



**Connecticut Department of  
Energy & Environmental Protection**  
Bureau of Water Protection & Land Reuse  
Remediation Division

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## *Environmental Program Fact Sheet*

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# **Targeted Brownfield Remedy**

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### **Overview**

Developers often remark that investigating the full extent and degree of contamination on a property takes too long, and can often exceed the cost of implementing a remedy. When the redevelopment plan is known and the remedy can be part of the site development design, it makes sense to scale the investigation to support the remedy – rather than vice-versa. The Targeted Brownfield Remedy (TBR) is a mechanism designed to minimize uncertainty with the cost and time spent on characterization to support the remedy.

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### **Applicability**

The TBR is applicable to certain sites/releases where there have been one or more releases of pollution to the environment, and the releases are required to be remediated under a cleanup law to comply with the requirements of the Remediation Standard Regulations (RSCA 22a-133k-1 through -3).

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### **What It Is**

The TBR, administered by the Remediation Division of the Bureau of Water Protection and Land Reuse, is an expedited process for addressing certain contaminated sites. The TBR approach consists of covering unsaturated polluted soil beneath new or existing buildings or an engineered cap in a manner consistent with the Remediation Standard Regulations (RSRs). The characterization process may focus on collecting only the information that is relevant for the implementation of the TBR and the evaluation of the potential risks, but not on understanding the full extent of pollution. The TBR approach can be utilized for an entire site or for portions of a site, provided the portions included in the TBR are clearly delineated by a survey. Any other portions of the site would need to undergo full site characterization in accordance with prevailing standards and guidelines.

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### **Eligibility**

In order for a site to be eligible for the TBR, basic eligibility requirements must be met. These requirements are itemized in the Department's Targeted Brownfield Remedy Eligibility Checklist. All pre-requisites must be checked in order for the site to be eligible for the TBR approach.

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## Site Characterization

Characterization of the area in which the TBR approach will be used may be focused and risk-based. This characterization must demonstrate that the TBR will eliminate exposure pathways, the erosion of contaminated soils, the migration of wastes, and the migration of vapors into overlying buildings.

The site characterization methods used should distinguish between a streamlined approach for those releases for which the TBR will adequately protect human health and the environment and a more conventional approach for those releases that require the implementation of other remedial alternatives.

It should be noted that prevailing standards and guidelines must still be applied to the characterization of off-site migration of pollutants and their impacts in accordance with the RSRs unless specifically exempted by statute.

The conceptual site modeling process, as described in the Site Characterization Guidance Document, remains applicable and should be used for the TBR Investigation. It is anticipated that sites with a well-developed conceptual site model (CSM) will have an advantage when using the TBR approach. In these cases, the investigation will consist of just enough sampling to confirm and validate the CSM. For sites with weaker CSMs or for which the investigation data does not support the CSM, additional investigation may be necessary.

In order to support the TBR, characterization should be sufficient to enable the environmental professional to:

- Understand the nature of the pollution and to have a general sense of its distribution in the area of the TBR;
- Have a representative understanding of any groundwater impacts and plumes;
- Demonstrate that pollution has not impacted groundwater, or support a CSM that pollution will not continue to impact groundwater after the TBR is in place;
- Demonstrate that any non-aqueous phase liquids in the area of the TBR will be properly addressed under the RSRs;
- Validate a CSM that supports the TBR;
- Properly evaluate and address all underground storage tanks and PCBs subject to TSCA regulations and RCRA Units; and
- Know if any sensitive receptors (human and ecological) are at risk.

Ultimately, the environmental professional must be able to demonstrate that any pollution beneath the TBR will be environmentally isolated and/or inaccessible, as applicable, and not able to cause unacceptable exposure or to migrate from that area at concentrations which could pose a risk to human health and the environment.

If future changes to the site use cause physical components of the remedy to be compromised or eliminated, such areas may then require supplemental characterization to determine the need for supplemental remedial measures.

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**Approval**

Determination of TBR eligibility is not subject to the Commissioner's approval, but documentation of eligibility through submission of the Targeted Brownfield Remedy Eligibility Checklist to the Department is required. It is important to note that the Commissioner's approval is still required for any variance being sought in conjunction with implementation of the remedy. These would include, but not necessarily be limited to, Engineered Controls and Environmental Land Use Restrictions (ELURs). Decisions on the specifics of such variance applications will be handled using an expedited review process that will prioritize sites that are utilizing the TBR approach and will be made based on the technical details contained in such applications at the time they are submitted to the Department.

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**Key Elements**

All polluted soil that will be addressed by the TBR will be rendered inaccessible and environmentally isolated beneath new or existing buildings. In areas not covered by buildings, soils would be covered by a cap (an engineered control) with required monitoring, maintenance, and financial assurance.

Sub-slab vapor controls (passive or active) will be installed beneath every building in the area of the TBR to ensure that no volatile compounds migrate into the overlying buildings. However, if additional site investigation adequately demonstrates that there is no current or future volatilization risk at the site, then the sub-slab vapor controls will not be required. This is an optional approach within the TBR process that the property owner can choose.

As with any engineered control or cap that is approved by the Commissioner, any reliance on an ELUR for use of industrial/commercial direct exposure criteria, or to render soils environmentally isolated or inaccessible, must be approved by the Commissioner and recorded on the land records.

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**Verification**

The TBR approach may be used in support of a verification for the portion of the property that incorporates the TBR. The verification report should include all relevant findings of the characterization that demonstrate the TBR is appropriate and a description of any engineered controls and ELURs approved by the Commissioner and recorded on the land records.

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This overview is designed to answer general questions and provide basic information. You should refer to the appropriate statutes for the specific language. It is your responsibility to comply with all applicable laws. The information contained in this fact sheet is intended only to acquaint you with the Targeted Brownfield Remedy and does not constitute the Department's interpretation of the applicable laws.