



# **Underground Storage Tank Technical Compendium**

## **References:**

**Release Investigation, Confirmation,  
and Corrective Action**

**U.S. EPA Office of Underground Storage Tanks**

The compendium contains interpretations and guidance letters sent out by the Office of Underground Storage Tanks. These references are cited within the underground storage tanks technical compendium at <http://www2.epa.gov/ust/underground-storage-tank-technical-compendium>.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

APR 4 1989

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Mr. Garah F. Helms  
Chairman, USWAG Tanks Committee  
Utility Solid Waste Activities Group  
c/o Edison Electric Institute  
Suite 601  
1111 Nineteen Street, N.W.  
Washington, D.C. 20036

Dear Mr. Helms:

This responds to your enclosed February 21, 1989 request for EPA guidance on whether the typical response actions of the utility industry to various types of confirmed releases from underground emergency generator tanks at nuclear power stations are in conformance with the final UST corrective action regulatory requirements of 40 CFR 280.61 (b) and 280.62 (a)(1). In general, we can affirm your basic understanding that when a release from an emergency generator tank is confirmed, the nuclear facility's owner and operator must begin to take immediate action to prevent further releases, including action that leads to the removal of as much of the regulated substance from the UST system as is necessary.

Section 280.61 (b) requires that within 24 hours some form of immediate action be taken to prevent any further release. Unless, directed to do otherwise by the implementing agency, section 280.62 (a) (1) also requires the removal of as much of the regulated substances from the UST system as is necessary to prevent further release into the environment. However, these two provisions were not intended to require that all regulated substances must be removed, from even begun to removed, from every suspect tank within 24 hours of release confirmation. EPA recognizes that such quick action may be unnecessary or physically impossible at many sites.

Although removal of product from the tank within 24 hours is not always achievable or necessary, it may sometimes be a necessary abatement measure to protect human health and the environment; for example, when there is a threat of a continued and rapid loss of product into the environment. Where alternative fuel supplies can be provided in a timely manner, it may also be the preferred approach with slowly leaking emergency generator tanks at nuclear facilities in order to minimize the cost and complexity of the required corrective action. Of course any fire, explosion, or vapor hazards due to leaking UST systems must always be identified and immediately mitigated, regardless of whether or not the tank is immediately emptied. Also, the owner and operator must initiate an investigation to determine if free product is present and, if so begin its removal as soon as practicable. Such corrective action steps must proceed in a timely manner and be reported to the implementing agency as required in the regulations.

I hope this letter provides the clarifications you need on this subject. If we can be of any more assistance in this matter please let me know.

Sincerely,

James McCormick, Director  
Policy & standards Division  
Office of Underground Storage Tanks

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

DEC 1 1989

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Mr. R. C. Cronau  
President  
R.C. Cronau and Associates, Inc.  
14189 Hiland Place  
North Huntingdon, Pennsylvania 15642

Dear Mr. Cronau:

This is in response to your letter of August 21, 1989, requesting clarification of EPA's regulatory requirements for investigating and confirming suspected releases at underground storage tanks Systems. In your letter you cited two specific cases where a tight tank was required to be removed because it failed tank tightness tests. Your letter questioned whether these removals were required by the EPA regulations. They were not.

The specific requirement in 40 CFR 280.52(a)(1), which is for those UST system owners and operators who are using a second tightness test to confirm a suspected release, mandates that an UST system owner and operator must repair, replace or upgrade the UST system and begin corrective action in accordance with Subpart F if the test results for the system, tank or delivery piping indicate that a leak exists. Thus, in the EPA's requirements did not mandate tank removal but also allowed for tank repair or upgrading.

Your letter did not provide specifics about the type of tank and the particular site conditions (e.g. nearness to any public or private drinking water wells) so I cannot comment on which release investigation option was best suited to be followed at the site. However, one of the first corrective action steps required in Subpart F is to stop all confirmed leaks (280.61(b)) and immediately conduct a "site check" (280.62(a)(5)). Thus, in the case you cited, certainly removal of product from the tank and external monitoring of the excavation area were required by the regulations (in light of the fact that two tightness tests were failed): product removal to prevent possible further release into the environment, and external monitoring, such as a quick vapor survey of the surrounding excavation area to determine the extent of the release and the presence of any free product. If the above regulatory procedures were followed in both of your cited cases it is probable that product would not have been detected and the tanks would not have been pulled. If the tank was a fiberglass or protected tank the initial tightness testing results should have been questioned as suspect and external monitoring (the 280.52(b) site check option) could have straightened this out.

The EPA release reporting, investigation and confirmation regulations are flexibly written to enable owner and operator choices as well as the exercise of some discretion on the part of implementing agencies to suit the situation at hand. It is unfortunate that two faulty tightness tests led to the removal of tight tanks in Ohio. The federal requirements did not mandate removal unless repair or upgrading was impossible (as required under 280.52(a)), or the Implementing Agency decided that initial abatement measures and site check activities required under 280.62 necessitated tank removal.

The site investigation checklist you referred to in your letter is generally accurate, but only in as far as it goes. Steps 1-4 of the checklist apply only to tightness testing using an overfill-type test method. The use of level-measuring or acoustic methods, for example, would obviate the need for excavation down to the top of the tank because such methods do not involve overfilling the tank. Therefore, loose fittings on top of the tank could not be the cause of the failed test. (which is most often the cause of a failure using overfill-type methods). Also, using the site check alternative (280.32(b)), the procedure you provided would begin with step 5. As I mentioned earlier, tank repair or lining may be not allowed by the Implementing Agency if, in their judgement, tank removal is needed at a particular site to successfully conduct the corrective action/abatement and site characterization actions required under subpart F of the regulations.

