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Master MCP Q & A: 1993 – 2018

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INTRODUCTION

When the redesigned Waste Site Cleanup Program started operating in October 1993, questions related to interpreting the Massachusetts Contingency Plan or "MCP" (310 CMR 40.0000), the regulations that set out the requirements for reporting, assessing and cleaning up contaminated sites, were raised by Licensed Site Professionals and others involved in applying the new rules. To respond to these questions in a timely and consistent way, MassDEP's Bureau of Waste Site Cleanup issued "MCP Q&As," which contain brief regulatory interpretations and policy statements in Question and Answer format.

This document includes questions from all Q&As published through June 2014. It is organized by MCP Subpart. Questions have been placed in the Subpart section that seemed to be the most appropriate. Please note that some of the questions may address more than one MCP Subpart. In addition to searching for questions under Subparts and subtopics, users may also find it helpful to search the document using for key words.

May 2016 This Master Q&A is currently under review by MassDEP for the purpose of updating the responses to reflect regulatory amendments (to the MCP and other regulations that are cited) as well as changes in practice and program policy. As part of this process, every question will be reviewed, some will be revised, and some will be "retired" as no longer relevant. Questions that have been reviewed without revision will be noted as "Reviewed [Month][Year]." Questions that have been reviewed and revised will be noted as "Revised [Month][Year]." The original publication date will also be retained. MassDEP will post reviewed/revised Q&As on a rolling basis (i.e., not all questions will be reviewed/revised and reposted at the same time). If you are referring to a Q&A for guidance that has not been recently reviewed and have some question as to whether it reflects current regulation, practice or policy, you may contact BWSC.Regulations@MassMail.state.ma.us to check on the status of the Q&A.

SUBPART A: General Provision

PILOT PROJECTS AND LICENSING REQUIREMENTS

Under what regulatory vehicle may soil vapor and/or groundwater extraction pilot tests be conducted? Are they "assessment" or "remediation"? Must a remedial action plan be submitted to conduct pilot tests? [August 1999; Revised May 2016]

Pilot Test is defined in the MCP at 310 CMR 40.0006 as “a test designed to acquire information on the anticipated performance of a remedial system”. Under that definition, “A Pilot Test shall be considered assessment if it is conducted and completed with 21 consecutive days, excluding time required for sample analyses, and involves only soil vapor, Non-aqueous Phase Liquid and/or groundwater extractions, otherwise it shall be considered remediation.” Where the Pilot Test is considered assessment, Phase II or III report (or next applicable submittal) should detail the activities and management practices used to conduct the Pilot Test. A Pilot Test lasting more than 21 consecutive days or involving activity other than soil vapor, NAPL and/or groundwater extraction is considered a remedial action and must be conducted and conducted under a remedial action plan (e.g., IRA, RAM or Phase IV plan). In all cases, Remediation Wastes, Remedial Wastewater, and Remedial Air Emissions must be managed in accordance with 310 CMR 40.0040 through 40.0049.

DEFINITIONS

Is a drainage ditch included in the definition of "tributary" for a Zone A? [Special Edition 3, September 1994, Clarified]

No. A "tributary" as used in the Zone A definition would include a periodically or continuously flowing surface water (e.g., brook, stream, or river) that is depicted on a USGS quad map and feeds into a Class A surface water used as a drinking water source.

Please Note (2/99): Division of Water Supply regulations, 310 CMR 22.00, as amended on March 21, 1997, contain a revised definition of "tributary" that is different from that described above. While the purposes of the Water Supply and the Waste Site Cleanup Q&A definitions are related, there are distinct differences that have led MassDEP to maintain both definitions of tributary for the time being. MassDEP is currently reviewing this issue and considering changes that will result in one definition of tributary in both sets of regulations. However, until a definition of tributary is incorporated into the MCP, parties conducting response actions that fall solely under the MCP should continue to refer to the Q&A definition.

Is filing for bankruptcy protection considered a force majeure event for purposes of MCP deadline extensions under 310 CMR 40.0025? [July 1995, Revised May 2016]

No. As defined in 310 CMR 40.0006, a force majeure is an act or omission beyond the reasonable control of a person and without the fault of that person which directly affects his or her ability to comply with a deadline, time period, order or determination, and which could not have been prevented, avoided or overcome by the exercise of due care, foresight or due diligence. Some examples of force majeure events may include acts of God, fires, floods, strikes and war embargoes.

While filing for bankruptcy protection is not a force majeure event, it may constitute evidence of financial inability. Under 310 CMR 40.0172, a person who has reason to believe that one or more response actions are beyond his or her technical, financial or legal ability may notify the Department of such inability. A person who provides such notice in good faith, and is able to demonstrate the inability, would have a defense to the assessment of civil administrative penalties for noncompliance that may arise out of such inability to perform response actions.

Submittal to the Department of a notice of financial inability under 310 CMR 40.0172 does not relieve a person of his or her responsibility for paying annual compliance assurance fees, for reimbursing the Commonwealth for any response action costs incurred by the Department or for performing those response actions within the person's ability or after the inability ceases. Annual compliance fees are substantially reduced in cases where financial inability is demonstrated.

Is the Interim Wellhead Protection Area for Non-Community Water Supplies a 1/2 mile radius around the well? [Volume 3 Number 1, June 1996, Clarified]

A 1/2 mile radius may be used. However, for a well with a pumping rate less than 100,000 gallons per day and for which a Zone II has not been defined, the Interim Wellhead Protection Area radius can be calculated by using the following equation: IWPA (in feet) = 32y + 400; where y is the pumping rate in gallons per minute (see Interim Wellhead Protection Area definition, 310 CMR 40.0006).

For wells where the daily pumping rate is not known, MassDEP Division of Water Supply Policy #94-06, "Default Radii for Interim Wellhead Protection and Zone I Areas for Non-Community Wells" provides the following default IWPA radii: 500 feet for transient non-community wells and 750 feet for non-transient non-community wells.

The town where my site is located may have an Aquifer Protection District. What does this mean for my cleanup and how do I find out if an APD exists? [Volume 3 Number 2, December 1996]

Groundwater that is located within an area designated by a municipality specifically for the protection of groundwater quality (to ensure its availability for use as a source of potable water supply) is considered a Potential Drinking Water Source Area under the MCP. These municipal designations must be in the form of: a) a local ordinance or bylaw adopted by the municipality (e.g., an Aquifer Protection District or Zone); b) an inter-municipal agreement approved by the municipal legislative body; or c) an executed inter-governmental contract for the purchase or sale of drinking water. Groundwater contamination within these designated areas must be cleaned up to GW-1 standards to meet the requirement of a Permanent Solution.

BWSC Priority Resource Maps do not include Aquifer Protection Districts, inter-municipal agreements, or inter-governmental contracts. To find out if your site is located in an area legally designated for groundwater protection, contact the municipal planning department, board of health, or water department.

The 21E Priority Resource map that I ordered from MassGIS shows my site as located in a Non-Potential Drinking Water Source Area (NPDWSA). When I visited my site I realized that the surrounding 100+ acres contain single family houses on 1 acre and larger lots, and therefore does not meet the MCP criteria for NPDWSA. How should I proceed? [Volume 3 Number 2, December 1996, Clarified]

The information shown on the 21E Priority Resource Maps is based on interpretations of aerial photographs taken in 1985 and 1990 Census Block Group information. This source information was the best available at the time it was gathered and may contain errors and/or omissions. People conducting cleanups should be aware that the maps are to be used only as a guide. Actual information gathered from visiting the site should be the basis for determining if the area actually meets the NPDWSA definition in the MCP. If the site-specific information disagrees with the GIS map, the site-specific information should be used to classify the groundwater appropriately. The same is true of areas which are mapped as Potential Drinking Water Source Areas - if actual site information shows that NPDWSA criteria do apply in a mapped Potential Drinking Water Source Area, then cleanup should be based on actual rather than mapped information.

If you send map corrections to MassDEP, we will update the GIS data so that future maps will be more accurate. BWSC's guidance document, "Determining Non-Potential Drinking Water Source Areas" (WSC-

97-701, March 1997) explains how to apply the NPDWSA definition and how to submit corrections to the NPDWSA overlay.

My site is located in a relatively undeveloped forested portion of town. This part of town (including my site) has been rezoned for future development of a 150 acre shopping mall. Does this mean that my site is now located in a Non-Potential Drinking Water Source Area because of the new zoning or will be located in a NPDWSA once this development occurs? [Volume 3 Number 2, December 1996]

The answer to both questions is NO. Non-Potential Drinking Water Source Areas are defined based on development that was in place before January 1, 1996 and that meets one or more of the criteria listed in the MCP. Municipal zoning should not be used since it does not always identify actual land uses.

M.G.L. chapter 21E and the MCP definitions of "release" excludes "pesticides": How does MassDEP interpret the word "pesticides" as used in c. 21E and the MCP? [November, 2001; Revised May 2016]

MassDEP's interpretation of the word "pesticides" in the MCP is consistent with the definition provided in the Federal Insecticide, Fungicide and Rodenticide Act. Pesticides include any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Pests can be insects, mice and other animals, unwanted plants (weeds), fungi, or microorganisms like bacteria and viruses. The most common types of pesticides include insecticides, herbicides, algaecides, repellents, antimicrobials, pre-emergents, fungicides, and rodenticides. A pesticide is also any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

The definition of pesticides is quite broad, but it does have some exclusions, including: drugs used to control diseases of humans or animals; fertilizers, nutrients, and other substances used to promote plant survival and health; biological control agents, except for certain microorganisms; and low-risk substances, such as cedar chips, garlic, and mint oil.

Historic Fill

One of the criteria in the definition of Historic Fill is: "(c) was contaminated with metals, hydrocarbons, and/or polycyclic aromatic hydrocarbons prior to emplacement, at concentrations consistent with the pervasive use and release of such materials prior to 1983." How do you determine what was "consistent with the pervasive use"? [June 2014, Revised November 2017]

The MassDEP Technical Update, "Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil" (May, 2002) lists concentrations of OHM that are commonly found in soil containing coal ash or wood ash. While not specific to the new definition of "Historic Fill" in the 2014 MCP, the values presented in Table 1 of that document can be considered a first approximation of levels "consistent with pervasive use" until the Department develops additional guidance. (The data sets used to create Table 1 are referenced and quantitatively detailed in Appendix A). Concentrations greater than the Table 1 values may also meet the definition of "Historic Fill," but in such cases should not simply be presumed to be "Historic Fill." The guidance presented on page 3 of the Technical Update (in the section entitled, "*Background Concentrations Different Than The MADEP-Published Values*" continues to be relevant to this evaluation. A general rule of thumb is that the level of effort and documentation appropriate to make and support a Historic Fill determination will increase as the concentrations of concern increase.

CONCEPTUAL SITE MODEL

The 2014 MCP Revisions include a new definition of the term "Conceptual Site Model" or "CSM." What is MassDEP's reason for adding this term to the MCP and what specific requirements are related to CSM? [June 2014, Reviewed November 2017]

For more than a decade, Conceptual Site Model development as a tool for organizing and analyzing information about disposal site conditions and designing and implementing sampling and remedial plans has been emphasized as standard practice by environmental professionals and regulators on the state and national level. The LSP Association and MassDEP have provided numerous training sessions which highlighted the importance of the CSM as a dynamic model for integrating disposal site information, identifying potential data gaps, and addressing uncertainties related to site conditions and related risks. By adding a CSM definition and related provisions to the 2014 MCP, the regulations are catching up with best practice. Use of the CSM is particularly important for understanding and successfully managing more complex sites, such as sites with potential vapor intrusion or NAPL.

In addition to the CSM definition at 310 CMR 40.0006, there are requirements to document the preliminary CSM at the conclusion of a Phase I Initial Site Investigation (310 CMR 40.0483(1)(h)), base the Conceptual Phase II Scope of Work on the preliminary CSM developed in Phase I (310 CMR 40.0834(2)(a)); and provide an updated CSM at the conclusion of the Phase II Comprehensive Site Assessment (310 CMR 40.0835(4)(i)). A succinct summary of the CSM must also be provided in support of a Permanent or Temporary Solution (310 CMR 40.1056(2)(b) and 310 CMR 40.1057(2)(b), respectively). Other MCP references to CSM include the provision at 310 CMR 40.1003(7) related to evaluating the feasibility of removing NAPL with Micro-Scale Mobility and the definition of Historic Fill at 310 CMR 40.0006.

REMEDIATION WASTE MANAGEMENT AND BILLS OF LADING

I am removing an underground storage tank which was previously abandoned and filled-in-place with sand. I now need to remove this sand, which is contaminated with petroleum compounds. Is this sand considered a "Containerized Waste" as defined in the MCP? How can it be managed? [Volume 4, Number 1, May 1997, Clarified]

Yes. Sand, sludge, liquids, debris and other materials inside of an underground storage tank, drum, engineered impoundment or other fabricated container meet the definition of "Containerized Waste" under the MCP. The regulatory classification of the Containerized Waste inside the tank dictates what the management requirements are for these waste materials. Assuming that the tank was not emptied of its contents prior to placement of the sand, then in accordance with the Massachusetts Hazardous Waste Regulations [see 310 CMR 30.000], the regulatory classification of the materials inside of the tank would be either a "used or unused waste oil" contaminated material (i.e., a Containerized Waste that is classified as a Hazardous Waste) and would be assigned a hazardous waste code of MA01 when transported off-site under a hazardous waste manifest. Containerized Waste that is classified as a hazardous waste must be managed in accordance with the Hazardous Waste regulations when removed from the tank, not the Remediation Waste regulations, since the definition of Remediation Waste specifically excludes Containerized Waste.

Containerized Waste that is not classified as a Hazardous Waste is considered to be a Solid Waste and, if eligible, these materials may be managed under the policies COMM #97-001 and WSC #94-400. The sand in the tank may, under certain circumstances, be considered a non-hazardous waste or a solid waste if all of the contents of the tank were removed, including all residual product and sludge, before the sand was placed into the tank. However, the presence of a discrete sludge layer, non-aqueous phase liquid, or the presence of highly contaminated and/or product saturated soils inside the tank would indicate that the tank was not properly cleaned. Therefore these Containerized Wastes may require management as a hazardous waste when removed from the tank.

What are the new MCP procedures for using a Bill of Lading (BOL) to transport contaminated media? Do they apply to all sites? [Volume 1 Number 1, November 1993]

The new Bill of Lading procedures are outlined in 310 CMR 40.0034 and 40.0035. These provisions apply to all disposal sites, including those with approved waivers. If If a party wishes to use a BOL, he/she must engage a Licensed Site Professional (LSP) to oversee the characterization and transport of the remediation waste. Alternatively, remediation wastes may be transported using a hazardous waste manifest, in which case an LSP is not required to manage the shipment.

What signatures are required for the Bill of Lading? [Volume 1 Number 5, June/July 1994, Revised]

The Bill of Lading Form (BWSC-012) must contain, among other information, the dated signature of a Licensed Site Professional (LSP), the dated signature of the Responsible Party (RP), Potentially Responsible Party (PRP) or Other Person conducting the response action, and the dated signature of a representative of the receiving facility [see 310 CMR 40.0035(1)(h) through (j)]. A completed Bill of Lading, including original signatures must be submitted to MassDEP within 30 days of the date of final shipment from the site [see 310 CMR 40.0034(5)], except for shipments of soil resulting from a Limited Removal Action [see 310 CMR 40.0318].

Is there a limit on the volume of soils that may be excavated with contaminant concentrations below the Reportable Concentrations? Can a Bill of Lading be used for the transport of these soils off-site? [Volume 3 Number 2, December 1996]

The MCP does not limit the amount of excavation in this instance provided that certain conditions are met. Pursuant to 310 CMR 40.0032(3), soils containing oil, waste oil and/or hazardous material at concentrations less than their release notification thresholds (specified in 310 CMR 40.0300 and 40.1600), and which are not a hazardous waste, may be transported from a disposal site without notice to, or approval from, the Department. These materials cannot be disposed of at a location where the concentrations in the soil would exceed notification thresholds at the receiving site or where existing concentrations at the receiving site are significantly lower than the concentrations in the soils that are being disposed of or reused [see 310 CMR 40.0032(3)(a) & (b)]. A Bill of Lading may be used in such cases, but is not required.

The D.C. Court of Appeals in the case Association of Battery Recyclers, Inc. et. al. v. U.S Environmental Protection Agency (decided August 21, 2000) vacated the use of the Toxicity Characteristic Leaching Procedure (TCLP) for evaluating whether manufactured gas plant (MGP) wastes (MGP-contaminated soil) are a hazardous waste. What is the impact of this decision on managing MGP wastes generated as part of response actions at 21E sites? [November, 2001]

MassDEP's Bureau of Waste Prevention has reviewed the decision and concluded that the decision does not impact the regulation of MGP waste in Massachusetts under the Massachusetts Hazardous Waste Regulations, 310 CMR 30.000. Therefore, MGP remediation wastes generated at 21E sites that exhibit the toxicity characteristic under 310 CMR 30.155B (TCLP) and 310 CMR 30.125B (TC Rule) when transported from a disposal site must be managed in Massachusetts as a hazardous waste, including the use of a hazardous waste transporter, hazardous waste manifest, and the applicable hazardous waste code. However, such wastes may be shipped to a non-hazardous waste facility in another state, provided that the receiving facility is legally authorized to accept MGP remediation wastes and complies with the requirements of the receiving state. In addition, such remediation wastes must still be managed within the disposal site in compliance with the provisions of 310 CMR 40.0030.

When must a 21E Bill of Lading or a Material Shipping Record be used for transporting contaminated soil? [November, 2002]

The MCP requires that soil containing oil and/or hazardous material (OHM) at concentrations equal to or greater than a release notification threshold established by 310 CMR 40.0300 must be transported in

compliance with the 21E Bill of Lading (BOL) requirements of 310 CMR 40.0034 and 40.0035 or hazardous waste manifest. If this material is a listed hazardous waste (other than oil), or a characteristic hazardous waste, only a hazardous waste manifest may be used.

Contaminated soil containing OHM at concentrations less than an applicable release notification threshold established by 310 CMR 40.0300, or which are exempt from a release notification threshold under 310 CMR 40.0317, need not be transported in accordance with the 21E BOL provisions. Contaminated soil generated from out-of-state locations also is not subject to the 21E BOL requirements of the MCP. In these cases, however, if the soil is considered a listed hazardous waste (other than oil) or a characteristic hazardous waste, a hazardous waste manifest must be used to transport it.

Soil that does not require the use of a 21E BOL and is not a hazardous waste may be shipped to a landfill or permitted soil-processing facility in Massachusetts using a Material Shipping Record (MSR). While no regulatory provision requires the use of a 21E BOL for these classes of materials, landfills and soil processing facilities may accept such material under a 21E BOL at their discretion.

The MSR provides for a certification by a Qualified Environmental Professional (QEP) on the adequacy of soil characterization and management, unless the document is approved by MassDEP. A QEP is an individual who is professionally licensed or certified in a discipline related to environmental assessment (such as engineering, geology, soil science, LSP, or environmental science) by a state or recognized professional organization. A detailed description of QEP qualifications and a copy of the MSR form are provided in Attachment III of MassDEP Policy #97-001, Reuse and Disposal of Contaminated Soil at Massachusetts Landfills.

What are the transportation requirements for soil that is classified as a hazardous waste when it is moved from a 21E disposal site? [November, 2002]

The transportation of soil that is a hazardous waste is subject to the Massachusetts Hazardous Waste Regulations (310 CMR 30.000), EPA's Hazardous Waste Regulations under the Resource Conservation and Recovery Act (RCRA), and the Department of Transportation Hazardous Materials Regulations. These requirements include, but are not limited to, the following:

-use of an EPA ID Number (310 CMR 30.303);
-use of a hazardous waste manifest (310 CMR 30.310);
-use of specified packaging, labeling, marking, and placarding (310 CMR 30.320);
-specified record keeping and reporting requirements, and if applicable, biennial reporting requirements (310 CMR 30.330);
-transportation in accordance with the provisions of 310 CMR 30.400, including the use of a licensed hazardous waste transporter; and
-compliance with RCRA Land Disposal Restrictions (40 CFR 268).

It is important to note that soil contaminated solely by a release of oil or waste oil that is managed under the Massachusetts Contingency Plan (MCP) in accordance with 310 CMR 30.0252(2), and that is not otherwise a hazardous waste, does not require management as a hazardous waste in Massachusetts (see related MCP Q&A, August 1999).

When may pesticide-contaminated soil be accepted by solid waste landfills in Massachusetts? [November, 2002]

DEP Policy COMM-97-001 Reuse and Disposal of Contaminated Soil at Massachusetts Landfills provides guidance on the acceptance and management of contaminated soil by solid waste landfills in Massachusetts. Pesticide-contaminated soil may be managed under COMM-97-001 provided:

-the pesticides were applied to the soil in a manner that was consistent with the product label and the manufacturer's instructions; and

-the soil is not a characteristic hazardous waste pursuant to Section 310 CMR 30.120 of the Massachusetts Hazardous Waste Regulations.

Pesticide-contaminated soil may be used as daily or intermediate cover or pre-capping contour material without prior MassDEP approval, as described in Section 4.0 of COMM-97-001, provided that:

-for purposes of Table 1 of COMM-97-001:
-the concentration of the chlorinated pesticides is included in the total VOC level;
-the concentration of the non-chlorinated pesticides is included in the total SVOC level; and
-the concentration of arsenic and lead-containing pesticides is included in the total arsenic and lead levels, respectively.
-the pesticides do not exceed the Upper Concentration Limits specified in Table 6 of 310 CMR 40.0996(7); and
-the soil is managed in accordance with the guidelines provided in COMM-97-001, including, but not limited to, as described in Section 5.2 of the policy, -the segregation and separate management of any "hot spots".

As part of a response action at a 21E disposal site, when must a site be registered as a large quantity hazardous waste generator? [November, 2002]

DEP must be notified that a site is a large quantity hazardous waste generator (LQG) if the site will generate 1,000 kg or more of non-acute hazardous waste or 1 kg of acute hazardous waste in any single month for longer than one year from the initial date of generation (i.e., this is not a concern for disposal sites where all contaminated soil is generated and removed in less than a one year period). (See related MCP Q&A, August 1999).

When is soil that is considered to contain a hazardous waste subject to EPA's RCRA Land Disposal Restrictions? [November, 2002]

EPA has stated that soil is generally subject to the RCRA Land Disposal Restrictions (LDR) program under Title 40, Part 268 of The Code of Federal Regulations, (40 CFR 268), including the LDR treatment standards, if the following conditions are met:

-the soil is a hazardous waste under RCRA; and
-the soil is generated.

Soil is considered generated for purposes of the LDR requirements when it is excavated and accumulated/placed in containers (drums, roll-offs, etc.), treated ex-situ, or removed from the Area of Contamination. In Massachusetts the Area of Contamination is equal to the disposal site, as defined under 310 CMR 40.0006.

It is important to note, EPA has stated that the LDR Treatment standards do not apply to in-situ soils, nor do they force soil to be excavated. If a contaminated soil is managed/re-graded within an area of contamination (equivalent to the MCP definition of disposal site), the soil would not be considered generated, and the LDR requirements do not apply, even if it is "removed from the land" within such an area - as long as excavated soils are not treated ex-situ.

Application of the LDR treatment standards to soil containing listed hazardous waste is provided in Table 1.

Table 1 Application of Land Disposal Treatment Standards To Soil Containing Listed Hazardous Waste

If LDRS:	And if LDRs	And If:	Then You:
Applied to the listed waste when it contaminated the soil	Apply to the listed waste now	____	Must comply with the LDRs
Did not apply to the listed waste when the waste contaminated the soil	Apply to the soil now	No contained-in determination has been made prior to the generation of the contaminated soil	Must comply with LDR treatment standards
Did not apply to the listed waste when it contaminated the soil	Apply to the listed waste now	The soil has been determined not to contain the listed hazardous waste prior to the soils first being generated	Do not need to comply with LDR treatment standards
Did not apply to the listed waste when it contaminated the soil	Do not apply to the listed waste now	____	Do not need to comply with the LDR treatment standards
1 Environmental Protection Agency's August 2001 guidance document, "Land Disposal Restrictions: Summary of Requirements" (EPA530-R-01-007). For additional information on the Federal Land Disposal Restrictions, consult the Environmental Protection Agency's, "Land Disposal Restrictions: Summary of Requirements" (EPA530-R-01-007).			

Soil is considered to be a hazardous waste (hazardous waste soil) under RCRA and 310 CMR 30.000, the Massachusetts Hazardous Waste Regulations, if, when excavated, it meets either of the following two conditions:

-the soil exhibits one or more of the characteristics of a hazardous waste pursuant to 310 CMR 30.120 [such as exhibiting a characteristic of toxicity under 310 CMR 30.125B (TCLP)]; or
-the soil contains hazardous constituents from a listed hazardous waste identified in 310 CMR 30.130 or Title 40, Chapter I, Part 261 (Identification and Listing of Hazardous Waste) of the Code of Federal Regulations. This is known as EPA's Contained-In Policy.

In the first case above, (that is, the soil is a characteristic hazardous waste), the soil ceases to be a hazardous waste when it is treated and no longer exhibits a characteristic of a hazardous waste under 310 CMR 30.120. However, the soil is still subject to the LDR treatment standards, unless the treatment is performed in-situ.

