonable limit on initial abatement over-excavation tonnage?

The existing STIRA Guidelines and Trust Fund RRD allow for the removal of soils up to 5 feet laterally from the tank system, for a depth of up to 17 feet below ground surface, with a total maximum volume of up to 800 cubic yards (cy) or 1200 tons (at ~1.5 tons per cubic yard excavated) in the initial abatement of a new, isolated release. Prior to this memo, justifying this volume was done wholly after-the-fact, meaning conflicts arose whenever claimed work was later determined to be unreasonable and the reimbursement denied. To help resolve this problem, the following process has been refined to help promote agreement on the scope of the initial abatement over-excavation volume prior to the work being completed.

For a site with a new release and no previous release(s), the 800 cy / 1200 ton over-excavation limit still applies. However, the steps to reach that limit are slightly different. The initial 5-foot and 17-foot boundaries have been reduced to the 'surgical' tank removal overburden limits, as described in Question 2 and in the table at the end of this memo. This volume of soil will be reimbursable only for the tanks that have a confirmed release, and will be eligible only for reimbursement under the applicable rate and task for soil transport and disposal within the Trust Fund RRD.

In addition to this tank-specific overburden volume, additional over-excavation may proceed until it either becomes apparent that the recovery of product or restoration of the site is infeasible, or until a secondary threshold of 533 cy / 800 tons (including the overburden soils) is reached. At this point, if the professional who has been overseeing the excavation has been using a mobile laboratory (such as UVF or mobile GC, etc., and not handheld OVA or PID meters, etc.) to accurately screen the soils that are being removed and can reasonably project from that trend that the release recovery and/or restoration could be completed within the 800 cy / 1200 ton limit, the Regional Office may approve in writing the excavation of additional contaminated soils up to that projected volume, not to exceed the final 800 cy / 1200 ton limit (i.e., up to +267 cy / +400 tons on top of the 533 cy / 800 tons from the earlier step).

As a fourth tier for new sites, excavations exceeding any of these limits may be authorized, but only where justified based on thorough screening data via written preapproval signed by both the Incident Manager and Trust Fund Auditor. Where necessary, these preapproval requests may be 'rushed' for same-day approval.

For a new release detected at a site with a pre-existing release, the key issues are whether the new release is isolated (i.e., its own second 'occurrence' located elsewhere onsite) or commingled with the older release (one joint 'occurrence'), and how the known site risk may affect the appropriateness of an over-excavation effort.

For a new, isolated release at a High or Intermediate risk site, the initial abatement over-excavation for the new release would follow the same tiers as described above, allowing for an attempt to recover and restore that stand-alone release. Along with the field screening data, the Incident Manager would also consider the impact of the known site risk on cleanup requirements in their evaluation of any additional tonnage requests.

For a new, isolated release at a Low risk site, where the new release does not increase the site risk, no additional over-excavation beyond the contaminated overburden would be needed to satisfy 15A NCAC 2L .0404(3). Therefore, only the overburden volume allowed based on the leaking tank's size would be eligible for reimbursement (see the table at the end of this memo).

For a commingled new release that is only detected at the time of tank closure, at a High or Intermediate risk site, the initial overburden allowance based on the leaking tank volume would still apply. For any additional soils, the Incident Manager must evaluate the potential feasibility of the recovery and restoration of the new

release in light of the existing contaminant plume and known site risk, and may authorize a combined over-excavation maximum of up to the *lesser* of either:

- two times that eligible overburden volume (once for the volume already removed, and once more for additional soils beneath or around the basin), or
- the secondary 533 cy / 800 ton limit.

For instance, if a single 10,000-gallon tank leaked, the maximum over-excavation volume an Incident Manager may choose to authorize would be 196 cubic yards (2 x 98 cy) or 294 tons (2 x 147 tons) (see Question 2 and the table below). If two 10,000 tanks leaked, the Incident Manager could choose to approve up to double that volume (392 cy / 588 tons), and so on, until the 533 cy / 800 ton secondary limit was reached. Any additional soils beyond that secondary limit would have to be justified via a written preapproval signed by both the Incident Manager and Trust Fund Auditor.

For a commingled new release that is only detected at the time of tank closure, at a Low risk site where the new release does not increase the site risk, no additional over-excavation beyond the contaminated overburden would be needed to satisfy 15A NCAC 2L .0404(3). Therefore, only the overburden volume allowed based on the leaking tank's size would be eligible for reimbursement (see the table at the end of this memo).

For a commingled release that is detected prior to a tank removal event at any risk level, or a new release where more than 90 days have lapsed since release discovery, any excavation must be part of a cleanup plan authorized via formal, written preapproval signed by both the Incident Manager and Trust Fund Auditor.

