

New MCP amendments are now in effect

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The Massachusetts Department of Environmental Protection’s hazardous waste site cleanup regulations implementing Chapter 21E, known as the Massachusetts Contingency Plan — or MCP — were originally promulgated in 1989 to address the growing problem of the cleanup of oil and hazardous material releases in the state.

The MCP, 310 CMR 40.0000, et seq., previously underwent two major sets of revisions. Now, the DEP has promulgated another round of important revisions. These are intended to enhance program efficiency, maintain a high level of environmental protection, and incorporate the latest science on chemical mobility and toxicity.

Most of the key changes will become effective on June 20, but new reportable concentrations, elimination of the initial Tier I permit, and the new tier classification criteria replacing the numerical ranking system took effect on April 25.

New site closure provisions

The site closure term “Response Action Outcome Statement,” or RAO, has been eliminated. Those in the day-to-day trenches of the MCP have grown comfortable with Class A, B and C RAOs and their numerical sub-categories defining the type of site closure (e.g., temporary versus permanent, whether there are use restrictions, whether residual contamination has been reduced to background levels). However, those terms are hardly transparent to the outside world.

Site closure categories have been re-defined in plain English, 310 CMR 40.1030-1050:

(1) Permanent Solutions with No Conditions

(2) Permanent Solutions with Conditions

This provides notice of potential future site risks and includes sites with deed restrictions (i.e., Activity and Use Limitations, or AULs).

Additionally, it closes loopholes by encompassing sites that previously slipped through the regulatory cracks of Class A RAOs without AULs:

- undeveloped sites with residual groundwater contamination that could pose a risk of vapor intrusion into future buildings but would not currently be subject to GW-2 (i.e., groundwater standards based on the potential for volatile material to migrate into indoor air);
- site soils contaminated by historic fill or other general human background activities, such as atmospheric deposition;
- elevated residual contamination under or in road or railway rights of way;
- residential sites with residual contamination where best management practices should be taken for gardening, such as planting vegetables in raised beds above a barrier.

(3) Temporary Solutions

The risk-based standards for closure remain unchanged. “No significant risk” must still be demonstrated for Permanent Solutions and “no substantial hazards” for Temporary Solutions.

Simplified site classification

The MCP previously required that all disposal sites that were not permanently closed within one year of reporting to the DEP be tier-classified by using a complex numerical ranking system.

Permits were required for response actions at Tier I sites; i.e., those deemed to pose the highest level of risk. Permits have now been eliminated, and the ranking system has been replaced with a far simpler tier evaluation process. 310 CMR 40.0520.

Tier I classification now applies where any of the following four conditions exist:

- (1) groundwater contamination is in excess of GW-1 (drinking water) standards at or near a drinking water source;
- (2) an Imminent Hazard condition exists (i.e., one that “would pose a significant risk of harm to health, safety, public welfare or the environment if it were present for even a short period of time”), 310 CMR 40.0006;
- (3) remedial action is required for an Immediate Response Action, or IRA, to abate a time-critical release, 301 CMR 40.0411; or
- (4) remedial action is required to eliminate a Critical Exposure Pathway, or CEP, (i.e., oil or hazardous material impacts to indoor air at a school, day care center or occupied residence, or impacts to drinking water supplies at any of those locations), 310 CMR 40.0006.

Vapor intrusion sites

For many years, Massachusetts has been leading the charges in the country to address potential health threats of vapor intrusion when volatile compounds migrate into indoor air.

The MCP requires 72-hour notification to the DEP for Conditions of Substantial Release Migration with potential for vapor intrusion into schools, day care centers or occupied residences. 310 CMR 40.0313(4) and 40.0006.

An IRA, such as the installation of fans or a Sub-Slab Depressurization (SSD) system, is then required to address the risk.

The regulatory revisions now allow certain CEP-related response actions, such as Active Pathway Elimination systems, to continue after permanent site closure, provided the source of the contamination has been effectively eliminated or controlled and other conditions are met. This is intended to remove the disincentive to install helpful SSD systems that otherwise may have delayed permanent site closure.

The MCP now has yet another acronym: AEPMM! 310 CMR 40.1025. Sites with Active Exposure Pathway Mitigation Measures requiring an AUL now may qualify for a Permanent Solution with Conditions. It must be demonstrated that if an AEPMM, such as an SSD system, were to fail for 60 consecutive days, there would be no exposure to contaminants posing an Imminent Hazard. Remote monitoring technology that will alert the building owner and operator immediately upon failure of an AEPMM system is required.