In the second case (that is, the soil contains a listed hazardous waste), the soil is no longer considered a hazardous waste when a site-specific decision concludes that the soil no longer "contains" hazardous constituents at concentrations that require it to be regulated as a hazardous waste. EPA reasserted in the November 30, 1998 final Hazardous Waste Identification Rule for Contaminated Media that under the contained-in policy authorized states have the authority to establish concentrations below which environmental media (such as soil) do not contain hazardous waste and therefore do not require management as a hazardous waste. This site-specific decision is known as a "contained-in determination".

In Massachusetts, soil that contains hazardous constituents derived from a listed hazardous waste is not considered to be a hazardous waste, if the following conditions are met:

-the concentrations of the hazardous constituents in the soil are below both the RCRA Universal Treatment Standards for soil under Title 40, Part 268 of the Code of Federal Regulations (40 CFR 268) and the MCP Method 1 S-1/GW-1 soil standards;
-the soil is appropriately characterized, including the identification and segregation of "hot spots";
-the concentrations are achieved through either removal or treatment and not dilution;
-the soil is not a characteristic hazardous waste, pursuant to 310 CMR 30.120;
-the activities are performed in accordance with the requirements of 310 CMR 40.0000;
-any excavated soil is managed in accordance with the requirements of 310 CMR 40.0030, Management Procedures for Remediation Wastes, including those of 310 CMR 40.0032(2) and 310 CMR 40.0032(3) and any other applicable laws and regulations; and
-the source of the hazardous constituents is a listed hazardous waste under 310 CMR 30.130 that Massachusetts is authorized for under RCRA by EPA.

At the present time, MADEP has received authorization to regulate most of the hazardous materials (constituents) commonly encountered at disposal sites, and, for most of these hazardous materials, the S-1/GW-1 standards are below RCRA Universal Treatment Standards. This means that soils with low-levels of many hazardous materials (i.e., less than S-1/GW-1 standards) need not be managed as a hazardous waste. However, as summarized in Table 1, the soil may still be subject to the RCRA Land Disposal Restrictions under Title 40, Part 268 of The Code of Federal Regulations, (40 CFR 268).

In Massachusetts, these "contained-in determinations" may be made by parties conducting work at a disposal site when the soil is managed as part of a response action, as long as such determinations are documented in the related response action submittal under the MCP (In the case of Limited Removal Actions, the contained-in determination must be maintained as part of the records required under 310 CMR 40.0318(7).). "Contained-in determinations" made for soil generated within Massachusetts do not limit the responsibility of generators to comply with the applicable requirements of other states, including the management of soil transported to those states from Massachusetts as a hazardous waste.

REMEDIAL ADDITIVES

The provision at 310 CMR 40.0046(3)(b) states that a written plan for the application of Remedial Additives near a sensitive receptor shall be submitted to the Department using "a form provided by the Department for such purpose prior to implementation." What form do I use to submit a written plan to apply Remedial Additives near a sensitive receptor? [June 2014, Reviewed November 2017]

Each of the eDEP transmittal forms used to submit plans for remedial actions has a box that must be checked to indicate the submission of a "Plan for the Application of Remedial Additives" near a sensitive receptor pursuant to 310 CMR 40.0046(3). By checking this box, you are using the form provided by the Department for submitting the written plan to apply additives near a sensitive receptor. Below is a list of where this check box appears on those forms that cover remedial action submittals:

BWSC105, Immediate Response Action Transmittal Form - Section B. Question 10.

BWSC106, Release Abatement Measure Transmittal Form - Section B. Question 9.

BWSC108, Comprehensive Response Action Transmittal Form – Section B. Question 24.

310 CMR 40.0420(9) states that written IRA plans are presumed approved 21 days after of the date the plan was received by MassDEP. Under 310 CMR 40.0046(3), approval to apply Remedial Additives in locations near sensitive receptors (near water supplies, surface waters, or schools, daycares and residences) is presumed after a period of 30 days. If I am submitting an IRA plan to remove oily soil that includes a proposal to apply additives to chemically oxidize VOCs in soil & groundwater as part of the project, do I have to wait 21 or 30 days to implement the plan? Can I do those portions of the work that do not involve additives after 21 days (assuming there is no letter from MassDEP denying the work)? [June 2014, Reviewed November 2017]

If you are submitting a single IRA Plan that includes the application of Remedial Additives as part of the scope of the work covered by the Plan, then you must wait 30 days from the date of submittal before assuming that the Plan is presumptively approved.

What information should be in the written plan described at 310 CMR 40.0046(3)(b) for the application of Remedial Additives near sensitive receptors? [June 2014, Reviewed November 2017]

A written plan proposing the use of Remedial Additives, whether as an Immediate Response Action, Release Abatement Measure or Comprehensive Response Action, must be submitted to the Department prior to the application of Remedial Additives. Such plan should contain the following information:

- a description and location of the sensitive receptor(s);
- the results of soil and/or groundwater analyses for samples collected prior to the application of Remedial Additives;
- the concentration, volume, and dosage calculation (chemical/soil oxidant demand) of Remedial Additives proposed;
- the frequency, duration, rate, depth and method of proposed remedial additive application(s);
- groundwater depth and calculated groundwater flow velocities;
- types of soil/bedrock present and depth to bedrock;
- mounding calculations given the proposed volumes of Remedial Additives and hydraulic characteristics of the aquifer;
- information on how hydraulic control will be maintained, if applicable;
- a discussion of the expected byproducts of the proposed Remedial Additives;
- a schematic depicting groundwater flow direction and any anticipated changes in groundwater flow direction during the application of Remedial additives, the proposed location(s) of Remedial Additive application, pre- and post-application soil and/or groundwater monitoring locations, and locations of buildings and subsurface utilities/preferential pathways; and
- a proposed post-application soil and/or groundwater monitoring plan.

Consistent with the MCP, an LSP may consider departures from the list above of Plan elements, if in their professional judgment, there is sufficient Technical Justification.

TIME PERIOD AND DEADLINE

For which submittals does a 7-day "grace period" apply to the associated deadline for the submittal in terms of being considered in compliance with such deadline? [November 2007, Revised May 2016]

The due dates for MCP submittals are specified in the provisions related to a given submittal. For example, the due date for a Tier Classification Submittal is specified in 310 CMR 40.0501(2). 310 CMR 40.0008 specifies the grace period that applies to the due date for various submittals.

A 7-day grace period from the actual due date is allowed for most submittals. In other words, the submittal is considered received on time if the document is received *within 7 calendar days* of the submittal due date specified in the MCP provision related to that submittal. If the specified submittal due date falls on a weekend, holiday or any other day MassDEP offices are closed, the due date runs to the end of the next business day and the 7-day grace period is calculated from that day. If the 7th day of the grace period falls on a weekend, holiday or any other day MassDEP offices are closed, the last day of the 7-day grace period is the next business day.

The following actions/submittals ARE NOT subject to this 7-day grace period:

- Notifications required by 310 CMR 40.0300, including Notification of Releases, Threats of Release and Imminent Hazards
- The date of MassDEP's receipt of a written request for approval of an IRA
- Submittals required by Interim Deadlines
- Submittals required by Notices of Noncompliance
- Any deadline in any MassDEP enforcement order, penalty assessment or other enforcement document.

These exceptions to the 7-day grace period are set forth in more detail in 310 CMR 40.0008(5).

SUBPART B: Organization & Responsibilities

ROLE OF THE LICENSED SITE PROFESSIONAL (LSP)

Does a Licensed Site Professional (LSP) whose only association with a site is managing Remediation Waste and signing the Bill of Lading become the "LSP-of-Record" for that site? [December 1993, Revised May 2016]

Yes. However, if that is the limit of that LSP's involvement with the site, and his/her employment terminates at that point, the LSP must notify MassDEP in writing within 21 days of such termination [see 310 CMR 40.0169(2)].

Am I required to retain an LSP to perform a due diligence or"21E contamination assessment" of a property which my bank has requested even though I have no knowledge of a problem or condition requiring notification under the MCP? [December 1993, Revised May 2016]

No. The MCP does not require that you retain an LSP to conduct such an assessment. However, just as some lending institutions require a "21E contamination assessment" of property as a condition of financing, they may also make it a condition that an LSP perform the assessment. MassDEP has no control over what a bank may require independent of M.G.L. c. 21E sec. 7 and the MCP.

However, if contamination is encountered above a reporting threshold during such an assessment, the MCP requires that the owner/operator or any person obligated to notify (as listed in 310 CMR 40.0331, “Who Shall Notify”), report the release to MassDEP, and a Licensed Site Professional be retained to oversee any necessary investigations and cleanup.

Can an LSP notify MassDEP of a release on behalf of his/her client? [September 1994, Revised May 2016]

Yes. An LSP may make oral notification for 2-Hour and 72-Hour releases on behalf of his his/her client. When notifying on behalf of a client, the LSP must supply his his/her client's name, address, and phone number at the time of notification. Written notification via the Release Notification Form (Form # BWSC-103) must be certified by a person required to notify (as listed in 310 CMR 40.0331, “Who Shall Notify”), unless the LSP receives written authorization from that person to certify the submittal in his or her place. A copy of the written authorization must be attached to the Release Notification Form..

TECHNICAL JUSTIFICATION

Can an LSP use "Technical Justification" to "waive" the applicability of Upper Concentration Limits at a site? [Volume 1 Number 2, December 1993-January 1994]

No. Technical Justification may be provided to forego certain investigatory requirements, but it can never be used to eliminate or modify a performance standard, such as Upper Concentration Limits [see 310 CMR 40.0193(1)].

RESPONSE ACTION PERFORMANCE STANDARDS (RAPS)

May "innovative technologies" be applied at a disposal site when conducting assessment and remediation under the MCP? [April - May 1994, Revised May 2016]

Yes. MassDEP encourages the use of innovative assessment approaches that enhance the accuracy and cost-effectiveness of assessments, and remedial technologies that recycle, detoxify or destroy oil and/or

hazardous material, reduce energy and materials consumption and environmental impacts, and minimize the need for long-term management of contaminated media. The MCP's Response Action Performance Standard (RAPS) requires "use of accurate and up-to-date methods, standards and practices, equipment and technologies" which can include innovative assessment methods and remediation technologies, provided they are scientifically defensible and adequately documented in response action submittals [see 40.0191 and 310 CMR 40.0017(2)(c)].

RESPONSIBILITIES OF "OTHER PERSONS"

Can an Other Person (i.e., a person undertaking response actions who is not a PRP or an RP) discontinue response actions under the MCP before a Permanent or Temporary Solution is achieved? [July 1995, Revised May 2016]

Yes. Under 310 CMR 40.0170(10), an Other Person may discontinue response actions at any time before a Permanent or Temporary Solution is achieved, provided the Other Person (i) notifies the Department of his or her intent to discontinue response actions, (ii) submits a Status Report to the Department, and (iii) does not leave the site worse off than it otherwise would have been had such response actions not been performed. An Other Person who meets these requirements will not be subject to sanctions by the Department for any deadlines or time periods which would subsequently run. In the event an Other Person is conducting response actions pursuant to a Tier I or Tier II Classification, the Department will stop assessing an Other Person annual compliance assurance fees upon the receipt of the required notice and Status Report. Payment of such fees is required for the billable year in which the notice and Status Report is received if response actions have been performed during that year.

DOWNGRADIENT PROPERTY STATUS (DPS)

Can I assert Downgradient Property Status (DPS) for soil contamination that resulted from hazardous material migration in surface water? [Volume 2 Number 1, July 1995, Revised]

Yes, DPS applies to oil and/or hazardous material which is or was located on one or more upgradient properties that has come to be located at the downgradient property as a result of migration of the oil and/or hazardous material in or on groundwater, AND, to oil and/or hazardous material that has migrated in or on surface water where an upgradient source has been identified. In the case of surface water, the source of contaminant migration must be identified on the upgradient property or properties [see 310 CMR 40.0183(2)].

According to my Licensed Site Professional (LSP), the source of contamination on my property was a tank leak on a neighboring upgradient property. The owner of the property that is the source of the contamination has submitted a Tier classification for the disposal site that extends onto my property. Am I exempt from the $1000 DPS fee on the basis of my property being part of an existing classified site? [Volume 2 Number 1, July 1995]

Yes. However, the requirements of 310 CMR 40.0183 must be met for documenting the basis for asserting that your property is part of the classified disposal site. Specifically, it must be documented that there is a technical basis for the conclusion that the contamination is from the upgradient property and the disposal site boundaries, to the extent known, must be delineated.

If a property owner with DPS sells the property, is the DPS automatically transferred to the buyer of the property? [Reviewed May 2016]

No, DPS runs with the person and not with the property. If the new owner of the property wishes to obtain DPS, and the former owner agrees, the new owner may acquire DPS pursuant to 310 CMR 40.0187, which provides for the modification of an existing DPS Submittal. The effect of this modification is to add the new owner as a party who has DPS. The former owner also retains DPS, which is why this process is

considered a modification rather than a transfer. A new owner who acquires DPS by such a modification must comply with 310 CMR 40.0185.

In cases where the former owner cannot be located or will not agree to such a modification, the new owner may file a new DPS Submittal to MassDEP.

What is the relationship between the DPS provisions of the MCP and the liability relief for downgradient properties in Section 5D of M.G.L. c. 21E? [November 2007]

The MCP DPS provisions provide the procedures and criteria to obtain and maintain DPS as a regulatory status. This status has the effect of suspending the assessment of Tier I/II annual compliance fees and the requirements to conduct Tier Classification and Comprehensive Response Actions for a person who has and maintains such status. M.G.L. c. 21E Section 5D provides certain downgradient property owners with relief from liability to the Commonwealth or any other persons for contribution, response costs or property damage related to oil or hazardous material releases that have migrated onto their property from an upgradient source. The MCP and the statutory DPS provisions are closely aligned, but not identical. Parties are advised to carefully read all the DPS regulatory and statutory provisions.

A person filing a DPS Submittal must certify that "no act of such person has contributed to the release ... or caused such release to become worse than it otherwise would have been" (see 310 CMR 40.0183(2)(c)). What are examples of actions or activities by a downgradient property owner or operator that may contribute to or worsen a release originating from an upgradient property? [November 2007]

Examples of acts that may contribute to a release observed at a downgradient property include (i) disposal of OHM by the downgradient property owner onto the upgradient property; and (ii) discharge of OHM into a sewer or drain that extends onto the upgradient property, to the extent that such activities result in a release of OHM on the upgradient property.

Examples of acts that may worsen a release observed on a downgradient property include (i) installation and operation of irrigation wells, subsurface drains, or stormwater infiltration systems on the downgradient property that alter contaminant plume movement, exposures, exposure point concentrations, and/or remedial feasibility; and (ii) grading or building construction activities that create new contaminant migration or exposure pathways.

A person filing a DPS Submittal must certify that "such person is not, and was not at any time, affiliated with any other person (i) who owned or operated the property from which the release ... originated, or caused such release, and (ii) who is potentially liable under M.G.L. c. 21E for the disposal site through any direct or indirect contractual, corporate or financial relationship other than (1) that established by any instrument creating such person's interest in the downgradient property; or (2) that established by an instrument wholly unrelated to the disposal site and which would not otherwise render such person potentially liable as a result of the relationship" (see 310 CMR 40.0183(2)(d)). Please clarify the exceptions to this "affiliation" provision. [November 2007]

Two important exceptions to the "affiliation" provision are as follows. First, a person is not disqualified from asserting DPS simply as a result of acquiring an interest in the downgradient property from the owner of the upgradient property. In other words, if the upgradient and downgradient properties have a common owner, and another person acquires the downgradient property from the common owner, this other person may still qualify for DPS. Second, a person is not disqualified from DPS because of a contractual, corporate or financial relationship with the owner of the upgradient property created by an instrument (partnership agreement, trust, mortgage) if that instrument is completely unrelated to the disposal site.

A DPS Opinion shall be based on investigative and assessment actions of sufficient scope and level of effort to conclude that OHM migrated onto a downgradient property from an upgradient property (see 310 CMR 40.0183(4)). What level of effort is necessary to demonstrate "migration" of OHM onto a downgradient property? [November 2007]

The necessary level of effort is property-specific, and is primarily a function of site and hydrogeologic features and complexities.

For groundwater situations, a lower level of effort will generally suffice for a site with the following characteristics:
The OHM of interest have never been used on the downgradient property;

• At least 3 (triangulated) groundwater monitoring wells have provided clear evidence of groundwater flow direction toward the downgradient property, which is unlikely to vary with seasonal or tidal influences;
• The hydraulic gradient is greater than 0.003 feet/feet;
• The groundwater table elevation is below the invert elevation of subsurface utilities and/or structures; and
Testing of at least 3 (triangulated) groundwater monitoring wells in the same geologic unit demonstrate a clear concentration gradient for the OHM of interest, with the highest levels at or near the upgradient property line.

While it is possible to successfully demonstrate DPS for properties without one or more of the characteristics listed above, such cases will necessarily require more effort, discussion, and rationale, and the development and presentation of an adequate Conceptual Site Model.

On the other hand, a higher level of effort is required when significant concentrations of the OHM of interest is present in the vadose zone on the downgradient property, since this may be indicative of a possible source area on the downgradient property. This possibility needs to be investigated and ruled out to support a DPS Submittal.
Ultimately, the onus is on the owner or operator of the downgradient property and the LSP to "make the case" for DPS. At some properties, it may simply not be possible to support such a finding, given site features (e.g., flat, paved industrial park with numerous subsurface conduits beneath the groundwater table), an inability to establish groundwater flow direction (due to access or building issues), and/or history of OHM use. While these confounding conditions for supporting DPS are unfortunate, they do not justify an unsupported submittal.

To maintain DPS, activities on the downgradient property that could prevent or impede the implementation of reasonably likely response actions must be avoided (310 CMR 40.0185(1)(b) & (f)). How does this affect the development potential of downgradient properties? [November 2007]

This requirement does not prevent development of the downgradient property, and in most cases development activities may occur on the downgradient property in a manner that will not conflict with this requirement or exacerbate the plume. However, it is imperative that this requirement be considered when planning development activities on the downgradient property, and modifications to such activities may be necessary. In cases where a proposed structure could prevent or impede future response actions, it is possible to conduct a focused assessment and remedial program within the footprint of the proposed structure, in accordance with the provisions of 310 CMR 40.0442(3).

Ideally, development plans should be coordinated between the owners and operators of the downgradient property and person(s) conducting response actions at the upgradient disposal site source property.

Does overland flow constitute surface water for purposes of DPS eligibility? [November 2007]

No, DPS applicability does not extend to overland flow. The overland flow pathway is different from the groundwater or streamflow migration pathways that are clearly covered by the DPS provisions. With contaminant migration through groundwater or streamflow, sampling data can demonstrate contaminant migration from an upgradient location or locations. With overland flow, a distinct migration pathway is often not evident or traceable.

ADEQUATELY REGULATED

Are all response actions conducted at CERCLA sites deemed to be adequately regulated under the MCP? [November, 2001]

No. The adequately regulated provisions, which are intended to minimize potentially duplicative MCP requirements at disposal sites regulated by the Environmental Protection Agency (EPA) under the federal Superfund removal program, and are found at Section 310 CMR 40.0111, only apply in certain circumstances. Generally, these provisions only apply when MassDEP has reviewed a Record of Decision (ROD) or other EPA remedial action decision, and concurs or has no comment; or when EPA has modified a proposed remedial action to integrate MassDEP's comments.

Conversely, if MassDEP disagrees with an EPA response action, then the adequately regulated provisions would not limit the applicability of the MCP to that site. Also, as indicated at 310 CMR 40.0111(2), the MCP does apply to a response action not subject to CERCLA.

Any response action at a Superfund site that is not undertaken pursuant to a ROD or other EPA remedial decision, even if the response action is taken to address Superfund site-related hazardous materials, would not be deemed to be adequately regulated, and so would be subject to the MCP.

MassDEP also considers remedial actions to address new releases, which are conducted as part of an ongoing CERCLA remedial action, to be adequately regulated. However, DEP would not consider new releases to be adequately regulated that occur or are discovered at a National Priorities List site that are not and will not be included in the CERCLA remedial action under EPA's ROD or in other EPA remedial decisions. Therefore, response actions to address such releases would be subject to c. 21E and the MCP.

In addition, an adequately regulated designation does not obviate the need to comply with the MCP 2-hour and 72-hour notification requirements.

For example, a rupture of a hydraulic line occurs on a backhoe during soil excavation and releases hydraulic oil at the site. This release must be reported to DEP in accordance with 21E and the MCP. If the mitigation/cleanup of the spill is included in work overseen by EPA pursuant to a ROD with which MassDEP has concurred, MassDEP may deem the clean up to be adequately regulated.

For more information on this topic, see 310 CMR 40.0110 of the MCP and the MassDEP's Adequately Regulated Fact Sheet.

MONITORING WELLS

Is there a state requirement to use a registered well driller for the installation and decommissioning of monitoring wells? [November 2002]

Under the provisions of M.G.L. c. 21, ss.8-16 and 310 CMR 46.00 Water Well Diggers and Drillers Registration, monitoring wells must be drilled, installed, and decommissioned by a well driller registered in the Commonwealth of Massachusetts. The registered well driller must file a well completion report for both the installation and abandonment of monitoring wells.

This requirement does not apply to (a) soil gas sampling probes, or (b) temporary groundwater wells, in which the installation tool is left in the ground for less than 48 hours. Further excluded from this requirement are wells used on a temporary basis for the purpose of dewatering excavations and stabilizing hillsides or earth embankments.

Additional information on DEP's Well Drillers Program may be obtained here . DEP also provides guidance on the design, installation, and abandonment of monitoring wells in Section 4.0 "Piezometer's, Observation Wells, and Monitoring Wells" of the DEP's guidance document: Standard References for Monitoring Wells WSC-310-91, April 1991.

SUBPART C: Notification

NOTIFICATION

Do I have to make a 72-hour notification for conditions listed at 310 CMR 40.0313(4)(f) related to the potential for vapor intrusion to a school, daycare or occupied residence for a site that was already being addressed under the MCP before these notification requirements became effective (i.e., before June 20, 2014)? [June 2014**, Reviewed November 2017**]

Prior to the achievement of a Permanent Solution, if there is a 72-hour notification condition at the disposal site for which prior notification has not been made, including the new 72-hour Substantial Release Migration (SRM) conditions related to vapor intrusion at 310 CMR 40.0313(4)(f), then notification of that condition is required.

If, at the time of notification, no response actions have been taken to evaluate the potential for vapor intrusion related to the condition, then an Immediate Response Action that at a minimum includes assessment of whether the pathway is complete would be required.

If response actions taken prior to the June 20, 2014 effective date of the provisions at 310 CMR 40.0313(4)(f) have determined that the pathway is not complete, or have appropriately mitigated the pathway, then a 72-hour notification must still be made for conditions listed at 310 CMR 40.0313(4)(f) that remain a the site ***unless*** prior notification of an SRM condition for a potential vapor intrusion into a school or residence was made (pursuant to the former MCP provision at 310 CMR 40.0313(5)), and response actions in compliance with the MCP to address the pathway are underway or completed. Where such prior notification was made and the criteria of the notification exemption at 310 CMR 40.0317(16)(a) through (c) are met, then no new notification of this condition is required (i.e., the prior SRM notification was related to the same vapor intrusion exposure potential).

During the process of providing verbal notification to MassDEP of the existence of the 72-hour SRM conditions at 310 CMR 40.0313(4)(f), MassDEP will ascertain in its discussion with the LSP the status of work to date to address the potential vapor intrusion pathway. As part of transitioning existing sites under the 2014 MCP, initiation of an Immediate Response Action (IRA) will not be required where response actions to address the potential vapor intrusion pathway are already completed or underway (i.e., any ongoing response actions can continue to be addressed as part of the assessment and remedial work that is already underway as a pre-existing/open IRA, Comprehensive Response Action or Release Abatement Measure). MassDEP will record that the notification has been made in such cases, and that an IRA is not required.

The 72-hour notification conditions listed at 310 CMR 40.0313(4)(f)1.and 2. apply to the presence of volatile organic compounds near school, daycare or child care centers, or occupied residential dwellings. Are volatile petroleum fractions considered volatile organic compounds? [June 2014, Reviewed November 2017]

The new definition of Volatile Organic Compounds at 310 CMR 40.0006 includes “organic compounds with boiling points equal to or less than 218°C that are targeted analytes in EPA Method 8260B and other purgeable organic methods specified in the Department’s Compendium of Analytical Methods.” This would include the Volatile Petroleum Hydrocarbon fractions C_5 through C_8 Aliphatic Hydrocarbons, C_9 through C_{12} Aliphatic Hydrocarbons, and C_9 through C_{10} Aromatic Hydrocarbons.

For notification purposes, when does the "clock start to tick" for a lender that forecloses on a property and has knowledge of a 120-Day release condition? [Special Edition 3, September 1994]

For notification purposes, the "clock starts to tick" on the date the lender acquires ownership or possession of the property. Unless it fits the definition of a person who has to notify [see 310 CMR

40.0331(1)], the lender is under no obligation under the MCP to notify DEP of a release of which it has knowledge if it has not acquired ownership or possession of the property. Accordingly, when a release has been identified before foreclosure, the lender would have 120 days from the date it acquires ownership or possession, not from the date it gained knowledge of the release, to notify DEP.

Is a release to pavement considered a release to the environment that requires notification? [Special Edition 3, September 1994]

Yes. If the release is equal to or greater than the Reportable Quantity (RQ), it requires a 2-Hour notification and an IRA.