I hope the above provides the clarification you seek about EPA's release confirmation requirements. I am sorry you were confused by the response you received from the RCRA/Superfund Hotline. Please also be advised that State UST regulatory programs are specifically allowed under the Federal law to be more stringent than EPA if they so choose, including in their requirements for investigating and confirming releases.

Sincerely,

David O'Brien, Chief,  
Standards Branch

enclosure (incoming letter)



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

1991

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Honorable Jesse A. Helms  
United States Senate  
Washington, D.C. 20510

Dear Senator Helms:

Thank you for your transmittal to the Environmental Protection Agency (EPA) of a letter dated March 11, 1991 from one of your constituents, Ms. Faye S. Brittain, concerning her mother's underground storage tank (UST) problem. Apparently, while conducting soil borings to determine the horizontal and vertical extent of soil contamination in the area of some USTs recently being removed from operation at her site, some contamination was discovered at the opposite side of her lot where they were planning to locate some new tanks. She wanted to know whether they might be forced to remove some of this soil that might have been contaminated over forty or fifty years ago where an aging tank was removed over thirty-six years ago.

Our reading of her letter suggests there may already be a leak from the operating USTs, and they are trying to characterize and deal with this problem. Thus, they are probably already in contact with the State UST regulatory program about this site. We recommend that Ms. Brittain and her mother continue to openly discuss this evolving situation with the responsible State program officials. It is basically the State's decision as to whether or not the soil in the area of the old release must be removed. In North Carolina, the UST program can be contacted at:

Division of Environmental Management  
Ground-Water Operations Branch  
Department of Natural Resources and  
Community Development  
P.O. Box 27687  
Raleigh, NC 27611-7687  
919-733-3221

I hope the above information satisfactorily addresses the concerns raised by your constituent. please feel free to contact me should you have any further questions on this matter.

Sincerely,

David W. Ziegele, Acting Director  
Office of Underground storage Tanks



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

FEB 27 1989

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

Mr. Gregory P. Underwood  
Senior Environmental Engineer  
Clayton Environmental Consultants, Ltd.  
949 McDougall  
Windsor, Ontario N9A 1L9

Dear Mr. Underwood:

This responds to your December 22, 1988 letter to the Office of Underground Storage Tanks requesting clarification of EPA's final regulations for reporting releases from underground storage tanks (40 CFR Part 280, Subpart E). I hope this provides the clarifications you need.

Under these new regulations, any leak that is discovered must be reported immediately to the implementing agency and action undertaken by the owner and operator to stop additional releases. For example, the preamble to this section of the rule (53 FR September 23, 1988, p.37170) describes that the discovery of a Suspected release due to off-site impacts, or the physical presence of a release in the environment, warrants reporting. Also, under some condition., it may be necessary to report inventory discrepancies immediately (such as a significant drop in inventory level overnight). Otherwise, because of the inexactness of this method, inventory discrepancies must be reported only after being confirmed by a second month of data.

In your letter you suggest that an owner and operator does not have to report a suspected release under 280.50(c), unless the monitoring method detecting the release is required to be phased in under the "schedule for phase-in of release detection" in 280.40(c). We do not share this interpretation. EPA requires suspected release reporting regardless of whether a method of detection was used earlier than the regulation's minimum compliance phase-in dates. Non-reporting would be a violation of 280.50(c) which mandates owner and operator reporting of monitoring results indicating a suspected release.

There are two caveats to the above general requirement for reporting all suspected releases. First, suspected release reporting is not required if the check of the device shows it to be defective and its immediate repair, recalibration, or replacement does not confirm the initial result (280.50(c)(1)). Second, suspected release reporting is not required if the release detection method used is not one of the general types of methods specified under 280.41 and 280.42 and therefore, cannot be used to comply with the final rule's requirements for release detection. For example, if an owner and operator practices inventory control and reconciles the data monthly in accordance with the standard in 280.43(a), a suspected release must be reported to the implementing agency

when the second month of data confirms the initial result (using the criterion in 280.43(a)). However, if an extensive inventory analysis service is provided to the owner and operator which claims to be able to detect a 0.1 gallons per hour leak, such a "suspected release" under this vendor provided (not EPA required) method would not have to be reported because EPA has not accepted such results as a valid indicator of a possible release. In this second case, the "suspected release" results are not due to an EPA required method and are therefore not considered valid for leak detection purposes under the rules.

In summary, whether or not an owner and operator conducts monitoring before the regulatory minimum compliance due dates, a suspected release must be reported within 24 hours (or some other reasonable time frame specified by the implementing agency) if it is discovered using one of the EPA required methods that are specified in 280.41 and 280.42. EPA has not intended to allow corrective actions (under Subpart F) identified as needed at specific UST sites to be delayed by the phase-in dates for the required release detection. whenever an UST release is discovered or legitimately suspected it must be reported, confirmed and dealt with in accordance with the appropriate sections of the final rules.

Your letter suggests that owners and operators will be discouraged from undertaking monitoring earlier than is required if they have to report and deal with any releases that are thereby discovered. EPA has concluded that timely responses to suspected releases (while the extent of contamination is still limited) is in the best financial interest of the owner and operator because it is the approach most likely to avoid large corrective action costs. Thus, we encourage UST owners and operators to install one of the required release detection methods as soon as possible, and we believe it is in their best interests to do so.

If I can be of any more service in this matter please let me know

Sincerely,

Dave O'Brien, Chief  
Standards Branch  
Office of Underground Storage Tanks