

Construction of Buildings In Contaminated Areas (from MADEP Factsheet)

In some cases, construction must be performed in areas where certain levels of oil and/or hazardous materials remain from a previous release. Due to budgetary and/or technical limitations, it may not be possible or practical to remove all of such contamination prior to new or reconstruction. The Massachusetts Department of Environmental Protection (MADEP) has designed a set of guidance criteria specifically for construction in such scenarios. We have prepared this summary of requirements and limitations from documents available on the MADEP web site at www.state.ma.us/dep.

The purpose of this document is to clarify existing regulatory requirements applicable to building construction in areas that have been contaminated by a release of oil and/or hazardous material ("contaminated areas"). This clarification concerns and is limited to the jurisdiction and application of 310 CMR 40.0000, the Massachusetts Contingency Plan (MCP), which are the soil and groundwater remediation regulation designed by the MADEP.

In general, the provisions of this guidance document apply to disposal sites subject to the notification and response action requirements of the MCP. This guidance document is not applicable at disposal sites where closure has been achieved in accordance with the MCP, unless, changes in site activities, uses, and/or exposures would trigger a new notification obligation.

Construction a building over a Contaminated Area

In many cases, a Release Abatement Measure (RAM) is the common regulatory vehicle used to enable the construction of a permanent building over contaminated soil. This practice raises concerns about the risks to future building occupants and concerns that future remedial options will be limited or precluded because of the presence of the building (e.g., it will not be feasible or even possible to remove additional volumes of contaminated soils from beneath or adjacent to the footprint of the proposed structure). Therefore, in order to be in compliance with the MCP, the following must be included in RAM activities conducted prior to and/or concurrent with the construction of a permanent building over soil and/or groundwater which contains reportable levels of oil and/or hazardous material:

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- a focused site characterization must be conducted within and adjacent to the footprint of the proposed building and associated subsurface structures, to adequately define the nature and degree of contamination;
- a focused risk assessment must be conducted within and adjacent to the footprint of the proposed building and associated subsurface structures, to adequately characterize the nature of risks to construction workers, surrounding populations, and future occupants of the building, and to ensure that such risks are within limits permitted by the MCP;
- a focused remedial program must be conducted, as necessary, to eliminate unacceptable risks to construction workers, surrounding populations, and/or future building or site occupants; and
- a focused feasibility study must be conducted within and adjacent to the footprint of the proposed building to determine if it is feasible to reduce soil contaminant levels to concentrations that achieve or approach a background condition, and if so, to ensure that such remediation is conducted before or during construction of the overlying portions of the building. At sites where "urban fill" is present, special emphasis must be placed on the identification and remediation of contaminant hot spots. At those sites where placement of the building structure will preclude further investigative or remedial efforts, sufficient data must be obtained to demonstrate compliance with RAO performance standards relating to source control within and adjacent to the footprint of the building structure.

These assessment and remedial actions may be undertaken as part of the RAM activities, and may be documented in applicable RAM submittals to the MADEP. Though not required, it may also be advisable and cost-effective at some sites to expand the area of investigation beyond the building footprint, because eventually it will be necessary for the entire Disposal Site to achieve closure via the filing of a Response Action Outcome. Timely completion of these studies will help owners, occupants, and contractors to meet the MCP's requirement to submit a Response Action Outcome within five years of Tier Classification.

Dewatering Activities

It is often necessary to conduct construction activities beneath the groundwater table "in the dry", necessitating pumping and discharging of groundwater. Under the provisions of the MCP, dewatering operations of this nature involving Contaminated Media (i.e., groundwater contaminated by oil and/or hazardous material at or above Reportable Concentrations) are considered remedial actions, and therefore must be conducted under one of the five regulatory vehicles provided by the MCP (e.g., RAM, URAM). It should be noted, however, that considerable flexibility is provided by the MCP in this respect.

Health and Safety Procedures

Requirements to adequately protect workers undertaking response actions at disposal sites - including construction activities conducted as a RAM - are detailed in the MCP. It should be noted that these regulations also specify the need to adequately monitor, control, and minimize exposures to surrounding populations.