Do new releases/knowledge of new releases at existing sites require notification to the Department? [November 1993 & June 1994, Revised November 2017]

Yes, unless the new release/condition is consistent with site conditions previously reported to MassDEP, and for which response actions are being conducted in compliance with MCP requirements and timeframes. For example, the discovery of additional plume areas of a previously reported petroleum release at a gasoline station would not require repeated notifications to the Department every time a new monitoring well revealed groundwater concentrations in excess of a Reportable Concentration of BTEX compounds. However, the (new) discovery of cyanide or coal-tar wastes at the site would require notification if a Reportable Concentration were met or exceeded. Knowledge of a new "2 hour" release/threat of release condition always requires notification to the Department, even at existing sites. See 310 CMR 40.0317(16).

What are the notification requirements for a release where the detection limit for the analytical method I am using is higher that the Reportable Concentration (RC) in the Massachusetts Oil and Hazardous Material List (MOHML)? [Volume 1 Number 4, April-May 1994]

The MCP does not impose specific sampling or analytical protocols for site assessments which may result in notification to MassDEP. LSPs/Consultants should use up-to-date analytical methods which are scientifically valid, available and generally accepted by the profession [see 310 CMR 40.0017(1) and 40.0191(2)(b)]. In a situation where the Method Detection Limit (MDL) for a contaminant is higher than the RCs, the PRP would have to notify MassDEP only if he/she obtained analytical results showing contamination levels at or above the detection limit for the chosen method. DEP is reevaluating the RCs to determine whether some are below Practical Quantitation Limits (PQLs) as part of the MCP revision process.

However, if the detection limit for a specific sample is elevated above the MDL due to contaminant interference and this prevents direct comparison of the analytical results to RCs, then you should assume that these results exceed RCs unless resampling demonstrates otherwise. Additionally, while the MCP does not mandate the use of specific analytical protocols, a PRP could be violating the MCP by his/her "willful, knowing or negligent avoidance of learning about the fact or facts in question" if the PRP purposely selects an analytical method to avoid encountering a contaminant that was likely to be present at a site in a concentration exceeding RCs and below the MDL [see definition of "Knowledge" in 310 CMR 40.0006].

What process should be followed once a "2-Hour" or "72- Hour" release notification is made to DEP at Tier Classified sites, including those with an approved waiver? [Special Edition 2, June 1994, Revised September 2011]

MassDEP will assign a new Release Tracking Number (RTN) to the new 2- or 72- Hour release to track the required Immediate Response Action. Releases which occur at Tier Classified sites should be closed out with an RAO within one year, or the new RTN must be linked to the existing RTN using a Tier Classification submittal or an Immediate Response Action Completion Statement within one year. Otherwise, the newly assigned RTN will be erroneously listed as a default site. When a new release

occurs at a Tier Classified site, the PRP should consider whether re-scoring is necessary since a new score may result in a new classification.

Does a PRP have to re-notify if contaminant levels at or above a Reportable Concentration are found through an assessment performed after the filing of a Waiver Completion Statement (a.k.a., Remedial Response Action Completion Statement)? [Special Edition 2, September 1994, Clarified]

No. Re-notification for a 72-Hour or 120-Day reporting condition is not required at a site for which a Waiver Completion Statement has been submitted unless the observed conditions would negate the conclusions on which the Waiver Completion Statement is based or if changes in site activities or exposures would require notification [see 310 CMR 40.0317(17)(e)].

I am a PRP for a transition site where an Underground Storage Tank (UST) was removed some time ago. Further assessment at the same location indicates a soil headspace reading greater than 100 ppm by volume volatile organic compounds. Does this condition trigger a 72-Hour notification requirement under 310 CMR 40.0313(2)? [Volume 1 Number 5, June-July 1994, Revised]

No. The 100 ppm threshold is intended to address soil and/or groundwater contamination that may be encountered at the time of UST closure. The Massachusetts regulations for tanks and containers [Board of Fire Prevention Regulations, 527 CMR 9.07(I)] and the Federal UST Regulations [40 CFR 280.72(a)] each require the owner/operator to measure for the presence of an oil and/or hazardous material release to the environment when removing an UST. While the 100 ppm threshold does not apply to the scenario above, the PRP should ascertain whether any of the volatile organic constituents, i.e., benzene, toluene, etc., exceeds an applicable Reportable Concentration (RC). If any contaminant meets or exceeds an RC, the PRP must notify DEP unless the contamination can be addressed within the bounds of a Limited Removal Action (LRA)[see 310 CMR 40.0311 through 40.0318].

Under what circumstances would the removal of an Underground Storage Tank (UST) require DEP notification and approval? [Volume 1 Number 5, June-July 1994, Clarified]

Generally, UST removals that do not involve contaminated media, i.e., routine maintenance and upgrading of USTs at a property, do not require notice to or approval from DEP. Routine UST removals are regulated by the Department of Fire Services (978-567-3300) which requires that the property owner must have a permit for the tank removal. However, once a tank removal involves contaminated soil and/or groundwater, notification may be triggered and subsequent remedial actions could involve an Immediate Response Action (IRA, for a 2-Hour or 72-Hour release notification), a Release Abatement Measure (RAM), or a Limited Removal Action (LRA) depending on the nature and extent of the contamination [see 310 CMR 40.0311 and 40.0313].

An IRA may include removal of the tank which is the source of the contamination and removal of surrounding soil as well as initiation of groundwater treatment, along with other response actions. IRAs involving remedial actions require DEP approval and the scope of the IRA will depend on the actions that the LSP proposes to address the contamination. Where a 2-Hour or 72-Hour notification threshold is not triggered, an LRA [see 310 CMR 40.0318] or RAM [see 310 CMR 40.0440] may be appropriate for removing a leaking UST. (Caveat: If a tight tank is removed from a contaminated area, that removal would be considered a response action under the MCP which would necessitate a plan (e.g., a RAM Plan and applicable DEP approvals to address the remediation of contaminated soil and/or groundwater in the area surrounding the UST, unless the contamination could be addressed within the bounds of an LRA).

What distance is considered "adjacent" to an UST, for the purpose of the 72-Hour notification threshold for tank closures [see 310 CMR 40.0313(2)]? [Special Edition 3, September 1994, Revised]

In 1995, 310 CMR 40.0313(2) was amended to define "adjacent" as a release of oil and hazardous material within 10 feet of an exterior wall of the UST. Notification to MassDEP is required within 72 hours if contamination is found during a closure assessment required by the Department of Fire Services or if contamination is found in connection with the removal or closure of a UST (see MGL c. 148 or 527 CMR 9.00). If, while performing a UST removal or closure, a release adjacent to the UST is found to have a sample headspace equal to or greater than 100 ppm by volume of total organic vapors "as benzene" AND the sample was taken at a depth greater than two feet below ground surface, notification to the DEP is required within 72 hours.

Is a hotel considered a "residential structure" within the meaning of 310 CMR 40.0313(4) and therefore subject to the 72-Hour notification requirement if volatile organic compound concentrations are exceeded? [Volume 1 Number 5, June-July 1994]

No. Hotels should be considered commercial structures, as opposed to residential structures, for notification purposes under the MCP. The focus on volatile organic compound levels near occupied residential structures or school buildings (where the groundwater is less than 15 feet below the surface) is intended to address situations where people are potentially exposed to contaminants which have volatilized from the groundwater to indoor air. The reason for the distinction is that there is greater potential for the same individuals to be exposed to VOCs in indoor air over an extended period of time in school or residential settings than exists in the case of hotel guests. Workers in a hotel should be considered in the same manner as workers in other commercial establishments.

Does the Reportable Quantity (RQ) of 5 pounds in the Massachusetts Oil and Hazardous Materials List (MOHML) for unspecified oil apply to transformer fluids? [Volume 2 Number 1, July 1995]

No. The MOHML specifies an RQ for transformer fluids of 10 gallons. Additionally, 310 CMR 40.0352(5) states that the RQ is 10 gallons if a material contains < 500 ppm PCBs. Transformer fluid of unknown PCB content is presumed to contain less than 500 ppm. If the concentration of PCBs in the transformer fluid is known or likely to be 500 ppm or greater, then the RQ is 1 gallon.

I have a small amount of petroleum (oil) contaminated soil in my yard resulting from some work I did on my car. Do I have to notify DEP? [Volume 2 Number 1, July 1995]

Generally, the amount of contamination resulting from such activities would not require notification. Under 310 CMR 40.0315(2), contamination at or above the applicable Reportable Concentration (RC) must be reported to MassDEP within 120 days "where the total contiguous volume of oil contaminated soil is equal to or greater than two cubic yards." In most instances, the volume of soil contaminated by incidental spills during routine car maintenance would be less than 2 cubic yards.

What are the notification requirements and timing considerations when an "Imminent Hazard" is discovered? [Special Edition 3, September 1994]

Imminent Hazards have a 2-Hour notification requirement [see 310 CMR 40.0311(7)]. In accordance with the MCP, the notification clock starts when a PRP first has knowledge of the condition. Additionally, the Board of Registration of Hazardous Waste Site Cleanup Professionals Regulations provide that when an LSP identifies an Imminent Hazard at a site where he or she is providing professional services, he/she must immediately advise the client of the need to notify MassDEP. If the client does not provide notice, the LSP must notify MassDEP no later than 24 hours after identification of the Imminent Hazard unless the client has provided such notice [see 309 CMR 4.03].

What responsibilities does an LSP have for making notification to MassDEP of an Imminent Hazard in the case where she/he informs the client of the Imminent Hazard condition and is immediately fired? [Special Edition 3, September 1994]

According to an advisory ruling issued by the LSP Board to Jeff Hardin, President, LSP Association, the LSP regulations require the LSP to notify MassDEP even if he/she has been fired by the client. A complete copy of this ruling may be obtained by calling the LSP Board at (617) 556-1091.

For notification purposes, are measurements always horizontal (e.g., 500 foot radius from a private well)? [Special Edition 3, September 1994]

For notification purposes, measurements are horizontal from the specified point and include any area beneath that measurement.

For 2-Hour and 72-Hour releases, can a fax replace an oral notification? [Special Edition 3, September 1994, Revised]

No. Notification to DEP for 2-Hour and 72-Hour releases must be made orally to DEP. Written notification via the Release Notification Form (Form # BWSC-103) must follow within 60 days of oral notification. The Release Notification Form must have the original signatures, and therefore, a fax copy is not acceptable.

With respect to the 72-Hour notification trigger for volatile organic compounds (VOCs) in groundwater within 30 feet of a school or residence [see 310 CMR 40.0313(4)], do I measure 30 feet from the school building or from the school property boundary? [Special Edition 3, September 1994]

The 30 foot distance is measured from the school building, not the school property boundary.

When using a headspace screening method to determine whether or not the 100 ppm by volume of total organic vapors "as benzene" in a soil or groundwater sample has been tripped [see 310 CMR 40.0313(2)], do I take the measurement of "greater than two feet below ground surface" from the top of the pavement or the top of the soil? [Special Edition 3, September 1994, Revised]

The measurement is taken from the top of the soil, unless the pavement is flush with the ground level, in which case you measure from the top of the pavement.

What are the notification requirements for subsurface LNAPL which is less than 1/2 inch in thickness? [September 1994, Revised November 2017]

In these situations, it is necessary to determine (i) if the LNAPL is volatile and (ii) if the LNAPL is or is likely present within 30 feet of a Residential Dwelling, School, Daycare or Child Care Center. If BOTH of these conditions exist, then LNAPL equal to or greater than 1/8 inch would require notification to MassDEP within 72 hours.

If BOTH of these conditions are not met, then LNAPL equal to or greater than 1/8 inch (but less than ½ inch) would require notification to MassDEP within 120 days.

While there are no specific notification thresholds for less than 1/8 inch of LNAPL, the presence of any amount of visible subsurface LNAPL at a disposal site would dictate a need to consider whether additional investigations are necessary to determine whether any other notification obligations may exist, including for a Condition of Substantial Release Migration or for exceeding a Reportable Concentration in soil or groundwater.

When pulling an underground storage tank (UST), do I have to measure for contamination (i.e., apply the 100 ppm headspace threshold)? [Special Edition 3, September 1994, Revised]

Yes. The 100 ppm threshold is intended to be applied at the time of an UST closure. The owner/operator is required, upon removal of an UST, to measure for the presence of a release of oil or hazardous material (OHM) to the environment where the contamination is most likely to be present on the site [see

527 CMR 9.07(l)(4) of the Massachusetts Tanks and Containers Regulations, and 40 CFR 280.72(a) of the Federal UST Regulations]. In the event that contamination is found, the Massachusetts Tanks and Containers Regulations require notification to the local fire department and to MassDEP's Bureau of Waste Site Cleanup (BWSC); the Federal UST Regulations require notification to "the implementing agency." Both regulations are silent on the definition of "contamination" and how to measure for it. The MCP defines contamination associated with tank removals as the measurement of greater than or equal to 100 ppm using a headspace screening method [see 310 CMR 40.0313(2)]. (See "Underground Storage Tank Closure Assessment Manual, WSC-402-96, April 1996 Year One" MCP revisions.).

What if 100 ppm "as benzene" [see 310 CMR 40.0313(2)] is not benzene after all, do I still have to report under a 72-Hour reporting requirement? When using a photoionization detector at a tank removal, can I use another compound to calibrate my screening instrument or do I have to use benzene? [Special Edition 3, September 1994, Revised]

Yes, notification is still required within 72 hours. The requirement for notification upon measurement of OHM "as benzene" refers to the method used to calibrate field instrumentation [e.g., photoionization detector (PID) or flame ionization detector (FID)], which are commonly utilized for screening for the presence of VOCs, to read in ppm. The reference to benzene in this section is not specific to the identification or quantification of the benzene compound. When screening soil adjacent to a tank removal, the instrumentation should be calibrated employing a method which achieves a "benzene response" standard. Typically the actual calibration gas used is isobutylene, which mimics a benzene response. Any other gas that acts similarly may be used to calibrate screening instruments for measuring the presence of VOCs.

In the absence of analytical data, how should I document the remediation of a sudden spill to pavement in an RAO, where the release was confined to the pavement (i.e., the release did not reach soil, groundwater, or surface water)? [Special Edition 3, September 1994]

It is possible to support an RAO demonstrating attainment of applicable cleanup levels without laboratory data. In this case, you may have other "data", such as visual observations and firsthand knowledge of the nature and extent of the release. A cleanup that results in the removal of the spilled OHM from the pavement may be considered to have achieved "background" and a Class A-1 RAO Statement may be filed. There is no need to indicate on the RAO Form which risk characterization method or soil or groundwater standards were used because this information is not applicable [see 310 CMR 40.0901(3)]. However, the LSP must attach sufficient information (i.e., a description of remedial actions and visual observations) to support his/her finding that background was achieved. It is important to note that this "no analytical data" scenario is only appropriate for simple releases where you are confident that the release has been completely contained and cleaned up.

What is required if I observe a sheen of oil on the groundwater during a tank excavation? [Special Edition 3, September 1994, Revised November 2017]

There is no specific reporting trigger for a sheen on groundwater in a subsurface excavation. Notification is required within 72 hours, however, if (i) LNAPL is observed at a thickness of greater than or equal to 1/2 inch on the groundwater [see 310 CMR 40.0313(1)], or (ii) volatile LNAPL is observed greater than or equal to 1/8 inch within 30 feet of a Residential Dwelling, School, Daycare or Child Care Center [see 310 CMR 40.0313(4)(f)]. If the LNAPL is less than 1/8 inch thick, samples should be obtained to determine if any constituents present trigger any notification thresholds listed in 310 CMR 40.0000. Any exceedances of RCs would require reporting within 120 days [see 310 CMR 40.0315(1)].

What notification to MassDEP would be required for buried drums and old underground storage tanks? [Special Edition 3, September 1994]

Notification of a release would not be required upon the discovery of an old UST unless contamination was discovered. Notification of a threat of release from the UST would not be required unless it is determined that the structural integrity of the tank is compromised to the point where it poses a threat of

release of OHM which would be at or above the RQ [see 310 CMR 40.0312]. The discovery of buried drums would require notification pursuant to 310 CMR 40.0312 if knowledge is obtained that OHM is contained in the drum and it is likely that a release greater than or equal to an RQ is about to occur. Drums are not designed structurally for burial (as are underground storage tanks) and thus pose a higher threat of release during removal. Notification should be made whenever a reasonable suspicion exists that the drums could contain quantities of OHM greater than or equal to the RQ and a release is likely to occur.

Would the recurrence of LNAPL greater than ½-inch trigger a new 72-hour release notification at a disposal site where an IRA was previously completed to remove LNAPL?[October 2004, Revised November 2017]

This would NOT be a new notification condition if: 1) this is the same LNAPL as previously addressed at the site, and 2) exposures/risks associated with this LNAPL have not changed. This may require a new 72 hour notification under the provisions of 310 CMR 40.0313(4)(f) if volatile LNAPL is present at a thickness of equal to or greater than 1/8 inch, if this specific condition was not previously reported.

The standard of proof in the MCP for decisions of this nature is "more likely than not". The reporting exemption at 310 CMR 40.0317(16) for 72-hour and 120-day release conditions does not require notification when a response action for that release was previously undertaken in compliance with the MCP and the OHM observed at the site is consistent with the nature, types and quantities of OHM for which the previous release notification was made. All pertinent information on the releases, including past data, the efficacy of earlier remedial measures, the location of potential sources, and groundwater flow and preferential pathways, should be evaluated within 72-hours of observing the LNAPL to determine whether a new notification requirement exists. Where there is uncertainty as to whether the standard for notification has been met, parties should consider notifying MassDEP within the specified timeframe, knowing that they may subsequently retract the notification within 60 days (310 CMR 40.0335).

Note that it is not necessary to eliminate a 2/72-hour reporting condition to close out an IRA (see 310 CMR 40.0427(1)), but only to eliminate Imminent Hazards, stabilize site conditions, and address CEP conditions.

If a URAM Notification Form (BWSC119) is submitted to remove contaminated soil during a utility repair, does a standard RNF (Form BWSC103) also need to be submitted? [October 2004]
An RNF must be submitted ONLY in those situations where the person conducting the URAM is also a party listed at 310 CMR 40.0331.

In accordance with 310 CMR 40.0462(2), "Persons providing oral notification to MassDEP pursuant to 310 CMR 40.0462(1) shall submit written confirmation of such notice to DEP within seven days, using a transmittal form established by MassDEP for such purposes. Such confirmation shall include submittal of an RNF as described in 310 CMR 40.0371, in cases where the person conducting the Utility-related Abatement Measure is also a person required to notify pursuant to the provisions of 310 CMR 40.0331." Although this section references oral notification procedures, the criteria on when an RNF must be submitted is germane to all URAM situations.

Does the submittal of a URAM notification without an RNF result in the assignment of an RTN to the location by MassDEP if levels above the Reportable Concentration may still exist in adjacent soil or groundwater outside a URAM project area? [October 2004]

In cases where the person conducting the URAM is not a person listed at 40.0331, and where an RNF is not submitted to MassDEP, the agency may associate the URAM condition with an existing disposal site (such as an adjacent gasoline service station), or seek to identify the source of the contamination and ensure that responsible parties undertake needed MCP response actions. The issuance of a RTN may or may not occur in such a situation. In any event, the party conducting the URAM would not be expected to conduct needed additional response actions, unless they are a party with statutory liability to do so in accordance with MGL c.21 E s.5A.

Are there situations where notification is not required, but response actions must still be conducted? [October 2004]

Yes. Where notification is not required, a response action would still be required "outside the MCP process" if the conditions constitute a Release as that term is defined in MGL Chapter 21 E and pose significant risk to health, safety, public welfare or the environment (see 310 CMR 40.0370(1)). For example, a spill less than the Reportable Quantity that posed a significant risk must be cleaned up. Unless MassDEP specifies otherwise (through a Notice of Responsibility), those undertaking response actions where no notification is required are not subject to the submittal requirements, approvals, or fees specified in the MCP and fee regulations (310 CMR 40.0370(2)).

When does the MCP require parties to notify DEP of a release to the interior of a building? [October 2004]

In accordance with the provisions of 310 CMR 40.0317(19), releases to the interior of a building, including releases from the rupture or overfill of a free-standing fuel oil storage tank, are exempt from the notification requirements set forth in 310 CMR 40.0300 if such releases are "completely contained within the building". In this context, for the purposes of reporting "2 hour" spill events per 310 CMR 40.0311, "completely contained within the building" shall be satisfied if a preponderance of the evidence indicates that less than the Reportable Quantity (e.g., 10 gallons for fuel oil) reached environmental media from within the building (e.g., flow through cracks in a concrete basement floor or into an unlined sump). An earthen floor in a basement is considered soil "in the environment" and the exemption at 310 CMR 40.0317(19) would not apply in cases where a discharge greater than its Reportable Quantity is released to an earthen floor within the interior of a building. This type of release would require a 2-hour notification to MassDEP. Note that a "120 day" reporting obligation per 310 CMR 40.0315 may still exist if environmental releases less than the Reportable Quantity contaminate more than 2 contiguous cubic yards of soil at levels above a Reportable Concentration applicable at the site.

Is a spill of an oil or hazardous material into a containment structure designed for such purposes reportable? [October 2004]

Yes, if the total quantity of the oil or hazardous material that escapes from the containment structure to the environment equals or exceeds its Reportable Quantity within a consecutive period of 24 hours or less, or if the quantity is unknown but likely equals or exceeds its Reportable Quantity within a consecutive period of 24 hours or less (see 310 CMR 40.0311(1)-(4)). Note that the quantity released would include discharges to the ambient air. Where there is uncertainty as to whether the standard for notification has been met, parties may want to consider notifying MassDEP within the specified timeframe knowing that they may subsequently retract the notification within 60 days (310 CMR 40.0335). In cases where a 2-hour reporting obligation is not present, it is important to note that a 72-hour and/or 120-day reporting condition could still exist.

Is a spill of an oil or hazardous material into a storm drainage system reportable? [October 2004]

Under the provisions of 310 CMR 40.0311(8), a "2 hour" notification obligation exists for "any release of oil and/or hazardous material ..that is indirectly discharged to the environment by means of discharge to a stormwater drainage system". In this context, reporting would be required for any release to a storm drain system (e.g., catch basin, piping) that: (i) is likely to be discharged to environmental media (e.g., underlying/surrounding soils, groundwater, surface water, ambient air) in an amount equal to or greater than the applicable Reportable Quantity within a period of 24 consecutive hours or less (310 CMR 40. 0311(1) and (3)); or (ii) the quantity of the release is unknown, but the amount discharged to environmental media is likely to be equal to or greater than the applicable Reportable Quantity over a period of 24 consecutive hours or less (310 CMR 40.0311(2) and (4)); or (iii) is likely to result in the appearance of a sheen on surface water (310 CMR 40.0311(5)). Note that any release of oil or a hazardous material above its Reportable Quantity to the surface of the ground (including pavement) is considered a direct release to the environment that requires notification within 2 hours, even if that discharge then flows into a nearby storm drain system. If a discharge to the surface of the ground above

an RQ results in a subsequent discharge to a storm drain system above an RQ, then a second 2-hour notification obligation may also exist.

Does the 100-ppmV headspace criterion in 310 CMR 40.0313(2) for reporting releases associated with an underground storage tank closure assessment apply to ancillary piping associated with the storage tank? [October 2004]

Yes. The criterion articulated in 310 CMR 40.0313(2) applies to "underground storage tanks" as that term is defined at 310 CMR 40.0006. That definition includes "ancillary piping".

NOTIFICATION EXEMPTIONS

According to 310 CMR 40.0317(11), "releases of oil and/or hazardous material in groundwater detected by sampling conducted by Public Water Supply owners or operators under 310 CMR 22.00, as indicated by the presence of oil and/or hazardous material in a public water supply source" are exempt from notification. What is the rationale for this exemption? [Volume 1 Number 3, February-March 1994]

Public water suppliers are required to routinely test public wells under the Safe Drinking Water Act and report these results to MassDEP's Drinking Water Program. This provision in the MCP is intended to exempt these suppliers from having to provide additional notice of test results which indicate the presence of oil and/or hazardous material to DEP's Bureau of Waste Site Cleanup.

Does coal tar qualify for a coal ash exemption? [Volume 1 Number 3, February-March 1994]

No. The notification exemption at 310 CMR 40.0317(9) applies to coal ash which is a combustion product. It does not apply to coal tar, which is the result of a pyrolysis process.

Are releases of oil to an oil/water separator always exempt from notification? [Special Edition 3, September 1994, Revised]

No. There are specific criteria (e.g., the oil/water separator is a properly functioning separator at an oil facility) which have to be met in order to qualify for this exemption. See 310 CMR 40.0317(1) for the complete exemption criteria and 310 CMR 40.0006(12) for the definition of an oil facility covered by the exemption.

Do releases of oil and/or hazardous material emitted from broken pavement need to be reported? [Special Edition 3, September 1994]

No. Oil and/or hazardous material emanating from bituminous pavement or pieces of pavement are exempt from DEP notification [see 310 CMR 40.0317(12)]. Also exempt under the same provision are releases of OHM emanating from piers, pilings and building foundation structures, as well as landscaping materials, utility poles, and building materials that are still serving their intended use.

