



## R.I. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Office of Waste Management  
Underground Storage Tank Program

### CLOSURE IN PLACE (CIP) POLICY June 15, 1998

**The Rhode Island Department of Environmental Management (RIDEM), Office of Waste Management, Underground Storage Tank (UST) Management Program, has developed a written policy for processing requests for Permanent Closure by closure in place in accordance with Section 15.12 of the RIDEM "Regulations for Underground Storage Facilities Used for Petroleum Products and Hazardous Materials".**

RIDEM Regulations for Underground Storage Facilities allow for tanks to be closed in place in accordance with Section 15.12, "UST Closure In Place" which states "**Upon approval by DEM of an application to close USTs, and with proper notification to the DEM pursuant to Rule 15.08, the owner of a Facility may permanently close underground storage tanks by allowing the UST(s) and/or associated facility components to remain in the ground.**"

In accordance with this rule the Department considers requests for Closure-in-Place (CIP) on a case by case basis. This policy explains the factors and criteria involved in those decisions.

Upon reviewing the Application submitted in accordance with Section 15.06, the Department may approve a CIP based on the policy contained herein. Section 15.08 referenced in the above paragraph, "*Notification and Inspection of Closures*" will follow the normal Standard Operating Procedures (SOPs) of the UST Section with minor exceptions. In addition to submitting a typical Closure Application which informs the Department of the owners intention to close the UST in place, the UST Section requires a written letter from the owner or designated representative that provides specific detail on the necessity of the CIP request. The UST Section reserves the option of CIP for those USTs that during removal would adversely impact the structural integrity of a building, permanent structure, sensitive/critical underground utilities, other active USTs or is determined to be inaccessible to typical removal equipment. Consideration is also given to the potential for adverse impacts to an environmentally sensitive area caused by closure by excavation.

Upon approval of a closure application, CIP request/justification, and the required scheduling and notification, tanks and associated components may be permanently closed in place providing that:

#### **(SECTION 15.12)**

***(A) The UST(s) and associated piping are precision tested, the results reveal no leaks, and all results are furnished to the director;***

The UST Program will not require USTs storing motor fuels and hazardous materials to be tightness tested prior to CIP approval. These USTs require a Closure Assessment in accordance with Rule 15.10 of the UST Regulations, therefore a subsurface investigation as detailed in this document is mandatory for CIP approval.

USTs storing fuel oil consumed solely on-site or any tank otherwise exempted from the Closure Assessment requirements (Rule 15.01), shall have the option of submitting a tightness test for the tank and lines. The test must be performed after a CIP approval is received from the UST Program. After the results are received from the Applicant, the UST Program will schedule the subsequent on-site inspection by UST Management Program personnel.

***(B) All product is removed from the UST and from all connecting lines.***

Some contents may be reused or recycled (virgin product) and others (sludge) disposed of appropriately. This will be addressed in the approval of the closure application by verifying the owner has contracted a licensed hazardous waste hauler and should be consistent with previously developed residuals management policies.

***(C) The UST is cleaned to remove any remaining product or residual material and such product and residuals is disposed of in accordance with applicable federal, state, and local statutes, ordinances, rules and regulations;***

In order to properly clean a UST which is closed in place, the contractor may have to cut open the exposed top of the UST. The contractor should be reminded of the State Law prohibiting cutting tanks on-site and the necessity of obtaining a variance approval from the State Fire Marshall's office. It may be possible to properly clean the UST by power-washing and utilizing a licensed vacuum truck to remove the residuals.

***(D) All fill gauge, pump and vent lines are disconnected and inlets and outlets permanently capped or plugged; and***

All accessible UST appurtenances shall be removed and inlets and outlets permanently capped or plugged. This shall include, but not be limited to, all fill pipes, product lines, and vent lines.

***(E) All USTs are filled completely with an inert solid material and all remaining underground piping associated with the USTs are permanently capped and secured against tampering.***

The UST Program will require the use of slurry concrete or flowable fill only. It is important that an attempt is made to fill all voids and that all openings on the top of the tank are permanently capped or obstructed to reduce the likelihood of tank re-use or accidental fuel delivery. All piping closed in place shall also be completely filled with concrete or flowable fill.

Additional site investigation work must be performed to provide DEM with information normally obtained through the typical permanent closure involving the removal of the tank. This is required in accordance with Section 15.10, "Closure Assessments" except for those tanks that are exempted in Section 15.01 "Applicability". **Section 15.01 exempts;**

- (A) USTs which store fuel oil consumed solely on-site;**
- (B) USTs of less than 1,100 gallons in capacity which store motor fuels at farm or residential sites, provided that the fuel is for on-site use; or**
- (C) Holding Tanks**

For USTs requiring a Closure Assessment, the Assessment shall be submitted in accordance with the requirements outlined in **Section 15.10, "Closure Assessments" and RIDEM Closure Assessment Guidelines(1992)**. In summary, this requires physical description of UST, soil, groundwater, methods of field screening, sampling, analytical methods, results and consultant recommendations. This must be submitted to the UST Program w/in 30 days.

The methods of obtaining the appropriate information may include but not be limited to:

- a) multiple cores performed through the bottom of the UST from the inside at each end, at a minimum, and a soil sample obtained from a depth of 1-2 feet below tank bottom.
- b) all accessible sides of the UST exposed and visually inspected with soil samples obtained from close proximity to the tank at a depth of 1-2 feet below tank bottom or just above the groundwater interface, if applicable. Field screening with the appropriate instruments, or olfactory/visual inspection of the soil as it is removed from the excavation may also dictate where the appropriate samples are taken.
- c) soil borings advanced in proximity to the UST on accessible sides, confirmatory samples shall be obtained from a depth of 1-2 feet below tank bottom or just above the groundwater interface, if applicable. Field screening with the appropriate instruments, or olfactory/visual inspection of the soil as it is removed from the boring may also dictate where the appropriate samples are taken.
- d) a groundwater monitoring well installed in close proximity to the UST. Field screening with the appropriate instruments, or olfactory/visual inspection of the soil as it is removed from the well boring may also dictate where the appropriate samples are taken. Upon proper installation and development of the monitoring well, the groundwater shall be sampled and analyzed accordingly.

In all cases, soils surrounding fill pipe should be inspected for the presence of contamination due to overflow or spillage. All soils excavated/disturbed during this process must be screened for contamination in excess of current RIDEM field guidelines and segregated for appropriate disposal if necessary.

When submitting a request to CIP, the Applicant must provide a scope of work which satisfies the above listed requirements for pre-approval by the UST Program. The degree of investigation necessary will be proportional to the environmental sensitivity of the area where the tank is located (i.e.; groundwater classification, nearby surface water or wellhead protection areas, etc.).

For those tanks exempted in Rule 15.01, "Applicability", the Applicant has the option to tightness test the UST system after an approval for CIP is received from the UST Program. If the UST system fails the tightness test, the Applicant will be required to perform a subsurface investigation in accordance with Section 14.00 "Leak and Spill Response". If it is impossible/impractical to tightness test the UST at the time of application (i.e.; out of service/empty, additional cost of filling and testing, owner not confident of integrity), the owner should have the option to perform subsurface investigations as previously described in this document to determine if a release has occurred. However, a consultant (Rule 15.08(c)) and closure assessment (Rule 15.10) will not be required. The subject work may be overseen by an on-site UST inspector.

Signed: \_\_\_\_\_  
Terrence D. Gray, P.E., Chief

Date: \_\_\_\_\_