Again, please note that any contaminated overburden that is hauled offsite as part of the initial abatement action does count against the total eligible over-excavation volumes allowed above, while only being reimbursable under the transport and disposal task (as the excavation and backfill portions would be a consequence of the ineligible tank removal effort, and could not be reimbursed).

10. Can Pre-LSA soil excavations that are not part of the initial abatement emergency response be reimbursed?

The general rule-of-thumb that preapproval is only required after the completion of the LSA and risk classification is slightly misleading. This 'rule' only applies if the work at a new release explicitly follows the UST Section STIRA and *Guidelines for Assessment and Corrective Action* (ACA) 'cookbook' schedules, having initial abatement completed within 90 days, followed directly by the LSA within 120 days of detection.

Any action that deviate from this schedule, (such as delaying the LSA to conduct follow-up excavations at a site where the confirmation sampling indicated only minor, accessible soil contamination remained after the initial abatement dig,) may be reasonable under certain circumstances. However, if this would result in non-emergency work falling outside the 90-day initial abatement window, or if the proposed excavation volume would exceed that allowed in the appropriate tiers above, then the work would only be eligible for reimbursement if explicitly preapproved in writing by both the Incident Manager and Trust Fund Auditor.

11. Is an approved Corrective Action Plan required for soil excavation that is not part of the initial abatement emergency response?

Not all eligible cleanup efforts or corrective actions require the approval of a formal Corrective Action Plan (CAP) to be eligible for reimbursement. Once the initial abatement window has passed, additional efforts to restore the area may be conducted "prior to or concurrent with" the completion of the CSA and the implementation of a formal CAP, per 15A NCAC 2L .0106(f). With the exception of those emergency response actions defined in Question 7 above, any other recovery or restoration efforts must be preapproved to remain reimbursable. Please note that preapproval may be denied if waiting to implement a comprehensive CAP that would address the site as a whole is determined by the Section to be the more cost-effective alternative.

Table 1: Tank Closure - Eligible Contaminated Overburden and Commingled Plume Initial Abatement Volume Calculations

UST Capacity (gal)	UST Dimensions (ft)		Void from UST (cu. yd)	Overburden Excavation (ft)*			Total Pit Void (cu. yd)	Eligible Overburden** *(Pit Void - UST Void)*	
	(l)	*(dia)*		*(l)*	*(w)*	*(d)*		(cu. yd)	(tons)
550	6	4	3	12	7	7	22	19	**29**
1000	11	4	5	17	7	7	31	26	**39**
2000	12	5.5	10	18	8.5	8.5	48	38	**57**
3000	18	5.5	15	24	8.5	8.5	64	49	**74**
4000	24	5.5	20	30	8.5	8.5	80	60	**90**
5000	13	8	25	19	11	11	85	60	**90**
6000	16	8	30	22	11	11	99	69	**104**
8000	21	8	40	27	11	11	121	81	**122**
10000	27	8	50	33	11	11	148	98	**147**
12000	32	8	59	38	11	11	170	111	**167**
15000	24	10.5	74	30	13.5	13.5	203	128	**192**
20000	31	10.5	99	37	13.5	13.5	250	151	**227**
25000	38.75	10.5	124	44.75	13.5	13.5	302	178	**267**
30000	40	11.5	149	46	14.5	14.5	358	210	**315**
(Lines)+	*N/A*	*N/A*	*N/A*	6	3	3	2	2	**3**

Calculations are based off of the following constants:

- 27 cubic feet per cubic yard
- 0.00495 gallons per cubic yard
- 1.5 tons per cubic yard

* - The overburden excavation pit dimensions are based on a standard sti-P3 tank with 3 feet of clearance off each end, 3 feet of clearance along one side (not both), and 3 feet of depth to reach the top of the tank. The actual dimensions at any given site may vary by tank shape, orientation, and count, but this standard has been used to define a consistent reimbursable limit on the cleanup of contaminated overburden following the completion of a tank closure event with a new release discovery.

** - At a site with an existing High or Intermediate Risk release, where there is a potential for any newly-detected release to be commingled with the existing contamination, the eligible closure overburden abatement and initial abatement action tonnages cannot exceed the lesser of the second-tier maximum or 2x the eligible overburden tonnage defined above.

+ - The overburden threshold for lines is based on point source location of a release along the line or fittings, with 3 feet of excavation allowed on either side, 3 feet of width along the line, and a depth of 3 feet. Additional tonnage may be approved using the same processes as described in the associated text above, based on the condition of the release (new, isolated, commingled) and site risk (if known).