If Polynuclear Aromatic Hydrocarbons (PAHs) are found at levels greater than or equal to RCs in soil or fill material containing wood ash, does this need to be reported? [Special Edition 3, September 1994]

No. Unless the wood ash is a result of the combustion of wood products that have been treated with chemical preservatives or there is a release of OHM unrelated to the wood ash, notification is not required [see 310 CMR 40.0317(9)]. Also exempt under this provision is OHM from coal and coal ash.

Is notification required if oil from a transformer exceeding an RQ is released to a vault? [Special Edition 3, September 1994]

A release of oil and or hazardous material to an underground utility vault is exempt from notification requirements if the release is completely contained within the vault. [See 310 CMR 40.0317(19)]. Such a release to a utility vault requires notification if:

-The vault is not designed, built, and maintained to be hydraulically tight;
-The vault is of unknown integrity or has a floor drain, dirt floor, or is otherwise incapable of containing the release;
-The release poses or is likely to pose an Imminent Hazard, such as a release involving smoke/fire/explosions; or
-Separate-phase oil is migrating into the vault from an external source (thus constituting a condition of Substantial Release Migration

If I own a property that was formerly part of an orchard and have detected elevated levels of arsenic, how do I demonstrate whether the levels are the result of arsenate pesticides applied "in a manner consistent their labeling" and consequently meet the 310 CMR 40.0317(8) reporting exemption criterion? If elevated levels of arsenic at a site can be attributed to appropriately applied pesticide use, would notification be required? Does the fact that the pesticide is no longer licensed for use affect regulation of that substance under the MCP? [Special Edition 4, February 1995 and Volume 3 Number 1, June 1996, Revised]

The definition of a release in M.G.L. c. 21E (and in the MCP) excludes the "application of pesticides consistent with their labeling". Where it can be established that the presence of arsenic or other pesticides resulted from historical application in accordance with manufacturer's instructions, the MCP does not require notification [310 CMR 40.0317(8)(c)].

The determination as to whether elevated arsenic levels are the result of application consistent with their labeling must be established on a case-by-case basis. One cannot automatically assume that any concentration of arsenic found in an area that was used as an orchard was applied as a pesticide and that its application was performed in accordance with the labeling requirements. A reasonable effort (consistent with the MCP's Response Action Performance Standard, 310 CMR 40.0191) should be made to establish historical operations and practices. If there are historical records of pesticide application, they should be reviewed. In the absence of historical records, an observed distribution of consistent arsenic levels in soil samples from the orchard can be assumed to indicate a pattern of agricultural application in accordance with labeling requirements.

If the pesticide at the time of use was applied in a manner consistent with its labeling, it would not be considered a "release" under the c. 21E and the MCP, as described above. Any pesticide (whether currently licensed or not) that was mishandled or disposed of improperly, is not eligible for this exemption from regulation under c. 21E. Observed Hot Spots can indicate of mishandling.

It is advisable to notify DEP when you cannot support the assumption described above. General inquiries about pesticide use can be directed to the Pesticide Bureau of the Department of Food and Agriculture (617/727-3020).

Please be advised that while properly applied pesticides are not considered a release and are exempt from notification under the MCP, the presence of these chemicals on your property may still present a risk. You should consider whether it is appropriate to take measures (e.g., landscaping, adding cover material, or soil removal) to reduce exposure to them.

If pesticides are found on my property, including some that are above the Reportable Concentrations (RCs) listed in the Massachusetts Oil and Hazardous Material List (MOHML), am I required to notify MassDEP? [Volume 1 Number 3, February-March 1994]

Not necessarily. The application of pesticides in a manner consistent with product labeling is not considered a "release" according to M.G.L. c. 21E and the current MCP (see definition of "release" in M.G.L. c. 21E sec. 2 and 310 CMR 40.0006). Therefore, if residual concentrations are consistent with normal application procedures, notification is not required. However, if a location contains pesticide residues, it is advisable to notify MassDEP if it cannot be determined that the pesticide application was in fact consistent with its labeling. If the levels of pesticides indicate improper pesticide application, the contamination may then be considered a release and the notification requirements of 310 CMR 40.0300 will apply to the location. General inquiries about pesticide use can be directed to the Pesticide Bureau of the Department of Food and Agriculture (617/727-3020).

If petroleum compounds were used as couriers for a pesticide, would the petroleum constituents be regulated under the MCP? [Special Edition 4, February 1995, Clarified]

Theoretically, if petroleum compounds were part of a pesticide and the pesticide was properly applied, the presence of that material at a location would not be considered a release to the environment. In this case, notification would not be required under the MCP. However, it would be extremely difficult to establish that the detected petroleum constituents were only attributable to historical pesticide use. Again, it is advisable to notify MassDEP unless it can be clearly demonstrated that the petroleum residue is due solely to pesticide use and the pesticide application was, in fact, consistent with its labeling.

LIMITED REMOVAL ACTIONS (LRAs)

What if work begun as a Limited Removal Action under 310 CMR 40.0318 extends beyond 120 days of "obtaining knowledge of the release" or exceeds the volume limits outlined in 310 CMR 40.0318? [Volume 1 Number 1, November 1993, Revised]

The Limited Removal Action (LRA) must be terminated before the 120 day time limit or volume limits are exceeded. Further remedial actions may be undertaken as a "Release Abatement Measure." Under the provisions of 310 CMR 40.0443(4), MassDEP may orally approve a Release Abatement Measure proposed as a continuation of an LRA, although the submission of a RAM plan will generally be required.

Does a Limited Removal Action (LRA) require evaluation of the feasibility of achieving background? [Volume 1 Number 2, December 1993-January 1994]

No, because an LRA is performed prior to notification. Response Action Outcome (RAO) requirements, such as evaluating whether it is feasible to achieve background (for Class A RAOs), apply only to releases and threats of releases which are actually reported to MassDEP.

I have received a report indicating that I have levels of xylenes in the soil at my site in excess of a Reportable Concentration. For the purposes of conducting an LRA and determining the applicable soil excavation limits, is the soil contaminated with an "oil" or a "hazardous material"? [Volume 1 Number 2, December 1993-January 1994]

Consistent with the reporting provisions of 310 CMR 40.0360(5), the soil is contaminated with an "oil" if you can conclude, based upon site history and analytical data, that the encountered hazardous material resulted from the release of an oil, such as gasoline or fuel oil. The soil would be contaminated with a "hazardous material" if the xylene contamination resulted from a release of a hazardous material, such as paint stripper, or if you cannot come to the conclusion that it is an oil. Soil excavation as part of an LRA is limited to 100 cubic yards for soil contaminated with oil or waste oil and 20 cubic yards for soil contaminated with hazardous material or a mixture of oil/waste oil and hazardous material.

How does the 100 ppmv headspace reporting criterion for an Underground Storage Tank (UST) relate to a Limited Removal Action (LRA)? [Volume 1 Number 3, February-March 1994, Revised]

If you trigger this 72 Hour reporting threshold as part of an assessment of an UST, you must notify MassDEP [see 310 CMR 40.0313(2)]. Because an LRA cannot be initiated or continued once you encounter releases meeting a 2 Hour or 72 Hour reporting criteria, you cannot continue the soil removal portion of tank closure activities as an LRA [see 310 CMR 40.0318(2)]. Once you notify DEP of this 72 Hour condition, an Immediate Response Action (IRA) would be required to, at a minimum, assess what additional measures should be taken to address the conditions which triggered this notification [see 310 CMR 40.0412(2)].

If you had begun an LRA prior to tripping the 72 Hour reporting threshold, you could continue the excavation as an IRA prior to notifying or getting approval from the MassDEP [see 310 CMR 40.0421(3)]. This provision (which applies specifically to USTs) allows you to excavate up to 100 cubic yards of oil contaminated soil prior to notifying DEP of the IRA condition, provided no Imminent Hazard exists. Soil excavated as a part of the LRA would need to be taken into account when determining the 100 cubic yard total site limit pursuant to 310 CMR 40.0421(3). For example, if you had excavated 50 cubic yards as an LRA prior to tripping the 72 Hour reporting threshold, you could only excavate 50 additional yards under this provision. Please note: you are still bound by the 2 Hour or 72 Hour notification requirements. If you need to excavate more than 100 cubic yards to abate the IRA condition or if you exceed 72 Hours, you must stop all site work until you notify DEP and receive approval to continue the IRA.

Does a Limited Removal Action (LRA) only apply to soil that exceeds Reportable Concentrations (RCs)? For example, could I remove more than 100 cubic yards of petroleum contaminated soil if the soil in excess of the LRA limit is below the RCs? [Volume 1 Number 3, February-March 1994]

Yes. For example, if you were removing 300 cubic yards and only 50 cubic yards had contaminant concentrations above the RCs, 50 cubic yards would be subject to the LRA limit for excavation of oil contaminated soil. . All contaminated media, however, should be managed in accordance with 310 CMR 40.0030.

Can I use the LRA provisions in 310 CMR 40.0318 to manage multiple discrete releases on my property and consequently, never notify DEP? [Volume 1 Number 3, February-March 1994, Revised]

Yes, you can. However, each release must fall within the limits for LRAs. Keep in mind that LRAs are intended for minor discrete releases, and are not appropriate for larger sites which warrant a holistic approach to assessment and cleanup.

Can Limited Removal Actions (LRAs) be taken for subsequent 120-Day releases at the same disposal site? [Special Edition 3, September 1994]

No. Once notification has occurred at a disposal site, additional LRAs may not be performed within the boundaries of the disposal site [see 310 CMR 40.0318(2)(b)]. However, if the release occurred in a separate and discrete area and can be considered to be a separate disposal site, then an LRA may be taken. Additionally, if a release was incorrectly reported to the DEP (i.e., no notification threshold was actually exceeded) and then retracted, an LRA can be taken for that release.

It should be noted that a sudden release within the boundary of an existing disposal site which does not exceed an applicable RQ may be cleaned up without notification to MassDEP. This cleanup would not be considered an LRA.

Can an LRA be extended to excavate more than 100 cubic yards of soil? [Special Edition 3, September 1994, Revised]

No. However, a Release Abatement Measure (RAM) or other response action could be used to address the additional soil. It is possible to obtain an oral approval for a RAM to be performed as an extension of an LRA [see 310 CMR 40.0443(4)]. Please note that in certain circumstances the soil volume limits for oil contaminated soil and hazardous material or oil and hazardous material contaminated soil may be additive. For example if you have a 115 cubic yard area of oil contaminated soil that includes a small area, say 15 cubic yards, where hazardous material is mixed in, you could remove the 15 cubic yards of the oil/hazardous materials contaminated soil, which is less than the 20 cubic yard limit for a mixture of OHM, and then remove the remaining 100 cubic yards of oil contaminated soil.

What is the procedure for submitting and maintaining Bills of Lading for LRAs? [Special Edition 3, September 1994]

LRAs that involve the use of a Bill of Lading (BOL) require LSP oversight [see 310 CMR 40.0318(8)]. All records generated from an LRA, including the BOL and other supporting documentation for shipments of soil resulting from the LRA, must be maintained by the RP, PRP, or Other Person for 5 years (or for 5 years from the date the MassDEP receives an RAO if the site is subsequently reported, whichever is later) [see 310 CMR 40.0034(6), 310 CMR 40.0318(7), and 310 CMR 40.0014(2)]. The RP, PRP, or Other Person is not required to submit the BOL and supporting documentation to the MassDEP. Additionally, a Release Tracking Number is not necessary on BOLs generated from LRAs [see 310 CMR 40.0035(1)(e)].

When performing an LRA, does the stockpiled soil have to be removed from the location within 120 days of obtaining knowledge of the release? [Special Edition 3, September 1994]

No. Excavation and proper stockpiling of the soil must be completed within 120 days of obtaining knowledge of the release [see 310 CMR 40.0318(5)]. However, you have 120 days from the first day you begin to stockpile the soil to remove the soil from that location [see 310 CMR 40.0034(3)(c)].

Can I dewater an excavation as part of performing a Limited Removal Action (LRA)? [Volume 2 Number 1, July 1995, Revised]

Yes. While LRAs are restricted to the excavation and management of soil from a disposal site [see 310 CMR 40.0318(4)], dewatering is acceptable as long as the water does not trigger any reporting condition. If a reporting condition is triggered, dewatering may be done as part of a RAM or IRA. After the appropriate release notification is made, a RAM or an IRA plan should be submitted to MassDEP and any discharge of dewatering effluent should comply with the requirements for remedial wastewater discharges in 310 CMR 40.0040.

According to 310 CMR 40.0318(4), Limited Removal Actions are "restricted to the excavation and off-site recycling, reuse, treatment, and/or disposal" of contaminated soil. Does the reference to treatment mean that I can implement bioremediation at a disposal site as a Limited Removal Action? [Volume 3 Number 1, June 1996]

No. Limited Removal Action (LRAs) are specifically intended for the excavation, removal, and off-site management of contaminated soil. The reference to treatment refers to procedures performed at an off-site facility. Any on-site treatment is beyond the scope of an LRA and would need to be done as an IRA, RAM, or Comprehensive Remedial Action, following the appropriate notification to MassDEP.

IMMINENT HAZARDS

Do I have to notify the MassDEP before any action can be taken once I have knowledge of an Imminent Hazard? [Special Edition 3, September 1994]

No. Response actions should not be delayed in situations where inaction would result in the development of an Imminent Hazard [see 310 CMR 40.0311(2)]. Additionally, if there are extenuating circumstances delaying notification which can be established by the person responsible for notifying, then notification to the MassDEP should be made as soon as possible [see 310 CMR 40.0332(1)]. Containing a spill or abating a fire hazard are examples of extenuating circumstances where inaction could result in an Imminent Hazard [see 310 CMR 40.0332(1)(b)].

Are Imminent Hazard Evaluations required for all releases? [Special Edition 3, September 1994, Revised]

No. An Imminent Hazard Evaluation is required for any release that "could pose" an Imminent Hazard [see 310 CMR 40.0321(2) and 310 CMR 40.0426]. An Imminent Hazard Evaluation is not required for a release that poses an Imminent Hazard which should be addressed immediately [see 310 CMR 40.0321(1)]. An Imminent Hazard Evaluation Transmittal Form (Form # BWSC-105) must be submitted to MassDEP with the Imminent Hazard Evaluation. For releases that could pose an Imminent Hazard, 310 CMR 40.0426(3) requires an Imminent Hazard Evaluation to be initiated within 14 days of obtaining knowledge of the condition. However, an RP, PRP or Other Person may assume that an Imminent Hazard exists and abate the condition using an IRA (e.g. constructing a fence around surficial contamination) rather than performing the Imminent Hazard Evaluation described in 310 CMR 40.0950. If the IRA is not complete within 60 days an IRA Plan must be filed with MassDEP. The IRA Plan Transmittal Form should indicate that it is being used to provide an IRA Plan as well as an Imminent Hazard Evaluation. Section F of the form BWSC-105 should have the fourth box checked (response actions will address those conditions that could pose the Imminent Hazard).

How are acute adverse impacts to fish measured/defined? [Special Edition 3, September 1994, Revised]

"Acute adverse impact" is defined as a fish kill of any number caused by chemical toxicity of of OHM, or a condition of suffocation resulting from the reduction of available oxygen [from increased biochemical oxygen demand (BOD) or chemical oxygen demand (COD)] as a result of a chemical reaction which is directly the result of, or was likely caused by, a release of OHM [see 310 CMR 40.0321(1)(e)]. Thus, acute adverse impacts to fish could be measured by determining the number of fish killed during an incident.

The description of one of the releases that could pose an Imminent Hazard for which Two-Hour notification is required includes the phrase "... within a depth of six inches below the ground surface, at any location within 500 feet of a residential dwelling..." (310 CMR 40.0321(2)(b)). Is this an AND situation? [Volume 3 Number 1, June 1996]

Yes, the release must be within the top six inches AND within 500 feet of a residential dwelling, school, playground, recreation area or park. It should also be noted that pavement, concrete, fences or other barriers which prevent access to the contamination by children eliminates the notification requirement of this section.

The S-1 Method 1 standard for Arsenic is 30 ppm and the Imminent Hazard trigger is 40 ppm. Why are these two numbers so close? [Volume 3 Number 1, June 1996]

These two values are so close because background levels for arsenic were considered in developing the Method 1 Standards. In contrast, the Imminent Hazard trigger value for arsenic [see 310 CMR 40.0321(2)(b)] is based solely on risk. Background levels of arsenic in soil are higher than the risk-based values identified in the development of the Method 1 standards. Thus, all of the Method 1 soil standards for arsenic are based on background levels rather than risk. Recall that in the MCP, background, by definition, constitutes a level of no significant risk.

Do the provisions of 310 CMR 40.0426 which require a PRP to conduct an Imminent Hazard Evaluation apply to sites with approved waivers [Special Edition 2, June 1994]

Yes. Notification to MassDEP of conditions that could pose an Imminent Hazard and the requirements in the current MCP for performing Imminent Hazard evaluations apply to sites with approved waivers.

Please clarify the 2 Hour Imminent Hazard notification requirements found in 310 CMR 40. 0320. [Special Edition 4, February 1995]

Imminent Hazards are presumed to exist when site conditions meet the criteria described in Subpart C (310 CMR 40.0321). Notification to MassDEP within 2 hours is required as described in 310 CMR 40.0312 and an Immediate Response Action (IRA) is required. (The requirements of IRAs and Imminent Hazard Evaluations conducted as part of an IRA are described at 310 CMR 40.0410 through 40.0429.) The existence of an Imminent Hazard is a refutable presumption in such cases: the IRA conducted following notification would include either a site-specific evaluation performed in a manner consistent with 310 CMR 40.0950 to demonstrate that the conditions, in fact, do not pose an Imminent Hazard, or actions to abate, prevent or eliminate the Imminent Hazard. Note that a recent change to this section of Subpart C clarifies that pavement, concrete, fences or other barriers which prevent access by children to the concentrations listed at 310 CMR 40.0321(2)(b) eliminate the notification requirement of this section.

What else triggers an Imminent Hazard Evaluation [Special Edition 4, February 1995]

Beyond the specific conditions listed in 310 CMR 40.0321 and described in the answer to the previous question, the MCP does not define specific situations or conditions at a site which trigger an Imminent Hazard Evaluation. The regulations rely upon the use of professional judgment to determine when such evaluations are needed. Imminent Hazard Evaluations should be considered whenever actual (or likely) exposures to contamination are occurring at a site, such as when people are drinking contaminated water, or when there is surficial soil contamination in a playground. The decision to conduct an Imminent Hazard Evaluation should consider the nature and location of the oil or hazardous material and should focus on current (or likely) exposures, considering the current use(s) of the site and considering exposures which may occur in the short term (up to 5 years).

What is the difference between a Substantial Hazard and an Imminent Hazard? [Special Edition 4, February 1995]

An Imminent Hazard is a hazard which poses a significant risk of harm to health, safety, public welfare or the environment if it were present for even a short period of time. The period of time considered in evaluating an Imminent Hazard should be no greater than 5 years and would typically be much less than that. An important distinction for Imminent Hazards is that the focus is on actual, current exposures occurring (or which are likely to occur), considering the current use(s) of the site.

A Substantial Hazard is a less immediate threat than an Imminent Hazard. A Substantial Hazard would exist at sites where the short term exposures are not significant, but if the contamination were to remain unremediated and exposures were to continue at the same or higher rate, there could be a significant risk in the future. [By definition, a Substantial Hazard is a hazard which would pose a significant risk of harm if

it continued to be present for several years.] The elimination of Substantial Hazards is one requirement of a Temporary Solution (a Class C RAO). When considering Substantial Hazards it might be helpful to look at the site in terms of current and future use: sites at which all Substantial Hazards have been eliminated pose No Significant Risk for current use, but may not have achieved a condition of No Significant Risk for the future use(s) of the site. Such an operational definition of Substantial Hazard would be consistent with the intent of implementing Temporary Solutions at sites.

WHO SHALL NOTIFY

Does a utility company have to notify if a release does not trip a 2-Hour or 72-Hour release threshold, but does trip a 120-Day threshold (i.e., exceedance of an RC)? [Special Edition 3, September 1994]

Yes. "Any agency of the Commonwealth or any public utility company that owns a right of way that is a site from or at which there is or has been a release or threat of release of oil and/or hazardous material" is required to notify MassDEP of a reportable release [see 310 CMR 40.0331(1)(h)]. This section does not differentiate among reporting conditions.

NOTIFICATION IN ERROR

Is there any way to get an oral release notification "out of the system" if it was discovered after notification that the release or threat of release was reported in error (i.e., the release did not actually trip a notification threshold under the MCP)? [Special Edition 3, September 1994, Revised]

Yes. The PRP should send the appropriate MassDEP regional office a Release Notification & Notification Retraction Form (BWSC-103) including an attached written explanation of why the notification (i.e., 2-Hour or 72-Hour) was in error [see 310 CMR 40.0335]. The retraction form must be received by the MassDEP within 60 days of oral notification. The retraction is considered approved if it is not denied by the DEP within 21 days of receipt of the form. Note that threats of release require reporting even if no release occurred, as long as a threat of release threshold was tripped.

REPORTABLE CONCENTRATION

I don't understand why the Reporting Category RCGW-1 includes the criterion of "any point located 500 or more feet from a public water supply distribution pipeline..." [see 310 CMR 30.0362(1)(a)5.] [Volume 1 Number 1, November 1993, Clarified]

This criterion addresses potential drinking water source areas where groundwater may in the future be drawn from private wells and used as drinking water. Because these areas are 500 feet or more from a public water supply line, it is considered likely that a future development would rely upon private wells. Given the distance to the distribution system, it may be more cost-effective in such areas to install private water supply wells than to tie into the public supply.

For notification purposes, from what point do I measure the "500 feet or more from a public water supply distribution pipeline" to determine if the site is in an RCGW-1 groundwater category [see 310 CMR 40.0362(1)(a)(5)]? [Special Edition 3, September 1994]

You should measure from the property line to the nearest point on a public water supply distribution pipeline. If that distance is greater than or equal to 500 feet, the whole property is categorized as RCGW-1, regardless of the use of that property.

If, based upon site-specific information, the groundwater at my site can be excluded from the Potentially Productive Aquifer (PPA) designation (i.e. the site is not located within the true boundary of a medium or high yield aquifer based based upon its soil type/transmissivity or it is naturally brackish), and therefore excluded under the GW-1 Category [see 310 CMR 0932(5)(b)], can I also exclude it from the PPA designation in terms of Reporting Category RCGW-1? [Volume 1 Number 5, June-July 1994, Revised]

No. The groundwater categories found in Subparts C and I reflect different considerations and serve different purposes. The Groundwater Reporting Categories (RCGW-1 and RCGW-2) are used to determine whether a notification obligation exists under 310 CMR 40.0300. For reporting purposes, all PPAs are considered RCGW-1 (with the exception of Non-Potential Drinking Water Source Areas, as defined in 40.0006). The Groundwater Categories (GW-1, GW-2 and GW-3) described in 310 CMR 40.0932 reflect varying exposure potentials and are used to characterize the risk posed by contaminants at the site. Only after notification and an adequate assessment of the actual site conditions may the criteria under 310 CMR 40.0932(5)(b) be applied to eliminate an area from consideration as a PPA. As a rule, the information required to exclude an aquifer from the PPA designation is usually beyond what is known at the time of notification.

Should I filter groundwater samples prior to analyzing them for metals when determining if a groundwater Reportable Concentration is met or exceeded? [Volume 1 Number 2, December 1993-January 1994]

Groundwater Reportable Concentrations should be compared to "dissolved" concentrations of contaminants [see 310 CMR 40.0362(1)]. For metal contaminants, filtering the samples through a 0.45 micron filter, prior to acidifying the sample, is acceptable to MassDEP, and follows EPA Standard Methods. However, for other response actions, including risk assessment, unfiltered samples, or a combination of filtered and unfiltered samples may be appropriate, depending on the objectives of the assessment (e.g., tap water samples should not be filtered if you are assessing exposure to metals in drinking water).

According to 310 CMR 40.0321(1)(a), explosive vapor readings above 10% of the Lower Explosive Limit (LEL) require notification as an "Imminent Hazard." Does this include explosive concentrations resulting from a leak from a natural gas pipeline or a sanitary landfill, or explosive concentrations detected in soil gas? [Volume 1 Number 2, December 1993-January 1994]

Releases of natural gas are exempt from MCP reporting requirements [see 310 CMR 40.0317(6)]. Therefore, explosive conditions resulting from a leak of natural gas from a pipeline do not require notification. Methane emissions from decomposing refuse, however, are not exempt and require notification as an "Imminent Hazard" if these conditions are found. You should keep in mind that the 10% LEL criterion applies to confined structures, such as buildings, basements and tunnels, and interconnected underground utility structures, such as drains and sewers. It does not apply to soil gas spaces or to controlled wastewater, leachate, and gas collection or management systems.

Does a sample with a concentration of an OHM greater than an RC need to be reported if the concentration is due to conditions that meet the definition of "background" (e.g., concentrations of metals which are shown to be due to naturally occurring conditions rather than a release)? [Special Edition 3, September 1994]

Yes. In setting the RCs, naturally occurring or "background" concentrations were considered, although at a specific site, the background levels may well be higher than the values used to develop the RCs. Unless one of the specific reporting exemptions (e.g., OHM from wood ash or coal ash) in Subpart C applies, a sample with a contaminant concentration level greater than or equal to an RC requires that notification be made [see 310 CMR 40.0360(1)]. However, if upon investigation, it is established that the OHM which required notification really represents background concentrations, that information could be used to support a Class A-1 RAO. Additionally, an RAO may be filed with a Release Notification Form if

the required assessment is completed within the 120 day period between the time the PRP obtains knowledge and reporting.