Annual certification to the DEP must be made confirming:

- (1) the system is being maintained properly;
- (2) the property owner is aware of the DEP's inspection rights, upon notice; and
- (3) the property owner has adequate funds for any necessary repairs of the system.

AEPMMs also may be used in conjunction with Remedy Operation Status, where a remedial system is being actively operated and maintained with the goal of reaching a Permanent Solution, and with Temporary Solutions. 310 CMR 40.1026.

Streamlined AULs

An AUL is a recorded deed restriction conditionally limiting future uses of a site with residual soil contamination that would otherwise present potential risks of human exposure without use limitations.

AULs have been cost-effective in permanently closing sites where contamination remains at levels below certain risk thresholds. Although not limited to commercial/industrial sites, AULs are particularly not advised at residential sites due to potential risks, if violated, to children, the most vulnerable population.

AULs also have a heightened perceived stigma in the residential marketplace, often resulting in greater diminution in property value than at other sites.

In a long overdue regulatory change, the DEP has streamlined AULs by reducing redundant paperwork and minimizing the potential for inconsistencies. The requirement that a Licensed Site Professional — LSP — prepare an AUL Opinion, which largely reiterated the AUL conditions already required in the DEP's Notice of AUL Form 1075, has been eliminated. 310 CMR 40.1074.

An important new requirement is that all deeds, easements, mortgages, leases, licenses, occupancy agreements or "any other instrument of transfer" involving a property subject to an AUL reference or fully incorporate the AUL.

Additionally, copies of all deeds transferring title to an AUL property must be submitted to the DEP within 30 days of recording, an obligation that may be fulfilled by the grantor or grantee. These requirements now appear at the top of the Notice of AUL Form 1075.

Non-Aqueous Phase Liquids

Separate phase oil or hazardous material present in the environment, known as Non-Aqueous Phase Liquids, or NAPL, has been a tricky issue in site closures. Until now, the MCP precluded permanent closure at any site with an observed NAPL thickness of greater than one-half inch in a monitoring well.

That standard had long been criticized as not truly representative of risk, as it ignored the potential for future exposure and mobility via groundwater.

Additionally, thickness measurements can be arbitrary, reflecting factors unrelated to risk, such as well diameters.

The MCP revisions have replaced the NAPL thickness criterion with performance standards focused on updated science on NAPL behavior in the subsurface and actual risk. 310 CMR 40.1003(7)(a). Sites may now be candidates for a Permanent Solution when it can be demonstrated that:

- (1) there is no “Non-Stable NAPL” present; and
- (2) NAPL has been removed to the extent feasible.

AULs are now required for Permanent Solutions at NAPL sites with “Micro-Scale Mobility”; i.e., “NAPL with a footprint that is not expanding, but which is visibly present in the subsurface in sufficient quantities to migrate or potentially migrate as a separate phase over a short distance and visibly impact an excavation, boring or monitoring well.” 310 CMR 40.0006 and 40.1012(2)(d).

Revised numerical cleanup standards

Periodically, the DEP has updated numerical standards for some of the nearly 2,000 listed contaminants to reflect new toxicity information. These standards apply to soil and groundwater and to reportable concentrations.

According to the DEP, although 69 percent of the values remain unchanged, 21 percent went up and are now less stringent, and 10 percent went down and are more stringent.

Of particular note, the GW-2 standard has gone down from 30 ug/L to 5 ug/L for TCE and from 2,000 ug/L to 1,000 ug/L for benzene, underscoring the DEP’s concerns about vapor intrusion from these volatile organic compounds. The changes will surely have a significant impact on closure for certain sites.

For a list of the numerical changes, see <http://www.mass.gov/eea/agencies/massdep/cleanup/regulations/site-cleanup-regulations-and-standards.html#6> (scroll down to “MCP Final Amendments — UNOFFICIAL VERSION,” then click the link for “MCP Numerical Standards and Reportable Concentration Changes (RCs)”).

What will these amendments mean? Site closure terms will become more obvious and transparent to the general public. Some sites that have been in limbo for years, such as those with measurable NAPL, will become candidates for permanent closure.

Changes related to vapor intrusion cut both ways but ultimately will be more protective of public health: more stringent GW-2 standards for TCE or benzene will require increased remedial efforts, but some prior impediments to implementing SSD systems will be eliminated now that sites with active systems may be permanently closed.

Other changes to numerical standards will affect closure on a site-by-site and contaminant-by-contaminant basis.

AULs and tier classification will become much more efficient.

Overall, the DEP seems to be heading in the right direction by protecting public health and environmental concerns while reducing some of the previous red tape and associated unnecessary costs of regulatory compliance.

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