For notification purposes, do I have to consider foreseeable use of the disposal site when identifying the applicable soil and groundwater reporting categories? [Special Edition 3, September 1994]

No. Only current use of the site must be considered. For example, if there is currently no residential dwelling within 500 feet, you don't have to assume the possibility of a future dwelling for purposes of reporting [see 310 CMR 40.0361 and 40.0362].

Are public water supply wells which are out of service still considered to have an Interim Wellhead Protection Area where an RCGW-1 groundwater category would apply [see 310 CMR 40.0362(1)(a)(2)]? [Special Edition 3, September 1994, Revised]

Yes. Unless the public water supply well has been formally abandoned using the appropriate Drinking Water Program procedures, the well is still considered to have an Interim Wellhead Protection Area for notification purposes.

What groundwater reporting category would I use for notification if the source area is outside of a Zone II, but a contaminant plume over RCs has entered the Zone II? [Special Edition 3, September 1994, Revised]

The contamination, thus the disposal site, extends into the Zone II. Therefore, the RCGW-1 numbers would apply to samples taken within the delineated Zone II [see 310 CMR 40.0362(1)(a)(1)].

Does a private water supply well have to be in use and within 500 feet to meet the RCGW-1 notification category? [Special Edition 3, September 1994]

To meet the RCGW-1 notification category, the private water supply well must be "piped for human consumption" as drinking water. The well water need not be currently in use for drinking (e.g., bottled water is temporarily being consumed instead of the well water due to contamination). If this criterion is met, and groundwater sampling points are located within 500 feet of the private well, then the RCGW-1 reporting category would apply [see 310 CMR 40.0362(1)(a)(1)].

Is a release of oil and/or hazardous material reportable if no thresholds that are listed in 310 CMR 40.0300 are triggered? [Special Edition 3, September 1994]

No. However, even in cases where a release is not reportable, a response action shall be undertaken if the release or threat of release poses a significant risk to health, safety, public welfare, or the environment, as described in 310 CMR 40.0900 [see 310 CMR 40.0370(1)]. Unless otherwise notified by the MassDEP, these types of response actions are not subject to the MCP's submittal requirements, approvals, or fees [see 310 CMR 40.0370(2)].

Do I have "No Significant Risk" at a transition site with contamination below RCs? [Special Edition 3, September 1994]

Not necessarily. The RCs are concentrations of OHM in soil and groundwater which trigger notification to the Department. While some RCs were based upon the calculated cleanup standards listed in Subpart I (and thus may approximate a level of "No Significant Risk"), several simplifying assumptions were made for their use as reporting criteria in Subpart C. Depending upon the particular exposure scenario for the site of concern, it is possible to have a concentration below an RC which is associated with an elevated risk level and response actions may be needed to address those conditions [see CMR 40.0370]. Such situations are more likely when the RCs in question are the default RCs generated from the RQs. Thus RCs should not be used to make "No Significant Risk" determinations. For a more detailed discussion of

the derivation and use of RCs, see Appendix E of the document "Background Documentation for the Development of the MCP Numerical Standards."

How can I determine whether my site is within a PPA as defined in the MCP and therefore likely to be Reporting Category RCGW-1 [see 310 CMR 40.0006 definition of "Potentially Productive Aquifer" and 40.0362(1)(a)]? [Volume 1 Number 5, June-July 1994, Revised]

The best way to determine whether a site is within a PPA is to consult a MassGIS map which presents the PPA data layer. While the U.S.G.S. Hydrogeological Atlases show all the medium and high yield aquifers (i.e. PPAs), the MassGIS maps provide a means to determine which medium and high yield aquifers are not considered Potential Drinking Water Source Areas based on the Non-Potential Drinking Water Source Area definition (see 310 CMR 40.0006). The MassGIS maps are available for public review at the MassDEP Regional Service Center which serves the site location. Either a "Large Format Map" (also referred to as a "Resource Map") or a smaller "Site Map" may be ordered from MassGIS through EOEA by using the Order Form for Maps or Licensing of Digital Data". This form is available at all MassDEP Regional Service Centers, or from MassGIS, which is located at 251 Causeway Street in Boston, telephone number (617) 626-1000.

If the groundwater flow rate at the location of a release has been determined or estimated to be greater than 200 feet per year, must a Condition of Substantial Release Migration be reported to the Department if it has also been determined that the contamination has not and is not migrating at a rate greater than 200 feet per year)? [February 2009]

No. The 72-hour notification requirement at 310 CMR 40.0313(5)(c) is required for any condition that meets the definition of Condition of Substantial Release Migration in 310 CMR 40.0006. Criterion (c) of the definition applies if the release to the groundwater is migrating at a rate of more than 200 feet per year. If site-specific data demonstrates that the contaminants are not migrating more than 200 feet per year, then criterion (c) would not apply, regardless of whether the groundwater flow rate was in excess of 200 feet per year. A demonstration of the contaminant migration rate should be based on site-specific sampling data. Modeling based solely on theoretical retardation rates and/or assumed aquifer conditions (such as "typical" organic carbon content) is not considered sufficient, in the absence of corroborating evidence, for the purposes of estimating contaminant migration rates and determining whether notification of a Condition of Substantial Release Migration is required. Estimates based on site-specific data (i.e., the date of release, identification of the downgradient edge of the plume, and the calculated OHM migration distance/time) or site-specific seepage velocity testing and organic carbon concentrations are more appropriate. Where this evaluation results in a conclusion that a Condition of Substantial Release Migration does not exist, it is recommended that the evaluation be documented in the next MCP submittal for the disposal site.

If it can be demonstrated that coal, coal ash, or wood ash attributable to historical sources is present in fill material, can all the parameters for which values are listed in Table 1 of MassDEP's Technical Update titled Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil (2002) be assumed to be attributable to the coal, coal ash, or wood ash and therefore exempt from notification, if present at concentrations at or below the values listed in Table 1? [February 2009]

Yes, but elevated chemical concentrations and/or an urban setting are not, per se, sufficient evidence to conclude that the concentrations are attributable to coal, coal ash or wood ash, as required for the notification exemption at 310 CMR 40.0317(9). The Technical Update describes the applicability of the Table 1 values and suggests lines of evidence to demonstrate that the elevated concentrations are associated with fill material containing coal, coal ash and wood ash. Such evidence can include documentation of storage and/or burning of coal at the site, or photographic evidence of storage or disposal or coal or wood ash, or the results of microscopic analysis of soil samples. With such evidence, concentrations at or below the values listed in Table 1 may be assumed to be attributable to the coal, coal ash or wood ash and therefore exempt from notification.

If concentrations exceed the values listed in Table 1 of MassDEP's Technical Update titled Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil (2002) and there is evidence of coal, coal ash or wood ash in the soil or fill material, can the notification exemption at 310 CMR 40.0317(9) still apply? [February 2009]

Yes, but this exemption is more likely justified for PAHs and is less likely for metals. The notification exemption may still be applicable where soil concentrations of PAHs exceed the values listed in Table 1 of the Technical Update, but the level of effort and evidence necessary will be significantly greater in order to demonstrate that the concentrations are, in fact, attributable to the coal, coal ash or wood ash. Additional lines of evidence may include the absence of other sources of PAHs, such as coal tar and creosote, the identification of discrete layers of ash in soil boring logs, physical evidence or visual observations (including microscopic analysis) of coal, coal ash or wood ash, and analytical results from ash layers in the soil. It should be noted that concentrations of most metals in pure coal, coal ash or wood ash are unlikely to exceed the values listed in Table 1 and, absent compelling evidence to the contrary, soil containing such elevated levels would not qualify for the notification exemption at 310 CMR 40.0317(9).

The 72- hour reporting condition at 310 CMR 40.0313(4) applies to a groundwater measurement of 5 mg/L "total volatile organic compounds within 30 feet of a school or occupied structure, where the groundwater table is less than 15 feet below the surface of the ground." The definition of Volatile Organic Compounds in 310 CMR 40.0006 includes some Volatile Petroleum Hydrocarbon (VPH) fractions measured by the VPH method. Should Volatile Petroleum Hydrocarbon (VPH) fractions measured by the VPH analytical method in the MassDEP's Compendium of Analytical Methods (CAM) be included in determining the total volatile organic compounds? [February 2009]

No. The Department did not intend that VPH fractions be included in determining total VOC concentrations with respect to this 72-hour notification threshold. For that reason, the original definition of Volatile Organic Compounds in 310 CMR 40.0006 specifically referenced SW-846 methods since the VPH fractions were not included in those methods. In 2006, the definition of VOCs was modified to reference "analytes in EPA Method 8260B and other purgeable organic methods specified in the Department's Compendium of Analytical Methods." This modification, made to reflect the publication of the CAM in 2003, created confusion as to whether VPH fractions should now be included in determining total VOC concentrations. The Department intends to amend the VOC definition and/or the requirement at 310 CMR 40.0313(4) to clarify this issue.

According to the Massachusetts Oil and Hazardous Material List (310 CMR 40.1600) there are three Reportable Concentrations (RCs) for chromium. How do these different RCs apply to a given site? [February 2009]

The Massachusetts Oil and Hazardous Materials List contains three listings for chromium:

- "total" chromium (CAS 7440-47-3),
- trivalent chromium (CAS 16065-83-1),
- hexavalent chromium (CAS 18540-29-9).

The RCs for total (unspeciated) chromium and hexavalent chromium (the more toxic of the two valence states) are the same. If the analytical results do not separately report concentrations for trivalent and hexavalent chromium, then the more conservative total or hexavalent chromium RC should be used (i.e., the worst-case condition should be assumed to exist). As specified in 310 CMR 40.0360(4), notification is not required for sites based on the total chromium RCs, if analytical results that show that the trivalent chromium and hexavalent chromium concentrations are both below their respective RCs.

SUBPART D: Preliminary Response Actions

IMMEDIATE RESPONSE ACTION (IRA)

If an Immediate Response Action (IRA) consists of an "active" system implemented to contain an Imminent Hazard, when can an IRA Completion Statement be submitted? [Special Edition 3, September 1994]

If an IRA consists of an "active" system implemented to contain an Imminent Hazard, the IRA Completion Statement cannot be submitted until MassDEP approval to terminate the system is obtained. The MCP defines Active Operation and Maintenance as "remedial operations which rely upon the continuing or periodic use of on-site or in-situ mechanical and/or electro-mechanical systems or devices, excluding monitoring and landscaping" [see 310 CMR 40.0006(12)] (examples of active systems include: carbon adsorption, air stripping and active soil vapor extraction). An IRA shall be considered complete when "the release or threat of release and/or site conditions which give rise to the need for that IRA, as described in 310 CMR 40.0412 have been assessed and, when necessary, remediated in a manner and to a degree that will ensure, at a minimum, both (a) the accomplishment of any necessary stabilization of site conditions and (b) the elimination or control of any Imminent Hazards to health, safety, public welfare and the environment, without the continued operation and maintenance of active remedial systems, pending the completion of any necessary Comprehensive Response Actions" [see 310 CMR 40.0427(1)].

An IRA implemented to contain an Imminent Hazard must continue all active remedial systems until the PRP, RP or Other Person obtains written approval from MassDEP after one of the following occurs: (a) the situation that gave rise to the IRA condition is stabilized and the active remedial system may be shut off, or (b) the active remedial system becomes part of a Comprehensive Response Action.

Should an Immediate Response Action Plan (IRAP) be submitted for assessment-only site activities within the 60-day time frame if neither an Immediate Response Action Completion Statement (IRAC) nor a Response Action Outcome Statement (RAO) can be filed? [Volume 1 Number 4, April-May 1994, Revised]

Yes. Although LSPs conducting assessment-only IRAs do not need to obtain DEP approval before proceeding with response actions, an IRAP is required within 60 days of notifying MassDEP of the need to conduct an IRA (provided an IRAC or RAO is not submitted) [see 310 CMR 40.0420(3) and 40.0420(5)]. The rationale for this provision is that DEP should receive information to monitor site activities with an option to become involved if warranted.

Can I ever backfill an excavation with contaminated soil as part of an Immediate Response Action, Release Abatement Measure, or Utility-related Abatement Measure? [Special Edition 3, September 1994, Clarified]

Yes. However, when backfilling with contaminated soil you should be mindful of long term cleanup goals. Eventually, soil levels left behind at the disposal site must meet the "No Significant Risk" or "No Substantial Hazard" standard required for a Class A or Class C RAO, respectively. You should avoid returning highly contaminated soils that would contribute to the ongoing migration of the contaminants or exposure to human or environmental receptors. DEP staff approving a response action may also limit the backfilling of contaminated media at a particular site if warranted by site conditions.

Can monitoring, done as part of an IRA that was orally approved, continue prior to written IRA plan approval? [Special Edition 3, September 1994, Clarified]

Yes. Monitoring, such as sampling a well, that is needed to maintain/evaluate the IRA, need not stop while waiting for approval of the written IRA plan. Orally approved remedial actions may also continue.

Does MassDEP ever give LSPs oral approval to modify an IRA after the PRP, who notified of the release, has received initial approval to do an IRA? [Special Edition 3, September 1994]

Yes. The LSP can propose to modify an IRA plan orally and, if appropriate, receive IRA plan approval orally. This oral approval is provided to the LSP in his/her capacity as an agent of the PRP or Other Person conducting the response actions.

How much information and level of detail is needed in an IRA plan? Are conceptual plans as opposed to detailed construction plans usually sufficient to receive DEP approval to proceed? [Special Edition 3, September 1994]

The level of information necessary will vary from site to site. Detailed construction plans, while they may be needed at some point, should not be needed to receive approval to proceed with most IRAs. [See 310 CMR 40.0424(1)]

If, during an Underground Storage Tank (UST) Closure, I discover a 72-Hour release condition, do I need to wait for DEP to approve an IRA before I perform any soil excavation? [Volume 2 Number 1, July 1995]

No. For 2 and 72 hour notifications, 310 CMR 40.0421(3) allows IRAs involving the excavation and handling of up to 100 cubic yards of oil- or waste oil-contaminated soil (cumulative for the site) resulting from an UST Closure to proceed without prior approval from DEP. The site must not pose an Imminent Hazard, soils must be managed as described in 310 CMR 40.0030, and notification must be provided to DEP within the appropriate timeline (i.e., 2 or 72 hours), at which time specific approval can be obtained for additional IRA work.

There seem to be differences in MassDEP Regional Offices as to the level of oversight for an IRA. Has this been raised as an issue? [Special Edition No. 3, September 1994, Clarified]

Yes. MassDEP is working to address problems and improve consistency among staff with respect to IRA approvals and other oversight activities. Any specific problems should be brought to the attention of the appropriate BWSC Deputy Regional Director.

SUBSTANTIAL RELEASE MIGRATION

Subslab soil gas sampling beneath an occupied residence detected the presence of VOCs. What concentration of VOCs in the soil gas would trigger a 72-hour notification to MassDEP as a Condition of Substantial Release Migration pursuant to 310 CMR 40.0313(4)(f)1.? [June 2014, Reviewed November 2017]

The provision at 310 CMR 40.0313(4)(f)1. requires that notification be made where VOCs are detected within 6 feet horizontally from the wall of a School, Daycare or Child Care Center or occupied Residential Dwelling, and within ten feet vertically from such structure's basement floor or foundation "at concentrations that are likely to discharge vapors into the structure." There are no specific regulatory references that define soil gas concentrations that are likely to discharge into a structure. MassDEP recommends consideration of soil gas levels above the relevant subslab soil gas screening levels in Appendix 2 of the Vapor Intrusion Guidance when evaluating soil gas results within these distances from the structure. LSPs should exercise professional judgment in determining whether the concentrations have the potential to discharge into the structure and err on the side of caution to expedite the assessment of this potential.

I have discovered levels of oil and hazardous material at my site which exceed Reportable Concentrations, and therefore I have up to 120 days to report. However, I have also concluded that these conditions constitute "Substantial Release Migration" as defined in 310 CMR 40.0413, which

requires that I notify DEP of my intentions to conduct an Immediate Response Action within 72 hours. When must I report? [Volume 1 Number 2, December 1993-January 1994]

The more conservative time period would apply, so you must communicate to DEP your intention to conduct an IRA within 72 hours of obtaining knowledge of the condition of Substantial Release Migration (see 310 CMR 40.0420).

What aquatic impacts trigger Substantial Release Migration? [Special Edition 3, September 1994]

Substantial Release Migration is triggered by the rate of movement of OHM through environmental media. If migrating OHM is likely to impact surface water within one year, regardless of the receptors impacted or the degree of impact, this migration triggers notification and requires an IRA to address this condition [see 310 CMR 40.0412(3) and 40.0413(2)].

Do I need to perform an IRA if a Substantial Release Migration condition is discovered at a transition site or waiver site? [Special Edition 3, September 1994, Revised]

Yes. An IRA is required at any disposal site where a condition of Substantial Release Migration [see 310 CMR 40.0412(3)] has been identified or when any other new condition triggering an IRA is found. At a minimum the IRA must assess the release or threat of release and/or site conditions to determine whether time-critical remediation actions are needed [see 310 CMR 40.0414(3)].

RELEASE ABATEMENT MEASURES (RAMs)

Can RAMs be continued at release locations where a new 2-Hour or 72-Hour release condition is encountered? [Special Edition 3, September 1994]

A RAM must be suspended or terminated upon discovery of a 2-Hour or 72-Hour release condition. However, under certain circumstances a RAM may be conducted simultaneously with an IRA, if written authorization from DEP is obtained [see 310 CMR 40.0441(3)].

Can Release Abatement Measures (RAMs) be conducted at a site with an approved waiver? [Special Edition 2, June 1994]

Yes. However, RAMs are not required by the MCP. PRPs have the option to either follow the Interim Measure Policy or to conduct a RAM under the current MCP. If the PRP chooses to conduct a RAM, s/he must abide by the provisions set forth in section 40.0440 in the MCP including the use of an LSP. Since sites with an approved waiver are categorically classified as Tier II sites, there is no fee for conducting a RAM at such sites.

When does the "60 day clock" start for the submission of a RAM Completion Report? [Special Edition 3, September 1994, Clarified]

Within 60 days of completion of all RAM activities specified in the RAM Plan, a RAM Completion Statement (Form # BWSC-106), with the RAM Completion Report attached, must be submitted to DEP. If applicable, an RAO Statement may be submitted in lieu of a RAM Completion Statement within the same time frame. [see 310 CMR 40.0446]

Where do I send RAM, DPS, and RAO Fees? [Special Edition 3, September 1994, Revised]

A check for the amount of the fee, along with a copy of the first page of the applicable transmittal form (e.g., in the case of an RAO, the first page of the RAO Statement, Form # BWSC-104), should be sent to the following lockbox address:

Department of Environmental Protection
PO Box 4062
Boston, MA 02211

When does the 21 day "presumptive approval clock" start for RAMs? [Volume 2 Number 1, July 1995]

The 21 day clock starts when the RAM Plan is received by the appropriate Regional Office, either served by hand delivery or by certified mail. A photocopy of the check for the RAM fee must accompany the RAM plan [see 310 CMR 40.0008(4)(b)]. The original check must be sent to the DEP lockbox.

UTILITY-RELATED ABATEMENT MEASURES (URAMs)

In order to undertake a Utility-related Abatement Measure (URAM), notification to DEP is always required. However, can a utility company perform a Limited Removal Action (LRA) and avoid notification if the volume of contaminated soil is within the excavation limits prescribed for LRAs? [Volume 1 Number 4, April-May 1994]

Yes. A utility company may perform an LRA instead of a URAM if the entire release falls within the criteria for LRAs. LRAs may be conducted prior to notifying DEP of releases which trigger the 120-day notification criteria and which do not require excavation of more than 100 cubic yards of oil or waste oil contaminated soil or 20 cubic yards of soil contaminated with hazardous material. Please note: URAMs cannot be initiated or continued at any site where a "2-Hour" or "72-Hour" release has occurred until an IRA has been undertaken and an IRAC submitted to MassDEP.

If a utility company chooses to undertake an LRA instead of a URAM, the utility must remove all of the contaminated soil that exceeds the RCs, manage the remediation waste according to 310 CMR 40.0030, and document the removal of contaminated soil [see 310 CMR 40.0318(7)].

Do steam pipes qualify as "utilities" under the provisions for URAMs? [Volume 1 Number 4, April-May 1994]

Yes. Steam pipes are considered conduits of the type envisioned in 310 CMR 40.0461(2)(c). Therefore, a URAM may be conducted to manage contamination encountered during the installation, repair, replacement or decommissioning of steam pipes, after notifying DEP.

Can a Utility-related Abatement Measure (URAM) be divided into discrete parts so that only a portion of the URAM is terminated due to the discovery of a 2-Hour or 72-Hour release condition, allowing work to proceed uninterrupted on the remaining unaffected portions of the URAM? [Special Edition 3, September 1994]

Yes. While the MCP prohibits the initiation or continuation of a URAM at a site where a 2-Hour or 72-Hour release or threat of release has been identified [see 310 CMR 40.0461(3)], it is acceptable to complete URAM activities on portions of the disposal site that are not affected by the 2-Hour or 72-Hour release condition.

Does the MCP allow construction of a cellular phone tower under the utility-related abatement measures (URAM) provision? [November, 2001]

Yes. In accordance with the provisions of 310 CMR 40.0461(2)(d), URAMs may be taken on public rights-of-way, utility easements, and private property to respond to and properly manage contamination encountered during the installation, repair, replacement, or decommissioning of telecommunications cables or other conduits and related appurtenances.

RESPONSE ACTIONS

Is off-gas treatment required for a sub-slab depressurization system? [Volume 3 Number 2, December 1996]

Off-gas treatment is is not required for a sub-slab depressurization system which is used to prevent the migration of contaminated soil gas from entering the living/working spaces of a building, provided that the system will not emit more than 100 pounds of VOCs per year. However, MassDEP may require off-gas controls on these systems if emissions exceed, or potentially exceed, significant risk level concentrations or create adverse health, safety, or odor conditions downwind of the discharge. See MassDEP policy # WSC-94-150 for more information and guidance on requirements for off-gas treatment.

CRITICAL EXPOSURE PATHWAYS AND CONDITION OF SUBSTANTIAL RELEASE MIGRATION

What is the definition of "Critical Exposure Pathways"? [Volume 7, Number 1, January, 2001]

The phrase "Critical Exposure Pathways" is defined in the MCP (see 310 CMR 40.0006) as follows:

Critical Exposure Pathways mean those routes by which oil and/or hazardous material(s) released at a disposal site are transported, or are likely to be transported, to human receptors via:
(a) vapor-phase emissions of measurable concentrations of oil and/or hazardous materials into the living or working space of a preschool, daycare, school or occupied residential dwelling; or
(b) ingestion, dermal absorption or inhalation of measurable concentrations of oil and/or hazardous materials from drinking water supply wells located at and servicing a preschool, daycare, school or occupied residential dwelling.

What is the definition of "Condition of Substantial Release Migration"? [Volume 7, Number 1, January, 2001]

By statute, a "Condition of Substantial Release Migration" is defined as, "a release of oil or hazardous material that is likely to be transported through environmental media where the mechanism, route or extent of transport has resulted in or, if not promptly addressed, has the potential to result in: (a) health damage, safety hazards or environmental harm; or (b) a substantial increase in the extent or magnitude of the release, the degree or complexity of future response actions, or the amount of response costs."

"Condition of Substantial Release Migration" is further defined in the MCP (see 310 CMR 40.0006, "Conditions of...") as follows:

Conditions of Substantial Release Migration and SRM each mean a condition at a disposal site that includes any of the following:
(a) releases that have resulted in the discharge of separate-phase oil and/or hazardous material to surface waters, subsurface structures, or underground utilities or conduits;
(b) releases to the ground surface or to the vadose zone that, if not promptly removed or contained, are likely to significantly impact the underlying groundwater, or significantly exacerbate an existing condition of groundwater pollution;
(c) releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year;
(d) releases to the groundwater that have been or are within one year likely to be detected in a public or private water supply well;
(e) releases to the groundwater that have been or are within one year likely to be detected in a surface water body, wetland, or public water supply reservoir; or
(f) releases to the groundwater that have resulted or are within one year likely to result in the discharge of vapors into school buildings or occupied residential dwellings.

Is there a specific notification trigger for identifying and addressing Critical Exposure Pathways (CEPs)? [Volume 7, Number 1, January, 2001]

No. There is no specific notification criterion triggered by the identification of a CEP or a potential CEP. The CEP requirements only apply when the performance of an Immediate Response Action is necessary, i.e., in response to releases/conditions that trip a 2- or 72-hour notification threshold. In those instances when an Immediate Response Action is required to address a 2- or 72- hour notification condition, and a CEP exists or potentially exists, then remedial actions to prevent, eliminate, or mitigate the CEP must be taken as part of the Immediate Response Action, if such actions are feasible.

Could you clarify the relationship between the "Condition of Substantial Release Migration" or "SRM" and the CEP requirements? [Volume 7, Number 1, January, 2001]

Since 1993, the MCP has specified six release or site conditions as Conditions of Substantial Release Migration and required the performance of an Immediate Response Action to address these conditions. The Brownfields Act of 1998 requires PRPs to notify MassDEP of a Condition of Substantial Release Migration. The October 29, 1999 MCP amendments implement this statutory provision by requiring notification to MassDEP within 72 hours of obtaining knowledge of a Condition of Substantial Release Migration, and, under an existing provision, requiring performance of an Immediate Response Action to address such a Condition.

The requirements for Immediate Response Actions are provided in the MCP at 310 CMR 40.0410. The October 29, 1999 MCP amendments specified additional response action requirements for Immediate Response Actions performed at sites with Critical Exposure Pathways.

In short, a Condition of Substantial Release Migration triggers a 72-hour notification obligation, and Critical Exposure Pathway triggers the requirement to perform additional response actions as part of the Immediate Response Action.

What are the additional response action requirements specified by the October 29, 1999 MCP revisions for Immediate Response Actions taken to address a Critical Exposure Pathway? [Volume 7, Number 1, January, 2001]

Pursuant to 310 CMR 40.0414(3) and 40.0414(4), Immediate Response Actions "shall be presumed to require" the elimination, prevention, or mitigation of Critical Exposure Pathways. Therefore, if a Critical Exposure Pathway exists or is likely to exist in the future, i.e., as the contamination continues to migrate, then the Immediate Response Action must include measures to address the Critical Exposure Pathway, unless it is demonstrated that such measures are not feasible.

If contamination is discovered in a private drinking water supply well at levels below the applicable Reportable Concentration(s) and it has not been determined that the contamination is from a disposal site for which notification to MassDEP is required, would such a condition still require notification to MassDEP within 72 hours as a Condition of Substantial Release Migration? [Volume 7, Number 1, January, 2001]

No. The Brownfields Act of 1998 established a new statutory reporting requirement for Conditions of Substantial Release Migration ("Condition" or "SRM"). Specifically, the Act provides that "[a]ny person required to notify pursuant to Section 7 of [Chapter 21E] shall notify the [D]epartment of " a Condition of Substantial Release Migration. In other words, knowledge of a Condition of Substantial Release Migration only triggers the reporting requirement if the Condition is associated with a release for which notification is, or at any time in the past was, otherwise required pursuant to Section 7 or 310 CMR 40.0300.

As defined, a Critical Exposure Pathway is the route by which "measurable concentrations" of oil and/or hazardous materials in vapor phase emissions or drinking water supply wells are transported or likely to be transported to human receptors in schools or residences. What is meant by "measurable concentrations"? [Volume 7, Number 1, January, 2001]

"Measurable concentrations" means concentrations of OHM attributable to the disposal site that are at or above the Reporting Limit (RL) for the sampling and analytical method used. For clarification, if the reported concentration of OHM encountered at the location being evaluated is less than the concentration that would be anticipated in the absence of the disposal site then a CEP does not exist.

Note: A Reporting Limit is the lowest concentration of an analyte that may be reliably reported under the operating conditions of the specific analytical system. A Reporting Limit must be at or above the lowest concentration used for calibration. Reporting Limits are also sample-specific, and must take into consideration variables such as sample volumes, collection methods, and processing procedures.

What analytical methods should be used to assess the possible contamination of a drinking water supply well? [Volume 7, Number 1, January, 2001]

The selection of analytical methods should be based on the objectives of the site characterization and existing knowledge of site conditions. In accordance with 310 CMR 40.0017, the analytical method should achieve "a level of precision and accuracy commensurate with its stated or intended use."

Generally, the 8000 series testing methods from SW-846 are sufficient for determining the presence of OHM in the course of investigating the extent of a disposal site. The 500 series drinking water methods should be used, however, to analyze samples from or near private and public drinking water supply wells.

What types of remedial measures should typically be considered when evaluating the feasibility of eliminating, mitigating, or preventing a CEP to (a) indoor air of a preschool, daycare, school, or occupied residence; or (b) a drinking water supply well located at and servicing these locations? [Volume 7, Number 1, January, 2001]

Below is a list of measures that may, in many instances, successfully eliminate or substantially reduce exposures via CEPs. The extent to which such measures are feasible at the time the IRA is being implemented depends, of course, on specific site conditions. Feasibility evaluations should be based on the costs of one or a combination of measures and the likely effectiveness of such measures. In addition, the level of effort for CEPs should be commensurate with the degree of uncertainty, the sensitivity of the receptors, and the magnitude of the exposure. Generally, measures that have a high likelihood of effectively eliminating, preventing, or mitigating a CEP and are cost-effective or are likely to complement or be incorporated into the long-term cleanup approach for a disposal site should be considered feasible.

For CEPs involving the migration of contaminants into the indoor air, one or a combination of the following should be considered:

- Sealing cracks/annular spaces around utilities
- Sealing and venting groundwater sumps
- Installing vapor barriers
- Ducting in outside air for furnace combustion/draft to reduce the induced infiltration of soil gas into the basement air
- Using air/air heat exchangers to over-pressurize basements, where appropriate
- Installing passive or active sub-slab depressurization systems

- Implementing groundwater treatment
- Conducting soil vapor extraction

For CEPs involving the migration of contaminants to a private drinking water supply well, one or a combination of the following should be considered:

- Connecting to a public drinking water supply system
- Installing a point of use treatment system
- Providing bottled water
- Implementing groundwater treatment

At what point can an Immediate Response Action Completion Report be submitted when an Immediate Response Action involves a measure to prevent, eliminate, or mitigate a CEP? [Volume 7, Number 1, January, 2001]

In accordance with 310 CMR 40.0427(1)(c), in cases where a remedial measure is taken to prevent, mitigate, or eliminate a CEP, the IRA cannot be closed out until such time as all active remedial measures (such as active venting, sub-slab depressurization, and/or point of use water treatment) have been terminated, or until such time as such active measures are formally incorporated in a comprehensive response action (Phase IV, V, ROS, Class C RAO). Termination of an active system may only occur if the CEP has been eliminated or if continued operation of the system is shown to be infeasible.

What are the MCP requirements if VOCs attributable to a plume *are not yet present* in a residence, school or daycare, but have recently been observed in a monitoring well next to the foundation? [January 2001, Revised November 2017]

A basic requirement and continuing obligation in the MCP is to determine whether a notification condition exists at a site. In this situation, the predominant concern would be whether a Condition of Substantial Release Migration (SRM) is present, which would require notification to MassDEP within 72 hours.

The detection of VOCs in groundwater proximate to a residence or school may or may not represent a Condition of Substantial Release Migration, depending on site-specific factors, including the type of building construction, contaminant concentrations, contaminant fate and transport characteristics, depth to groundwater, and soil type. As articulated at 310 CMR 40.0313(4)(f), specific conditions that would require reporting as an SRM condition include:

- soil or soil gas impacted with one or more volatile organic compounds within six feet, measured horizontally from the wall of the structure, and within ten feet measured vertically from the basement floor or foundation at concentrations that are likely to discharge vapors into the structure;
- one or more volatile organic compounds in the groundwater that exceed the applicable Groundwater Category GW-2 Standard within 30 feet of the structure, if the average annual depth to groundwater in that area is 15 feet or less;
- volatile light non-aqueous phase liquid (LNAPL) present in a groundwater monitoring well, excavation, or subsurface depression within 30 feet of the structure at a measured thickness equal to or greater than 1/8 inch (0.01 feet); or
- evidence of vapor migration along preferential pathways at a location that is likely to result in the discharge of vapors into the structure.

If an SRM condition has not been identified, ongoing response actions should continue to assess the potential for vapor intrusion in the course of reaching closure for the disposal site.

If an SRM or other 2- or 72-hour notification obligation is identified, notification must be made and an IRA must be initiated. With the IRA requirements, there is a presumption that response actions to eliminate, prevent or mitigate a Critical Exposure Pathway will be taken, unless shown to be infeasible [see 310 CMR 40.0414(3) and (4)]. In cases where VOCs *are present* in a residence, school or daycare and determined to be an Imminent Hazard, the initiation of a containment or removal action is required.

Could you identify some general considerations for conducting indoor air sampling to discern if contaminants have migrated from groundwater into indoor air? [Volume 7, Number 1, January, 2001]

The following recommendations generally apply to indoor air sampling.

- Ensure that sampling represents reasonable worst-case conditions. While sampling may be performed at any time, in Massachusetts, sampling conducted during the winter is more likely to represent worst case conditions as a result of combustion furnaces operation and chimney stack effects, which draw soil gas into a home. In addition, windows and doors in the home or school should be closed during and 48 hours before the sampling to simulate worst case conditions, unless closing the windows and doors jeopardizes the health of any occupants.

- Remove volatile and semi-volatile sources/products from the home or school before sampling. To the extent practical, volatile and semi-volatile products/sources should be removed from the basement or other areas of the home or school before sampling. Such products/sources include paints, paint thinners, cleaning solvents, recently dry cleaned clothes, etc.
  -Obtain a time-weighted average. Samples should be collected over a period of 2 to 24 hours to obtain a time-weighted average.

- Obtain samples from multiple floors of a multiple-floor residence/building. Information from different floors/locations within a structure is helpful in determining whether detected air concentrations are disposal site-related or originate from an indoor source.

- Consider collecting soil gas samples beneath or near the structure. This may be necessary to evaluate the likelihood of disposal site-related emissions in cases where indoor air concentrations may be elevated because of chemical products in the home or school. It is also helpful to have corresponding groundwater data. Both soil gas and/or groundwater data should be collected, if possible, at the same time that the indoor air sampling is being conducted.

What is the appropriate way to determine whether the OHM in the indoor air of a school or residence is the result of a "discharge of vapors" from the groundwater into indoor air (a Condition of Substantial Release Migration) or is emanating from products and building materials in the school/home or ambient air? [Volume 7, Number 1, January, 2001]

"[D]ischarge of vapors" means detecting concentrations of groundwater contaminants in indoor air above a level that would be expected or be typical in a home or school absent any impact from a disposal site. Levels typical of homes and schools unaffected by an OHM release should be obtained from published sources and data, and not by sampling structures outside the boundaries of the disposal site. Applicable published values include Massachusetts DEP publications Background Documentation for the Development of the MCP Numerical Standards (April 1994) and the Indoor Air Contaminants Comparison Table.

To distinguish levels typical of unaffected structures from vapor discharges emanating from a disposal site, the multilevel approach that is recommended in Section 4.3.1 of the VPH/EPH Implementation Policy

should be used to systematically investigate vapor concerns by examining soil gas and/or indoor air concentrations.

If a GW-2 standard is exceeded in a GW-2 area, would a Condition of Substantial Release Migration exist (and consequently notification be required) if a school or residence is the "occupied building or structure" of concern? [Volume 7, Number 1, January, 2001]

Not necessarily. A finding of groundwater levels above the GW-2 standard in a GW-2 area is not categorically a Condition of Substantial Release Migration. Rather, it is an indicator that a Condition of Substantial Release Migration and Critical Exposure Pathway may be present; further evaluation in an expeditious manner is warranted.

Can I use the Method I GW-2 standards as a screening tool to rule out the need for further investigation of CEP concerns at a site? [January, 2001, Revised November 2017]

Yes, under certain circumstances. At most sites and for most contaminants, the GW-2 standards are considered protective, including for CEP concerns, even though these standards were originally derived based on risk considerations, not "detectable levels". This is because (a) conservative modeling parameters were used to calculate these values, and (b) the "risk based" indoor air concentrations used to derive these standards were in fact background or Reporting Limits (RLs) for many contaminants (because the risk-based values were less than background and/or Reporting Limits).

MassDEP would generally not expect parties to investigate CEP issues at sites that have been adequately characterized, and have groundwater concentrations less than GW-2 values, unless:

(a) indoor air contaminants and/or odors potentially attributable to groundwater contaminants have been reported within the structure of concern;
(b) the structure of concern has an earthen floor, fieldstone foundation or concrete block foundation, significant cracks, and/or groundwater sump;

(c) soil or soil gas impacted with VOC near the building basement or foundation at concentrations that are likely to discharge vapors into the structure;
(d) volatile Light Non-Aqueous Phase Liquid (LNAPL) is present in a groundwater monitoring well, excavation, or subsurface depression within 30 feet of the structure of concern at a measured thickness of equal to or greater than 1/8 inch; and/or
(e) there is evidence of vapor migration along a preferred flow path that is likely to discharge into the structure of concern.

The conditions (c), (d) and (e) correspond to Conditions of Substantial Release Migration that require 72-hour notification pursuant to 310 CMR 40.0313(4)(f),

How do the SRM notification requirements and CEP response action requirements apply to sites that are already in or have completed the "MCP process?" Specifically, how would the SRM/CEP requirements apply in the case of: (a) a site for which an IRA to address conditions related to an SRM/CEP has previously been completed; (b) a site where an IRA is ongoing; and (c) a site where remediation has been completed and the standards for No Significant Risk have been met and an RAO has been submitted, but recent monitoring indicates the presence of a CEP? [Volume 7, Number 1, January, 2001]

Since 1993, parties conducting response actions have been required to report Conditions of Substantial Migration, and to undertake Immediate Response Actions to address SRM. Before October 29, 1999, these requirements were specified at 40.0422. Because of the Brownfields Act of 1998, this requirement has been moved to 40.0313(5) as a 72-hour notification requirement. Parties that communicated an SRM condition before October 29, 1999 are not required to re-report that condition under the new provisions at 40.0313(5). If knowledge of an SRM condition existed before October 29, 1999 and MassDEP has not

been notified of that condition, then parties are required to notify MassDEP and to conduct an Immediate Response Action.

With respect to (a) above, the CEP requirements do not apply retroactively to a completed IRA that was performed to address the same SRM condition, i.e., where an Immediate Response Action Completion (IRAC) Report was prepared and submitted in accordance with MCP requirements before October 29, 1999.

In the case of (b) above, the CEP requirements do apply to ongoing IRAs for which an IRAC Report has not been submitted. As part of the IRA, existing or potential CEPs must be identified and feasible measures to prevent, eliminate, or mitigate the CEP must be implemented.

With respect to (c), two scenarios are possible. The first scenario is a site where a Response Action Outcome has been submitted and a new SRM condition is discovered. In this case, notification must be made to DEP, an IRA must be conducted, and the CEP requirements addressed if the condition (new contaminant and/or exposure pathway) was not previously known and/or characterized as part of the disposal site to which the RAO applies. The second scenario is where the SRM condition was previously known and characterized as part of the disposal site to which the RAO applies. In this latter case, new notification, an IRA, and actions to address any CEP would be required only if the recent monitoring information negates the basis for the Response Action Outcome, i.e., indicates a condition of No Significant Risk has not been achieved or maintained [see 310 CMR 40.0317(17)].

Where do I document the CEP feasibility evaluation and what format should I use? [Volume 7, Number 1, January, 2001]

You should document the CEP feasibility evaluation in the associated Immediate Response Action Completion Report. The documentation should include at a minimum:

- A description of the Critical Exposure Pathway (location, related groundwater and/or indoor air data);
- A list of the remedial measures that were evaluated to prevent, eliminate, or mitigate the CEP;
- The estimated costs of each considered measure or combination of measures and an explanation of how such costs were determined;
- An evaluation of the relative effectiveness of each measure or combination of measures considered;
- A statement as to why, based on the aforementioned information, it was either feasible or infeasible to implement one or more of the evaluated measures: and
- A statement identifying the measure or combination of measures chosen, if any.

SUBPART E: Tier Classification & Deadlines

TIER CLASSIFICATION

I am working on a site that had a Tier IB permit that was transitioned to a Tier I Classification on June 20, 2014. The site will be reclassified from Tier I to Tier II because I have determined it does not trigger any of the Tier I Criteria at 310 CMR 40.0520. What transmittal form should be used and what information do I provide to support a reclassification from Tier I to Tier II? [June 2014, Reviewed November 2017]

The current BWSC107 transmittal form should be used to reclassify the site. Box B.7.b. on the BWSC107 form should be checked off to show the revised Tier Classification Category. Pursuant to 310 CMR 40.0530(3), the information to support the reclassification must include the information specified in 310 CMR 40.0510(2)(a) through (c). This would include information that addresses the four Tier I Criteria. Note that it is not necessary to resubmit a Phase I Report as part of the reclassification if the Phase I Report has not changed.

I have missed the one year deadline for submitting either an RAO, Downgradient Property Status (DPS) or Tier Classification for my site. The site has now defaulted to Tier IB status. Some work was conducted on the site during the first year, which has led me to consider filing for DPS. Do I still have to Tier Classify the site? What fees will apply? [Volume 3 Number 2, December 1996, Revised]

Pursuant to 40.0520(2)(c) your site is categorically Tier IB because the one year deadline has passed without the submittal of an RAO, Tier Classification or DPS. Therefore, you will be assessed a $2600 annual compliance fee for the first year (time zero = time of notification, deadline = one year from notification) if response actions were performed during the first year from the date of notification. If you file for DPS after the one year deadline, you do not need to Tier Classify and you do not need to pay the $1000 filing fee for DPS (since the site is Tier Classified by default and the DPS fee does not apply to tier classified sites). However, because you have already crossed into your second year before filing for DPS, you will be assessed an additional $2600 annual compliance fee for the second year if response actions are performed during the second year. Please note that Tier Classification is not necessary in this instance due to the DPS filing, which stays further response actions for this portion of the site. Tier Classification would also not be required if an RAO is filed. When a site defaults to Tier IB because the one year deadline was missed, it is considered to be out of compliance by the Department and may be subject to enforcement actions. PRPs who have missed their 1 year deadline (and do not submit an RAO or DPS) must submit a Tier Classification (and Tier I Permit Application, if applicable) to come back into compliance.

When there is a change in persons conducting response actions at a Tier I or Tier II site, 310 CMR 40.0560(8) states that the new person must submit a Tier Transfer Submittal to MassDEP. Can the new person conduct response actions under an existing Tier Classification prior to the 30 day waiting period specified at 310 CMR 40.0580(8)(c)? [July 1995, Revised January 2018]

No. In accordance with 310 CMR 40.0560(8)(c) there is a 30 day presumptive approval for the Tier Transfer Submittal. The new person must wait until the transfer becomes effective before starting work. However, the current holder of the Tier Classification status could continue response actions up to the point the Tier transfer is effective.

Do the Tier I inclusionary criteria apply to sites with Class C RAOs that are located within groundwater resource areas that now become delineated as Zone II areas? If so, when must the Tier I Permit be applied for? [November, 2001]

Yes. When a newly delineated Zone II encompasses a site with a Class C RAO, this change in circumstance is considered new or additional information pursuant to 310 CMR 40.0530. When such new or additional information is discovered, the PRP must determine whether the new condition is likely to change the Tier Classification based on the NRS score (310 CMR 40.0530(1)) and the Tier I Inclusionary criteria (310 CMR 40.0510(1)(c)). Before conducting additional response actions, the owner should consider whether the additional information would change the tier classification of the site. Additional response actions at sites with Class C RAOs must be conducted pursuant to 310 CMR 40.0581 and 310 CMR 40.0582. Note that when a site with a Class C RAO is upgraded to a Class A, the applicable cleanup standards are those standards that are in effect at the time a Class A RAO is achieved (GW-1).

Is Tier Classification necessary at disposal sites that require the collection of seasonal groundwater monitoring data beyond one-year after notification of a release to MassDEP to confirm that requirements for a Permanent Solution are met? [November, 2002, Revised January 2018]

Yes. As specified at 310 CMR 40.0501(2), Tier Classification is required within one year after notification to MassDEP of a release of OHM that exceeds a reporting threshold unless the person conducting response actions submits a Permanent Solution Statement or Downgradient Property Status submittal. If additional groundwater monitoring beyond one year from notification is required to support a Permanent Solution, then Tier Classification is required. If the disposal site is not Tier Classified by the deadline, it will be classified by default as a Tier ID site for the purposes of assessing annual compliance fees (see 310 CMR 40.0502).

At what point in the MCP process is it permissible to link multiple Release Tracking Numbers (RTNs) for a disposal site into one RTN? Which RTN governs the time line for MCP deadlines? [November, 2002]

The MCP provides flexibility to parties cleaning up sites to decide when and if they want to address all or only part of a disposal site.

Multiple RTNs associated with the same disposal site can be linked during Tier Classification. Pursuant to 310 CMR 40.0501(6), an individual Tier Classification submittal may be used for a single discrete disposal site located on one or more parcels of land or to address multiple discrete disposal sites located on a single parcel of land.

In addition, it is possible to link RTNs associated with the same disposal site after Tier Classification by the following mechanisms:

- IRA Completion Statement for the RTNs being linked;
- Tier Classification Submittal (revised); and
- Minor Permit Modification (Tier 1 sites).

When multiple RTNs are part of the initial Tier Classification submittal, the RTN with the earliest status date becomes the primary RTN. If additional RTNs are linked later on in the process, there is no change in the primary RTN; the existing comprehensive response action deadlines for the primary RTN will govern these additional RTNs.

Once an RTN is linked, all subsequent submittals for that RTN (including the RAO statement) may be made under the primary RTN. The only exception is when IRA actions have not yet been completed for the linked RTNs. In this case, the IRA submittals should list the RTN assigned when the IRA was initiated.

For sites where the RTNs are not linked before an RAO statement is submitted, but the releases are located on the same disposal site (for example, two RTNs at an unclassified disposal site), the same RAO

statement can cover multiple RTNs. In this case, all RTNs should be listed on the RAO Statement Form, BWSC-104.

If a site is classified as default Tier ID because a deadline was missed, how does the party conducting response actions come back into compliance? [October 2004, Revised January 2018]

Parties conducting response actions at sites that default to a Tier ID status pursuant to 310 CMR 40.0502 can come back into compliance by conducting the next required response action(s) (i.e., the response action that was not performed by the required deadline which resulted in the default status). For sites that default to Tier ID because of a failure to tier classify within 1 year of release notification, the next required response action is the submittal of an initial Tier Classification. A Permanent Solution Statement may also be submitted in lieu of Tier Classification if no additional assessment or remedial action is necessary to achieve or support the Permanent Solution.

Note that returning to compliance in this manner will not eliminate the need to pay the Tier ID annual compliance fees that accrued during the time of noncompliance, nor prevent MassDEP from pursuing appropriate enforcement procedures, including the issuance of additional fines or penalties.

SUBPART G: Tier I Permits

CHANGE IN OWNERSHIP

When a 21E disposal site changes ownership, under what circumstances must a Tier Transfer Submittal be filed with MassDEP? [November, 2002, Revised January 2018]

A new property owner who intends to conduct Comprehensive Response Actions at a tier- classified site must do so in accordance with a valid Tier I or Tier II Classification status. In such cases, the new owner must file a Tier Classification Transfer Submittal pursuant to 310 CMR 40.0560(8). The regulations do not allow multiple parties, such as the new owner and the former owner, to hold the Tier Classification simultaneously. Comprehensive Response Actions may only be conducted by the person who holds the Tier Classification status.

SUBPART H: Comprehensive Response Actions

REMEDY OPERATION STATUS

When a Remedy Operation Status (ROS) for a site is filed, must the Tier classification or Tier I permit be extended when the five-year time limit expires? [Volume 5, Number 2, August 1999]

No. The Remedy Operation Status regulations [310 CMR 40.0893(4)] state that, once the ROS is achieved, the requirement for achieving a Response Action Outcome (RAO) within five (5) years of the effective date of a Tier I permit or Tier II classification no longer applies.

What is Remedy Operation Status (ROS)? [February 2009]

ROS is a sub-universe of Phase V (not all sites in Phase V are in ROS) and a status in the MCP that, under the 1998 Brownfields amendments to M.G.L. chapter 21E, provides a conditional liability endpoint. ROS can be obtained in cases where a Comprehensive Remedial Action relies upon Active Operation and Maintenance of a remedial system or program and meets the requirements of 310 CMR 40.0893.

Six performance standards, as defined in 310 CMR 0893(2), must be achieved prior to asserting ROS and must continue to be met to maintain ROS. These performance standards include:

- Completion of Phase III and Phase IV Comprehensive Response Actions in accordance with 310 CMR 40.0850 and 310 CMR 40.0870, respectively;
- Implementation of a remedial system or remedial monitoring program designed to achieve a Permanent Solution in accordance in with 310 CMR 40.0870;
- Operation and Maintenance of the remedial system or program in accordance with 310 CMR 40.0890, 310 CMR 40.0000 and any applicable permits, approvals or licenses;
- Elimination or control of all sources of Oil and/or Hazardous Materials (OHM) in accordance with 310 CMR 40.1003(5);
- Elimination of any Substantial Hazard; and
- Documentation and submittal of Status Reports and Remedial Monitoring Reports containing information and data on the operation and maintenance or monitoring of the remedial system or program.

When should ROS be used? [February 2009]

ROS can only be filed for a site when the selected remedial measure (evaluated in Phase III and developed in Phase IV) and ongoing remedial operations will likely result in a Permanent Solution. Meeting this requirement means having sufficient certainty that the remedial measure, as designed and implemented, will achieve a level of No Significant Risk in a predictable period of time. Certainty in the remedy should be based on site-specific data and implementation results.

ROS is a significant milestone in the MCP with a 21E liability exemption provided ROS is maintained. Accordingly, ROS must not be entered into without due consideration, and the appropriate data and justification. Remedial systems or programs being implemented under ROS must be actively monitored and evaluated over the course of operations to demonstrate that applicability criteria and

performance standards established by 310 CMR 40.0850 and identified in the Remedy Implementation Plan are being met and that acceptable and anticipated progress toward a Permanent Solution is being made.

What is the difference between Phase V and ROS? [February 2009]

ROS is a special status for qualifying disposal sites within Phase V. A disposal site where ROS has been asserted and maintained is considered to be in Phase V and to have ROS. Not all disposal sites in Phase V meet the conditions and requirements of ROS. Further, persons conducting response actions in Phase V may choose not to assert ROS. When there is uncertainty about the adequacy and/or ultimate success of a remedy in achieving a Permanent Solution, (e.g., available data are insufficient to have confidence in the effectiveness of the remedy), or if source control and a condition of No Substantial Hazard have not been achieved, then ROS cannot be asserted. In such cases, the remedy may be operated under the general Phase V provisions (310 CMR 40.0890).

In addition, pursuant to 310 CMR 40.0893(4), the requirement to maintain an effective Tier I Permit or Tier II Classification or extension does not apply to a disposal site with ROS (i.e., if the Tier I Permit or Tier II Classification expires while the remedy is in operation under ROS, there is no requirement to seek an extension). In contrast, for disposal sites in Phase V without ROS, a Tier I Permit or Tier II Classification or extension must be in effect until an RAO is achieved.

What is the difference between a Class C-2 Response Action Outcome (RAO) and ROS? [February 2009]

There are significant differences between Class C-2 RAO and ROS. One main difference is where each can occur in the overall MCP process. Both Class C-2 RAO and ROS require the identification of a remedy that will achieve a Permanent Solution. A Class C-2 RAO may be achieved, however, when the identification of the remedy occurs at the conclusion of a Phase III feasibility evaluation. ROS, on the other hand, may only be asserted after completion of Phases III and IV. ROS is asserted at the time the remedy that will achieve a Permanent Solution is in operation in Phase V.

Another difference is that, in accordance with 310 CMR 40.1051, a valid Tier I Permit or Tier II Classification, or extension thereof, is required at the time a Class C-2 is filed and for the duration of the operation of the remedial program. This is not, however, required for sites where ROS has been asserted and is being maintained.

The question often asked is why a person conducting response actions at a site would need to submit a Class C-2 RAO if he/she intends to implement a remedy that will achieve a Permanent Solution? One reason for filing a Class C-2 RAO is that 310 CMR 40.0550 and 40.0560 require that persons conducting response actions submit some type of RAO (Class A, B or C) within 5 years of Tier Classification. For disposal sites where Phase IV remedy implementation hasn't been completed by the time an RAO is required, response actions cannot yet proceed to Phase V and ROS. In such cases, filing a Class C-2 RAO would satisfy the requirement at 310 CMR 40.0550 or 40.0560.

For disposal sites where a Class C-2 RAO was previously filed, the option to enter into ROS still exists once Phase IV is completed, provided that the ROS performance standards are met. The Class C-2 RAO is not replaced or voided by ROS. The Class C-2 RAO remains on the record as an achieved milestone even after response actions proceed into Phase IV and beyond toward the achievement of a Permanent Solution.

The table below summarizes the key components of and differences between Phase V, ROS within Phase V, or Class C-2 RAO

Component	Phase V	ROS within Phase V	Class C-2 RAO
When to Enter	After completion of Phase IV RIP	Upon or after entering Phase V once performance standards are met	After completion of Phase III RAP
Prior Source Control or Elimination Required?	Yes	Yes	Yes, to the extent feasible
Prior Completion of Phase III Required?	Yes	Yes	Yes
Prior Completion of Phase IV Required?	Yes	Yes	No
Annual Compliance Fee	Phase V $800	Phase V $800	Post-RAO Class C $800
Must a Tier I Permit/Tier II Classification or Extension be Maintained?	Yes	No	Yes

Can ROS be asserted for a disposal site if an uncontrolled upgradient source is commingled with the disposal site where the remedy is to be implemented? [February 2009]

No. In accordance with 310 CMR 40.0893(2)(d), each OHM source must be eliminated or controlled before ROS may be asserted and as a requirement of maintaining ROS.

How do you "maintain" Remedy Operation Status? [February 2009]

To maintain ROS, persons conducting response actions must ensure that the same performance standards applicable to asserting ROS at 310 CMR 40.0893(2) continue to be met over the period of time that the remedy is implemented and until a Permanent Solution is achieved or ROS is

terminated. Maintenance of ROS also requires the submission of Status Reports and Remedial Monitoring Reports to document the operation, maintenance and monitoring of the remedy and demonstrate that the ROS performance standards are being met. 310 CMR 40.0892(2)(c) specifically requires that the Status Reports include "an evaluation of the performance of the remedial action during the period of time since the last Status Report, including whether the remedial action is achieving remedial goals ..., and a description of any conditions or problems noted during the period that are or may be affecting the performance of the remedial action." This evaluation should include information and/or an explanation regarding remedial performance and contaminant reduction, as well as, demonstrated progress toward cleanup goals and a Permanent Solution.

Under what circumstances is "modification" of a remedy conducted under ROS acceptable? [February 2009]

In general terms, limited modifications may be made to remedies implemented under ROS without requiring termination of ROS as outlined in 310 CMR 40.0893(5). These may include changes such as upgrading off-gas treatment equipment from carbon filtration to catalytic oxidation or optimizing system capacity by adding more recovery wells. The plans and timetable for these modifications need to be documented in the ROS/Phase V Status Report and implemented within 120 days of providing notice pursuant to 310 CMR 40.0893(6)(b). Conducting modifications that cannot be accomplished in this time frame would require the termination of ROS.

Modification of ROS should not include major changes or the addition of new remedies that were not originally evaluated in the Phase III and developed in substantial detail in the Phase IV as a component of the selected remedial approach for achieving a Permanent Solution. If the Phase III and Phase IV evaluations provided a substantially detailed evaluation of the remedy modification (e.g., the possibility that in-situ chemical oxidation might be used after or in conjunction with air sparging/soil vapor extraction), then such modification could be made while maintaining ROS. Implementation of modifications beyond what can reasonably considered enhancement of the current remedy or beyond what is included in the Phase III and Phase IV would require termination of ROS. After termination in such cases, supplemental Phases III and IV for the disposal site must be submitted for the modified remedy before its implementation.

How does ROS Terminate? [February 2009]

Under 310 CMR 40.0893(6), ROS may terminate under the following conditions:

- the person providing the ROS Opinion fails to meet the performance standards for ROS under 310 CMR 40.0893(2); or

- the person providing the ROS Opinion notifies the Department in accordance with 310 CMR 40.0893(6)(c) that such person intends to terminate ROS;

If ROS performance standards are not met, then the ROS is effectively terminated, unless notice is given by the person conducting response actions and modifications are made pursuant to 310 CMR 40.0893(6)(b). The Department may act to terminate ROS if it determines that the performance standards are not met. Persons conducting response actions are required to terminate ROS if they find that the performance standards are no longer being met and cannot or do not address the issues affecting the status within the timeframe provided by 310 CMR 40.0893(6)(b). Finally, persons conducting response actions may elect to terminate ROS, even when performance standards continue to be met.

Why is there a requirement to achieve an RAO within 2 years of ROS termination (310 CMR 40.0893(6)(e))? [February 2009]

310 CMR 40.0550 and 40.0560 require that some type of RAO be achieved within 5 years from Tier Classification or the effective date of a Tier I Permit, unless the disposal site is otherwise in ROS. When ROS is terminated for a disposal site, the requirement to achieve an RAO within 2 years of such termination is intended to ensure that the requirement at 310 CMR 40.0550 and 40.0560 is met for those disposal sites where ROS had been asserted and, as a result, an RAO was not required or submitted within 5 years from Tier Classification. For disposal sites where a Class A or B RAO cannot be achieved within two years of ROS termination, a Class C RAO would satisfy the requirement at 310 CMR 40.0893(6)(e). For disposal sites where a Class C RAO was achieved prior to assertion of ROS, the requirement to achieve an RAO within two years of ROS termination has already been met.

What is required for a No Substantial Hazard (NSH) demonstration (a requirement for asserting and maintaining ROS)? [February 2009]

In accordance with 310 CMR 40.0893(2)(e), Substantial Hazards shall be eliminated in order to meet the performance standard for ROS. A Substantial Hazard is a condition that would pose a significant risk of harm to health, safety, public welfare, or the environment if it continued to be present for five more years beyond the time of the evaluation and including the risk posed since the time of notification. A Substantial Hazard evaluation must be performed as part of the Phase II Comprehensive Site Assessment, and if a Substantial Hazard exists, an RAO cannot be achieved for the site until the Substantial Hazard is eliminated.

In accordance with 310 CMR 40.0956, the focus of a Substantial Hazard Evaluation shall be on possible exposures to human and environmental receptors, considering the current uses(s) of the disposal site and surrounding environment. The exposure period must be equal to or greater than the time from notification to the date of the evaluation plus 5 years.

A condition of No Substantial Hazard to the Environment would exist if steps have been taken to eliminate or mitigate any of the conditions affecting an environmental resource at a site as described in 310 CMR 40.0956(2), including uncontrolled discharges to surface water and continued migration of OHM to the environment.

A condition of No Substantial Hazard to Health would exist if, for an appropriate Exposure Period, no Cumulative Receptor Cancer Risk and no Cumulative Receptor Non-Cancer Risk is greater than the Cumulative Receptor Risk Limits specified at 310 CMR 40.0993(6), i.e., the Cumulative Receptor Cancer Risks shall be compared to an Excess Lifetime Cancer Risk limit of 1 x 10-5. Cumulative Receptor Non-Cancer Risks shall be compared to a Cumulative Non-Cancer Risk Limit Hazard Index of 1.

Alternatively, in accordance with the provisions of 310 CMR 40.0956(1) (c), a condition of No Substantial Hazard to health would exist if there are no current exposure pathways to OHM at a disposal site.

Should the No Substantial Hazard (NSH) demonstration be reevaluated during the course of ROS? [February 2009]

In accordance with 310 CMR 40.0893(2)(e), to achieve and maintain ROS any Substantial Hazard shall be eliminated. Therefore, the condition of No Substantial Hazard must be evaluated, as necessary, on an ongoing basis to ensure that current and foreseeable future use conditions of a site have not changed to create a Substantial Hazard. A finding of a Substantial Hazard would require termination of ROS.

Is "rebound monitoring" acceptable in ROS without triggering termination? [February 2009]

Yes. Rebound monitoring can be conducted under ROS once the remedial goals have been achieved without triggering ROS termination. Rebound monitoring is a prudent and necessary step in a variety of remedial operations to confirm whether the remedial goals have been achieved and conditions remain

stable over time. In accordance with 310 CMR 40.0893(6)(d), rebound monitoring may be conducted in ROS after discontinuing operation of the remedial system on which the ROS is based, as long as notice is provided to the Department in the next required Status Report after system shutdown. To maintain ROS while conducting rebound monitoring, Status Reports must continue to be submitted to the Department even though system is not operating. The duration of rebound monitoring is not specified in 310 CMR 40.0893. The appropriate period and frequency is site- and remedy-specific and based on professional judgment. Should operation of the remedy be resumed after rebound monitoring, the Department must be notified within the timeframe of the next Status Report following resumed operation. Provided these requirements are met, ROS will be maintained during the rebound monitoring.

What fee(s) apply to sites in ROS? [February 2009]

The annual compliance fee for disposal sites in ROS is the Phase V Fee Category currently set at $800 per year.

Can Monitored Natural Attenuation (MNA) be implemented at a site under ROS? [February 2009]

Yes, MNA can be implemented under ROS provided that it meets the ROS performance standards. With the April 2006 MCP amendments, "Active Remedial Monitoring Program" was added to the MCP definition of "Active Operation and Maintenance" (ROS applies to remedies that meet the definition of Active Operation and Maintenance). The 2006 amendments also included the addition of a definition of "Monitored Natural Attenuation" (see definitions at 310 CMR 40.0006). Active Remedial Monitoring Programs include such remedies as MNA, application of Remedial Additives, reactive walls and other remedies that employ a systematic program of sampling and analysis of environmental media to measure progress toward remedial goals. The inclusion of Active Remedial Monitoring Programs under the definition of Active Operation and Maintenance allowed MNA to be considered for ROS, since ROS is applicable to disposal sites in Phase V where the Comprehensive Remedial Action relies on Active Operation and Maintenance of a remedy (see 310 CMR 40.0893(1)).

POST CLOSURE REMEDIATON AND CONSTRUCTION

I want to undertake construction at a site where an A-3 RAO was filed several years ago. What are my MCP obligations in this regard? [Volume 4, Number 1, May 1997]

Provided you are undertaking construction activities that do not create conditions that invalidate the RAO [including any Activity and Use Limitation (AUL) conditions], you do not need to notify MassDEP [see 40.0317(17) and 40.0370]. In such cases, you can perform construction activities "outside the MCP process". Performing construction may result in the removal of Remediation Waste. Soil removal will require appropriate handling and a BOL where necessary [see 40.0030].

If the intent is to perform additional response actions to modify conditions of the RAO, conduct additional response actions in order to withdraw an AUL, and/or to maintain a condition of No Significant Risk, then you will need to notify MassDEP to obtain a Permit Extension or Tier II Classification Extension, and reenter the MCP process [see 40.0581 and 40.0582].

A RAM is being conducted at a site to remove NAPL. The PRP plans to file a Class C-1 RAO and continue NAPL removal operations. Under what MCP remedial action would this occur? [November 2007]

If the NAPL removal operations are needed to achieve and maintain the Class C-1 RAO, a RAM Completion Statement should be filed, and the NAPL removal operations continued as a Post Class C Operation, Maintenance, and/or Monitoring activity pursuant to 310 CMR 40.0897, addressed via the Status and Remedial Monitoring Report provisions of 310 CMR 40.0898. If the NAPL removal operations are not needed to achieve and maintain the Class C-1 RAO, the NAPL removal operations may continue as a RAM, addressed via the Status and Remedial Monitoring Report provisions of 310 CMR 40.0445.

Does the requirement that OHM sources be eliminated, controlled, or mitigated to the extent feasible for Class C RAOs apply to Class C RAOs filed prior to April 3, 2006 (the effective date of this requirement)? [November 2007]

At the time of the next required 5-year Periodic Evaluation for Temporary Solutions (i.e., Class C RAOs), the PRP must indicate whether the Class C RAO status is Class C-1 or C-2. With that submittal, it will be necessary to ensure that the disposal site meets the performance standards for Class C RAOs. Both Class C-1 and Class C-2 RAOs require that the source be eliminated, controlled or mitigated to the extent feasible in accordance with 310 CMR 40.1050(1) and 40.1003(5)(b).

SUBPART I: Risk Characterization

CLEANUP STANDARDS

If GW-3 cleanup standards for some chemicals are lower than GW-1 standards, could you be in a situation where you would have no obligation to report, but would have to clean up? [Volume 3 Number 1, June 1996]

No. For chemicals that have Method 1 cleanup standards, the Reportable Concentration for category RCGW-1 groundwater is based on the lowest of the three Method 1 groundwater standards. Thus, for a chemical that has a GW-3 standard that is more stringent than both the GW-1 standard and the GW-2 standard, the RC for groundwater is based on the GW-3 standard.

However, it should be noted that being below an RC does not necessarily mean that a site poses no risk and does not need to be cleaned up. Being below an RC only means that notification is not required. The MCP requires that remedial actions be taken at disposal sites where concentrations of OHM pose a significant risk to health, safety, public welfare or the environment. However, unless the Department notifies a party (i.e., in a Notice of Responsibility) to submit information or undertake response actions to address a release below RCs, any actions taken to clean up a release for which notification was not required is not subject to the submittal requirements, approvals or fees specified in the MCP [see 310 CMR 40.0370(1) and (2)].

Why are some of the Method 1 GW-2 and GW-3 standards lower than the GW-1? I thought the GW-1 standards for the protection of groundwater as a drinking water source were the most stringent? [Volume 1 Number 1, November 1993, Clarified]

The Method 1 GW-1, GW-2, and GW-3 standards are based on different exposures, not gradations of the same exposure. No one category is consistently more stringent than the other; it depends on the chemical. For example, GW-3 tends to be the strictest category for metals and pesticides because of the aquatic toxicity of these chemicals (GW-3 standards are based on protecting surface water environments).

May I use the Method 1 Cleanup Standards of the 1993 MCP at sites with an approved waiver? [Special Edition 2, June 1994]

Yes. According to 310 CMR 40.0630(2)(f), Method 1 Standards, and the other standards and methods for risk characterization found in Subpart I (310 CMR 40.0900) of the current MCP, may be used to develop a Waiver Completion Statement. Please note, however, that the Subpart I Standards include AUL requirements. When using these standards you must also apply the AUL provisions where appropriate. If an AUL is used, an RAO must also be filed in lieu of a Waiver Completion Statement.

Can the proposed draft MCP Method 1 Cleanup Standards for soil and groundwater be used before they are promulgated? [November, 2001]

No. The proposed draft Method 1 Cleanup Standards cannot be used until they are promulgated because it is anticipated that some of the values will change as a result of public comments. However, the basic science that was used to develop the proposed draft standards could be incorporated now, as appropriate, into a Method 2 or Method 3 risk characterization. The "basic science" applicable to soil includes:

-the data sets used to update soil background concentrations
-the latest studies on dermal adherence of soil
-chemical-specific soil-to-groundwater leaching pathway
-updated toxicity information

-updates to the vegetable gardening pathway
-updated methodology to evaluate incorporating exposure to inhaled particles
-updated enhanced soil ingestion rate

The "basic science" applicable to groundwater includes:

-updated toxicity information
-updated methodology to quantify dermal and inhalation exposure to drinking water during showering
-chemical-specific modeling of the groundwater-to-indoor air migration pathway

REPORTABLE CONCENTRATIONS

When characterizing the risks posed by a disposal site using the methods outlined in Subpart I (Methods 1, 2 or 3), do I need to consider all of the contamination at the disposal site, or only that which exceeds the Reportable Concentrations? [Volume 1 Number 1, November 1993]

When characterizing risks posed by a disposal site, you must consider all contaminants identified by the assessment. The Reportable Concentrations (RCs) are thresholds for notifying MassDEP of a release according to the requirements of Subpart C. RCs are not relevant to defining the extent of a disposal site or establishing what areas should be evaluated as part of the risk characterization. The delineation and assessment of a disposal site is independent of the RC values.

METHODS 1, 2 AND 3

Can you clarify the difference between the Reporting Thresholds (RCs and RQs) in 310 CMR 40.1600 (MOHML) and the Method 1 Cleanup Standards in 310 CMR 40.0970? [Volume 1 Number 3, February-March 1994, Clarified]

These two sets of numbers serve different purposes and have distinct applications. The reporting thresholds listed in the MOHML apply to releases and indicate whether notification to MassDEP is necessary. They are not cleanup standards. Once the owner/operator obtains knowledge of a release that meets or exceeds either the RCs or RQs listed in the MOHML, MassDEP must be notified within a specific time frame (see 310 CMR 40.0300).

Method 1 Cleanup Standards are to be used for determining whether remedial actions are needed to achieve a level of No Significant Risk and should only be applied once the nature and extent of contamination have been adequately characterized. The Method 1 Standards are applicable to exposure point concentrations, which may be averages or weighted averages of several samples (see 310 CMR 40.0902). In contrast, the reporting thresholds apply to any single analytical result that equals or exceeds an RC. Note too that the soil and groundwater categories are different for reporting and cleanup purposes.

While many of the RCs are extrapolated from the Method 1 Cleanup Standards (which explains the similarities between some of the numbers), the majority were derived from the RQs. The RCs have limited and specific application and should not be used as standards for remediation.

Does the presence of an imminent hazard automatically mean that the site must be evaluated using a Method 3 risk assessment for purposes of an RAO? [Special Edition 4, February 1995]

No, it does not. The presence of a potential Imminent Hazard may require that a narrowly focused site-specific (Method 3 type) risk assessment be performed, which can be used to support the Immediate Response Action Completion Report (IRA-C). The eventual RAO for the disposal site would rely upon a Method 1, 2 or 3 risk characterization, as applicable.

Why are Method 1 Standards not applicable and suitably analogous under Method 3? Can't you use Method 1 numbers to screen out chemicals for Method 3? [Special Edition 4, February 1995]

Method 1 Standards are not applicable and suitably analogous under Method 3 because the Method 1 standards represent an alternative risk characterization approach. The result of the Method 3 risk characterization is an estimate of the cumulative risk to a receptor from the contaminants at the site, considering both exposures from multiple pathways and multiple chemicals. If Method 1 standards are used to screen out chemicals in a Method 3 risk assessment, the result of the Method 3 risk characterization will not be a true estimate of that cumulative risk, only an estimate of the risk from those chemicals not screened out of the assessment.

[The Method 1 standards by themselves are considered to be generally protective of exposures from multiple contaminants since the target risk goals used to develop the standards were set at levels sufficiently below the Method 3 Cumulative Risk Limits to compensate for the possible presence of multiple contaminants at a site.]

Can you use different Methods to characterize the risk of different releases at the same site?...how about for different portions of a site (e.g., Method 3 for indoor air and Method 1 for soil and groundwater)? [Special Edition 4, February 1995]

The fundamental risk management criteria of the MCP are expressed as limits on cumulative risk, or the risk to a receptor received from all applicable exposure pathways (and by all chemicals): even the Method 1 standards were set at levels which would be generally protective of multi-chemical, multi-pathway exposures. By breaking up a site into discrete areas and assessing them by different Methods, the cumulative impact of the contamination may not be adequately addressed. In order to minimize this problem, the criteria for determining the applicability of the Risk Characterization Methods (described at 310 CMR 40.0940) were written so that one of the described options would be employed at a given site. (Method 3 could not be used to evaluate indoor air while using Method 1 for the soil and groundwater.) There are very specific circumstances under which a combined approach may be used, but that is limited to situations in which the human exposures are evaluated using Methods 1 or 2 and the public welfare and environmental risks are evaluated using a Method 3 risk characterization.

The MCP allows achievement of a Response Action Outcome (RAO) for a portion of a disposal site [310 CMR 40.1003(3)]. When multiple RAOs are submitted for a site, one of the three Risk Characterization Methods may be used to support a given RAO. Further guidance on how RAOs may be achieved for portions of a disposal site is being developed by the Department.

If I am using Method 1 to perform a risk characterization, can I average the groundwater contaminant concentrations found in the monitoring wells across the site, or must each well meet the applicable groundwater standards? [Volume 1 Number 4, April-May 1994]

You must consider the contaminant concentration at each groundwater monitoring well as a separate exposure point and meet the applicable cleanup standard at each monitoring well location. According to the MCP, existing water supply wells and monitoring wells are considered current or potential exposure points for a Method 1 Risk Characterization [see 310 CMR 40.0973(3)(a)]. Additionally, exposure point concentrations must be determined for each oil and/or hazardous material at each exposure point and they must be representative of the actual concentration at that exposure point, unmodified by other exposure assumptions [see 310 CMR 40.0973(4)]. Contaminant concentrations from different exposure points (i.e., different monitoring wells) cannot be averaged across an area of the site and subsequently compared to the Method 1 standards.

It is acceptable, however, to average contaminant concentrations from multiple sampling rounds at the same well or exposure point if the average value is considered representative of current and reasonably foreseeable concentrations at that exposure point [see 310 CMR 40.0926(3)]. The Risk Assessment Guidance Document developed under development by MassDEP's Office of Research and Standards provides additional guidance on this topic.

If I am using Method 3 to characterize the risk posed by contamination at my site, should I evaluate the risk posed by all the contaminants or just those that exceed the Reportable Concentrations (RCs) or the Method 1 Cleanup Standards? [Volume 1 Number 5, June-July 1994]

Method 3 evaluates the cumulative risk posed by the contamination present at the site to exposed receptors [see 310 CMR 40.0993(5)]. By looking at the cumulative risk, a Method 3 evaluation considers impacts resulting from the presence of multiple chemicals and/or multiple exposure pathways. Contaminants which are present in concentrations below RCs or the Method 1 Standards may contribute to the cumulative impact which the site has on the surrounding community and they must be included in the risk evaluation. While the MCP does exempt from further risk characterization those contaminants present at background levels [310 CMR 40.0902(3)], the regulations do not allow the RCs or Method 1 Standards to be used to "screen out" contaminants of concern. Note: 310 CMR 40.0993(3) specifically states that the Method 1 Standards are not considered in Method 3 because they represent an alternative approach to Method 3. As such, Method 1 cannot be used to "screen out" contaminants in a Method 3 evaluation.

Is it possible to conduct a Method 3 Risk Assessment without conducting a Phase 2 Comprehensive Site Assessment? [Volume 2 Number 1, July 1995]

Yes. A Method 1, 2, or 3 risk characterization may be done at any time during the cleanup process as long as the site contamination is adequately characterized. Specifically, it is the quality of the site investigation that will determine whether you can convincingly claim that there is "No Significant Risk" without going through a formal Phase 2 Comprehensive Site Assessment. This. This information includes defining the extent of contamination, determining background and identifying sources.

Must every OHM present in the environment at a site always be included in a site risk characterization? [November, 2002]

No. An OHM is not required to be included in a site risk characterization if that OHM is:

- present at a low frequency of detection (that is, less than 10% of the samples) and in low concentrations and there is no historical or present use of the chemical at the disposal site; or
- present at levels that are consistent with "background" concentrations in the area; or
- not subject to the requirements of the MCP because it is specifically exempt from the definition of "release" set forth at 310 CMR 40.0006 (e.g., pesticides that were applied consistent with the label instructions); or
- not subject to the requirements of the MCP because it is specifically exempt from the definition of "disposal site" as described in 310 CMR 40.0006 (e.g., lead-based paint residues that emanated from the point of original application of such paint).

WASTE MATERIAL

I have "blobs" of waste materials at my site that cannot be considered soil or groundwater. Because the materials are in a solid matrix, they likewise cannot be considered non-aqueous phase liquids. How are these deposits addressed/regulated by the MCP? May I use a Method 1 Risk Assessment process? [Volume 4, Number 1, May 1997]

If the waste materials contain oil or hazardous materials, the risk posed by these deposits must be evaluated using a Method 3 Risk Assessment process. Under the provisions of 310 CMR 40.0971(1), Method 1 may only be used at sites where the presence of oil and/or hazardous material is limited to soil and/or groundwater. A waste material is neither soil nor groundwater.

Moreover, note that under the provisions of 310 CMR 40.1003(5)(a)(3), a Class A or B Response Action Outcome cannot be achieved if the presence of a waste deposit constitutes a continuing source of environmental contamination.

UPPER CONCENTRATION LIMITS (UCLs)

Can I compare the Upper Concentration Limits (UCLs) listed in 310 CMR 40.0996(4) to the arithmetic mean of soil and groundwater contaminant levels or should I compare them to the highest contaminant concentrations observed? [Volume 1 Number 4, April-May 1994, Revised]

When using Method 3 to characterize the potential future risk of harm to public welfare and the environment, the arithmetic average of contaminant concentrations in soil and groundwater across an area of the site should be compared to the UCLs [see 310 CMR 40.0996(2)]. This average may also include "Non-Detect" results within the area of contamination, provided the concentrations for the Non-Detects are calculated to equal one-half of the Sample Detection Limit (SDL). However, the average contaminant concentration for soil and/or groundwater should not include any sample (either positive or Non-Detect) beyond the area of contamination. The average contaminant concentrations within any hot spot in the area would also be compared to the UCLs [see 310 CMR 40.0996(2)(b)].

GROUNDWATER

Why aren't the Method 1 GW-1 standards always the most restrictive? Do the GW-1 standards consider the vaporization of contaminants from groundwater during such activities as showering, etc.? [Special Edition 4, February 1995]

The groundwater category GW-1 standards are considered protective for the use of that water as drinking water. In order to create consistency among MassDEP programs and regulations, the existing Massachusetts drinking water standards and guidelines were adopted as the Method 1 GW-1 standards whenever possible. In addition, the GW-1 standards developed specifically for the MCP were calculated in a manner consistent with the methodology used to develop the drinking water standards and guidelines. The Limits (MMCLs, promulgated in 310 CMR 22.000) and guidelines (developed by the MassDEP Office of Research and Standards for the MassDEP Drinking Water Program) are health based but do not explicitly consider vaporization of contaminants from water to air through the use of water in household activities. Therefore, it is possible that GW-2 standards, which are based on volatilization from groundwater to indoor air, are more stringent than GW-1 standards. The GW-3 standards are based on the Ambient Water Quality Criteria and are intended to address environmental concerns about surface water discharge and potential exposures. It is also possible that the GW-3 standard may be more stringent than the GW-1 or GW-2 standards for some contaminants.

The MCP uses the phrase "occupied building or structure" as part of the GW-2 definition [310 CMR 40.0932(6)] but does not define the term. What is an occupied building or structure? [Special Edition 4, February 1995]

The GW-2 category identifies groundwater which, if contaminated with volatile chemicals, could result in health risks from contaminated indoor air. The phrase "occupied building or structure" was used to differentiate between buildings in which people could experience significant exposures because they live or work there (such as in homes, convenience stores, schools, and manufacturing facilities) and structures which are infrequently visited (examples of the latter could include gazebos, storage sheds and garages used for storage). A more complete discussion of "frequency of use" may be found in the MCP at 310 CMR 40.0933(4)(a) as part of the soil categorization process, and that discussion may be helpful in determining if a building or structure is occupied: a building or structure should not be considered "occupied" if its frequency of use would be considered "low" or "not present".

Existing monitoring wells are considered "Exposure Points" when using a Method 1 risk characterization (310 CMR 40.0973(3)(a), but what if a well is monitored and then closed: does the monitoring well still exist as an exposure point? How do new groundwater monitoring technologies, (like push technology, microwells, Geoprobes, etc...) factor into Exposure Point Concentration calculations? Do all sampling locations constitute exposure points? [Special Edition 4, February 1995]

Existing water supply wells and monitoring wells are considered "Exposure Points" under Methods 1 and 2 (and for comparison to "applicable or suitably analogous standards" under Method 3) to insure that all points within an aquifer meet the applicable standards, as even small, localized areas of contamination may have significant impacts on drinking water supplies and indoor air quality. Thus, the results from monitoring wells which have been closed, or results from other sampling techniques which provide a snapshot of localized aquifer conditions would be treated in the same manner as results from existing monitoring wells, as they provide evidence of groundwater quality in a specific location.

What is the classification for irrigation wells? How are non-potable supply wells considered when classifying groundwater? [Special Edition 4, February 1995]

Wells which provide water for human consumption would be considered "private water supply wells" for the purpose of categorizing groundwater [310 CMR 40.0932(4) and 310 CMR 40.0006]. This would include any private wells connected to an indoor water distribution system where human ingestion of the water is possible, even if such use of the water is not currently occurring. Wells supplying water for purposes other than human consumption would not be considered "private water supply wells" for the purposes of groundwater categorization. In the absence of other factors which would result in a GW-1 categorization, the groundwater around such "non-potable" supply wells would be considered GW-2 and/or GW-3 as applicable. However, since the Method 1 Standards for GW-2 and GW-3 are not considered protective for exposures from swimming pools, sprinkler play, contact with commercial or industrial process water or agricultural use of the water, a Method 3 risk characterization would be required to demonstrate that the oil or hazardous material in the water pose no significant risk of harm to health, safety, public welfare or the environment. (Water used for such purposes would constitute "an environmental medium in addition to soil or groundwater", 310 CMR 40.0942(1)(b).)

If a site is classified as GW-1 due to a private supply well within 500 ft., and the private well becomes inactive, is the site still classified as GW-1? What if it is an inactive public supply well? [Special Edition 4, February 1995, Clarified]

Groundwater which is categorized as GW-1 solely because of its location within 500 feet of a private well need not be categorized as GW-1 if the private well is removed as a source of drinking water and: 1) written documentation is sent to MassDEP to show that the property is now on a public water supply, 2) written documentation is sent to DEP showing that there is no unpermitted cross-connection between the private well and the public system or that the well is properly abandoned, and 3) a Grant of Environmental Restriction which prohibits the use of the well as a source of drinking water or the installation of a new private water supply has been approved and is recorded and/or registered (310 CMR 40.0932(5)(d)).

Inactive Public Water Supplies are often held in reserve for future increased demand in the community. The groundwater around such a well must be considered GW-1 unless the well has been officially abandoned according to Department records. The regional Drinking Water Program staff should be consulted for that information.

What groundwater standard applies for the shallow aquifer within a Zone II of a public water supply where the production wells are screened within the lower confined aquifer? [Volume 4, Number 1, May 1997]

The GW-1 standards apply regardless of which aquifer within the Zone II is the source of the public water supply. A. Although it may appear that there is no hydrogeologic connection between the two aquifers,

studies have shown that fissures can exist in aquitard materials that provide a direct conduit for contamination. In addition, improperly installed monitoring wells for site investigation purposes can inadvertently hydrologically connect the two aquifer lenses.

Do GW-1 standards apply to contamination detected in groundwater within the bedrock underlying a Zone II? [Volume 4, Number 1, May 1997]

Yes.

For the purposes of applying Method 1 standards, if a disposal site is within 500 feet of a private water supply well, but is downgradient from that well, should the groundwater at the site necessarily be categorized as GW-1? [Volume 2 Number 1, July 1995]

No. However, simply stating that the site is downgradient from the well is NOT sufficient to get out of the GW-1 designation. If it can be demonstrated that there is no hydrogeologic connection between the groundwater at the disposal site and the private water supply well at the upgradient property, then the groundwater need not be categorized as GW-1 solely due to its location within 500 feet of the well [see 310 CMR 40.0932(5)(d)(2)]. The determination must be based on site-specific conditions and the highest daily pumping rate possible for the private water supply well.

Other scenarios where an exclusion from the GW-1 categorization may be applicable include: a) when it is adequately documented that the private water supply well has been removed from service as a source of drinking water, b) when there is a hydrogeologic barrier between the groundwater at the disposal site and the private water supply well, or c) when the disposal site is cross-gradient to local groundwater flow direction and at sufficient distance from the well such that it is outside of the zone of contribution for that well [see 310 CMR 40.0932(5)(d)(1-2)]. Similar provisions exist for groundwater within an Interim Wellhead Protection Area [see 310 CMR 40.0932(5)(a)].

What site-specific characteristics should be considered in making a determination that seasonal groundwater monitoring is not necessary at a disposal site? [November, 2002]

Site-specific characteristics that may indicate seasonal groundwater monitoring is not necessary at a disposal site include, but are not limited to:

- the type(s) of contaminant(s) and the nature, age, and history of release indicate low mobility and low potential to migrate;
- previous monitoring data indicate that the concentrations of contaminants in the soil and groundwater are substantially below applicable standards and are not migrating from the release;
- seasonal groundwater fluctuations would not likely affect concentrations in groundwater; and/or
- the geology at the site consists of low permeability soil (for example, clay and silt with no fractures), which would retard contaminants from migration.

In all cases, sufficient groundwater monitoring must be conducted at disposal sites to adequately characterize the site, evaluate the need to implement remedial measures, and demonstrate compliance with applicable cleanup standards. In cases where significant impacts to groundwater have been documented, MassDEP recommends that a minimum of one year of quarterly groundwater monitoring be conducted.

Adequate documentation must be provided to MassDEP to demonstrate that adequate monitoring has been conducted in accordance with the Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare, and the Environment (310 CMR 40.0900) and with the Provisions for Response Action Outcomes (310 CMR 40.1000).

While performing due diligence on a site where an RAO has been filed, it is discovered that a nearby municipal well that had an Interim Wellhead Protection Area (IWPA) now has a Zone II boundary that extends onto the site property. The RAO relied on GW-2 and GW-3 standards when filed. If the RAO was valid at the time it was filed and current groundwater concentrations are consistent with or lower than concentrations at the time the RAO was filed, is the RAO still valid, or are additional response actions required? [November 2007]

See SWAP Zone II Delineation - Effect on 21E Site Management for details on this issue. For a disposal site where a Permanent Solution (Class A or B RAO) was achieved prior to the delineation of the Zone II boundaries, additional remedial action as a result of the newly delineated Zone II is not required unless the RAO is not protective of actual current or foreseeable exposures associated with the previously identified IWPA, as described in 310 CMR 40.0900 and 310 CMR 40.1000. This is true even where groundwater concentrations exceed the drinking water standards. (Re-notification is also not required pursuant to 310 CMR 40.0317(17)).

For a site that has achieved only a Temporary Solution (Class C RAO) and is located within a Zone II, however, the GW-1 cleanup criteria must be met before a Class A or B RAO can be achieved.

If MassGIS map shows an area indicating a Non-Potential Drinking Water Source Area (NPDWSA) overlapping a designated Zone II, is the NPDWSA area within the Zone II exempt from GW-1 classification? [February 2009]

No. The criteria for GW-1 classification are independent of each other. While the NPDWSA indicates that an area is not designated as a potential future water supply source, the overlapping Zone II means that the area is protected as a source of a current water supply.

NON-POTENTIAL DRINKING WATER SOURCE AREA

Some BWSC Resource Priority maps contain Non-Potential Drinking Water Source Areas (NPDWSA) that overlap with current Drinking Water Source Areas. In such cases, is the RCGW-1 designation of the current source affected? [Volume 5, Number 2, August 1999]

No. Status as a Current Drinking Water Source Area takes precedence over status as a Non-Potential Drinking Water Source Area. Thus, regardless of the aquifer classification as a NPDWSA, the RCGW-1 status applies in a current wellhead protection area (Zone II or IWPA) until the current source is abandoned [310 CMR 40.0932(5)(e)].

How does one determine if an aquifer meets the criteria for a Non-Potential Drinking Water Source Area? [November, 2002]

It must be demonstrated that the land use before January 1, 1996 met the criteria for a Non-Potential Drinking Water Source Area (NPDSA), as defined in 310 CMR 40.0006. MassDEP's Policy, WSC-97-701 "Determining Non-Potential Drinking Water Source Areas," provides guidance for making this determination. If these criteria cannot be met, then the requirements and process to be followed for a "Case-Specific Designation of a Non-Potential Drinking Water Source Area" is provided in 310 CMR 40.0932(5)(c).

When reviewing the BWSC Priority Resource Map, I noticed that my site is located within a Zone II that is overlain by an area designated as a NPDWSA. Does this mean that GW-1 standards do not apply to my site? [November, 2002]

No. The existence of a current drinking water source as indicated by the Zone II requires the use of GW-1 standards. The NPDWSA exclusions for a Potentially Productive Aquifer (PPA) apply only when a current drinking water source exposure pathway does not exist. The overlapping area on the map is an artifact of

the GIS mapping process. It should also be noted that the designation of an area as a NPDWSA does not preclude MassDEP's Bureau of Resource Protection (BRP) from permitting a new drinking water source in these areas. A NPDWSA can become part of a Zone II for a new public water supply well subsequent to the initial reporting of the waste site, making GW-1 standards applicable at the time MassDEP approves the Zone II.

In cases where a municipality has designated an Aquifer Protection District (APD) and the Priority Resource Maps indicate an area within the APD as being a NPDWSA, the use of GW-1 standards is still required. By the enactment of the APD, the municipality has specifically designated this area for the protection of groundwater quality to ensure its availability for use as a source of potable water (see related MCP Q&A).

GROUNDWATER CATEGORY GW-1

If my site is in a GW-1 area which is served by a public water supply system, am I required to initiate treatment of the groundwater to achieve drinking water standards? [Volume 1 Number 5, June-July 1994, Revised]

Yes. To achieve a Class A or B RAO at a site where groundwater is categorized as GW-1, the MCP requires that drinking water standards must be met. MCP cleanup standards that apply to all groundwater categorized as GW-1 are found under Method 1 [310 CMR 40.0960] and under Method 3 "the Massachusetts MCLs" listed in [310 CMR 22.00]. These standards apply to groundwater defined as a Current Drinking Water Source Area as well as to a Potential Drinking Water Source Area (even though no one may currently be drinking the groundwater).

Proper categorization of groundwater depends on the site's location in relation to the source of drinking water. The GW-1 category must be applied if the site is located in a Current Drinking Water Source Area or a Potential Drinking Water Source Area. A Current Drinking Water Source Area includes groundwater: located in a Zone II, an Interim Wellhead Protection Area, Zone A , or within 500 feet of a private water supply well. A Potential Drinking Water Source Area includes groundwater: located 500 feet or more from a public supply line, an area designated by the municipality as a potential future water supply, such as an Aquifer Protection District, or located in a Potentially Productive Aquifer.

Groundwater located in a Potentially Productive Aquifer which underlies urban land is exempt from categorization as a Potential Drinking Water Source Area, provided it does not meet any of the other criteria for GW-1. GW-1 categorization is not required in an Interim Wellhead Protection Area where you can demonstrate that the groundwater is not hydrogeologically connected to the aquifer serving the current well. Similarly, naturally brackish groundwater in a Potentially Productive Aquifer should not be categorized as a Potential Drinking Water Source Area.

Please note: Some municipalities with limited public water supplies require an attempt to develop a private well before allowing a connection to the public supply. The municipality may require that the water in the new private well meet the Massachusetts Drinking Water Standards, even in areas where the groundwater is not categorized as GW-1 by the MCP. In addition, DEP urges anyone conducting an assessment to verify whether there are private wells within 500 feet of the site -- just because an area is served by public water does not mean that there are no private wells in the area.

Is a site located within a sole source aquifer automatically classified as being within a GW-1 area? If not, what factors determine the groundwater designation? [November, 2001]

No. A sole source aquifer is a U.S. EPA designation for an aquifer determined to be the sole or principle source of drinking water for that area pursuant to s.1424(e) of the Federal Safe Drinking Water Act. The designation of an aquifer as "sole source" is not a factor in the MCP groundwater classification scheme. Sole source aquifers, like all other aquifers, must be evaluated based on the criteria listed in the MCP for Current or Potential Drinking Water Source Areas (310 CMR 40.0006). Groundwater must be defined as

category GW-1 if the groundwater is located within a Current Drinking Water Source Area or within a Potential Drinking Water Source Area. The criteria defining these areas include proximity to existing wells, distance from water distribution lines, location within Potentially Productive Aquifers, and location within a municipality's Aquifer Protection District or Zone.

"BRACKISH" EXEMPTION FROM GW-1 CATEGORY

According to 310 CMR 40.0932(5)(b)(2), groundwater within a Potentially Productive Aquifer need not be considered GW-1 if the groundwater is "brackish" and the development of the aquifer as a public water supply is currently technologically or economically infeasible. How is the term "brackish" defined? [Volume 3 Number 1, June 1996]

The MCP does not define the term "brackish". However, 314 CMR 6.00, the Groundwater Quality Standards regulations, define "fresh water" as water having a chloride concentration of less than 250 mg/l or Total Dissolved Solids (TDS) equal to or less than 10,000 mg/l. For the purpose of applying the MCP GW-1 exception described in 310 CMR 40.0932(5)(b)(2), groundwater can be considered saline or "brackish" if the levels of chloride or TDS are above the fresh water levels described above. At the current time, MassDEP considers such levels to be technologically or economically infeasible to treat.

GROUNDWATER CATEGORY GW-2

When determining whether groundwater is in the GW-2 category, do you measure the depth to groundwater from the ground surface or from the basement floor? How do you take groundwater fluctuations into account in determining whether the depth to groundwater is greater than 15 feet? [Volume 3 Number 1, June 1996]

The depth to groundwater is measured from the surface of the ground. Ideally, to take groundwater fluctuations into account, groundwater levels should be measured seasonally at the same well for a year. These values would then be averaged to determine the depth to groundwater. Otherwise use the most conservative value.

GIS INFORMATION ON PUBLIC WATER SUPPLIES

I have been using the GIS Water Resource Maps to identify public drinking water supplies near disposal sites. Do these maps provide information on all public drinking water supplies, or should I be consulting other sources of information? [Volume 3 Number 1, June 1996]

While the GIS maps are good tools for locating municipal public water supplies, they do not identify all public drinking water supplies. Public water systems, as defined in 310 CMR 22.00, include any system which "has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year." Many smaller "non-community" public water supplies (such as those that supply drinking water to condominium complexes, industrial facilities, restaurants and camps/recreation areas) do not currently appear on the water resources maps. In addition, newly approved municipal supplies (i.e., new Zone IIs and IWPAs) may not yet appear on the maps because of a lag in updating the data layer.

Therefore, in addition to consulting the GIS maps, LSPs should always check local information sources (e.g., local Board of Health, Water Department, and Public Works) to ensure that they have the most current and complete information on public water supplies. MassDEP and MassGIS are working to add new and smaller public supplies to the Water Resources Maps, making the map information more comprehensive. Even after this work is completed, however, it will still be advisable to consult with local officials to confirm and supplement the map information.

(Note: LSPs should also check with local officials regarding private water supply locations.)

SOIL

Why must soil which is up to 15 feet below the surface be considered potentially accessible and therefore an exposure point? Does one categorize soil or contamination? [Special Edition 4, February 1995]

Soils from 3-15 feet unpaved, or 0-15 feet paved are considered "potentially accessible" because foreseeable future activities such as landscaping, minor construction and utility work could create conditions where human receptors could come in contact with those soils.

Technically, any soil, contaminated or clean, can be categorized based on soil accessibility and the type of receptors present and their frequency and intensity of use of the area. From a practical standpoint, however, one need only categorize the contaminated soil at a disposal site.

Can elevated concentrations of oil or hazardous material remain in the soil if it has been determined that there is no exposure? [Special Edition 4, February 1995, Revised]

In developing the Method 1 (and 2) Standards, a certain amount of exposure was assumed to occur, either under current or future site conditions [see 310 CMR 40.0973(4)]. When a PRP or LSP chooses to use these simplified options for risk characterization, he/she implicitly acknowledges the potential for current and/or future exposures to the contaminated soil, even if such soil is located at depth or under buildings. Thus, it is not possible to leave contaminated soil which exceed these standards without using a Method 3 approach, which evaluates site-specific exposures. With a Method 3 risk characterization, residual concentrations greater than the Method 1 (or 2) standards can be justified if it is determined that there would be no significant risk associated with potential current or future exposures, although if the risk assessment incorporates the assumption that potential exposures are limited in any way (e.g., by the depth of contamination) then an Activity and Use Limitation (AUL) is required [310 CMR 40.1012(1)(a)(2)]. Even under Method 3, however, there is a limit to the concentrations of oil or hazardous material considered to be consistent with a permanent solution: except in very limited circumstances [see 310 CMR 40.0996(4)(a), (b) and (c)], Class A and B RAOs do not apply [310 CMR 40.1036(3), (4) & (5) and 40.1046(4) & (5)] at sites at which the levels of oil or hazardous material exceed the Upper Concentration Limits (UCLs) listed in 310 CMR 40.0996(5). UCLs in soil and groundwater are, by definition, concentrations of oil and hazardous materials which, if exceeded, indicate the potential for significant risk of harm to public welfare and the environment under future conditions.

Please discuss the S-1 boundary conditions (0-3 ft.) vs. imminent hazard evaluation criteria (0-6 inches) vs. environmental risks relative to bioaccumulating contaminants in the top 2 feet of soil. [Special Edition 4, February 1995]

The depth of 3 feet for S-1 soil classification was determined to be protective of potential future human exposures by taking into consideration routine activities such as property maintenance, gardening, etc. Imminent Hazard evaluations look at surficial soil (0-6 inches) because they focus on actual or likely exposures which may occur within a short period of time. Environmental risk assessments are concerned with bioaccumulating contaminants in the top 2 feet of soil because it is believed that such a depth would be protective of most foraging terrestrial receptors.

If human exposure to sediment at a site is the same as for soil, can Method 1 standards be applied to the sediment, even though sediment contamination apparently triggers Method 3 risk characterization according to the MCP? Please also clarify the distinction between sediments and soils. [Special Edition 4, February 1995]

At present, there is no specific human exposure assessment guidance for sediment: in a Method 3 risk characterization, the exposure rates for a human receptor's direct contact with soil would also be used for sediment. The underlying assumption is that, for a given concentration and exposure scenario, absorption resulting from direct contact with sediment would be no greater than absorption from direct contact with

soil. If such an assumption is valid for a site-specific risk assessment, you could also conclude that (a) the same assumption would hold true for Method 1 risk characterizations, and (b) that Method 1 soil standards would be protective of potential human exposures to sediment. Thus, Method 1 (or Method 2) standards may be used to assess human exposures to sediment: if concentrations of oil or hazardous material in sediment are equal to or less than the applicable Method 1 soil standard, then one could conclude that the contaminated sediments pose no significant risk of harm to human health. (This recommendation may change if, in the future, the Department provides specific guidance for the assessment of human exposure to contaminated sediment. No such guidance is currently planned, however.) A Method 3 environmental risk characterization would also be required [310 CMR 40.0942(1)(b)(1)] as the Method 1 soil standards do not consider the potential ecological risks posed by contaminated sediments.

As defined in 310 CMR 40.0006, the term "sediments" means "all detrital and inorganic or organic matter situated on the bottom of lakes, ponds, streams, rivers, the ocean, or other surface water bodies." Since water levels in surface waters frequently vary, the definition is further clarified such that sediments are found in tidal waters below the mean high water line and below the upper boundary of a bank which abuts and confines a water body. This definition highlights the relationship between the sediment and an aquatic environment which could be affected by contamination present in the sediment. The definition of soil is more general ("any unconsolidated mineral and organic matter overlying bedrock that has been subjected to and influenced by geologic and other environmental factors") and specifically excludes sediments.

SOIL CATEGORIZATION

I am using the MCP soil categorization matrix [310 CMR 40.933(9)] for the purpose of categorizing soils at a disposal site. The site is located within 500 feet of a school and therefore it would seem the "frequency of use" by children should be considered high. The site, however, is also surrounded by a fence. Does the presence of the fence decrease the frequency of children's use? [Volume 3 Number 1, June 1996]

Frequency of use, under the MCP, indicates how often a receptor makes use of, or has access to the disposal site [310 CMR 40.0933(4)(a)]. If it can be shown that the fence does restrict access of children to the site, then a lower frequency of use by children could appropriately be applied when determining the soil category. Issues such as the fence height and integrity, and actual observations of site use need to be considered when determining accessibility of the site to children.

If, as a result of factoring the fence into the soil categorization, soil is categorized as something other than S-1, then an AUL must be implemented to ensure that the soil category does not change without further assessment or remediation. The AUL should contain information about the obligation for maintenance of the fence and any other conditions necessary to maintain a level of no significant risk at the site. The contents of an AUL are specified in greater detail in 310 CMR 40.1071(2) and 40.1074(2).

Is it necessary to collect samples to characterize soils in the saturated zone? [August 1999, Revised November 2017]

In many cases, yes. For example, significant amounts of OHM may be immobilized/sorbed onto soil particles because of NAPL migration and seasonal groundwater elevation fluctuations. This "smear zone" can contain significant levels of contaminants that may present a health concern and also act as a continuing source of groundwater contamination. Section 310 CMR 40.0904(2)(a) of the MCP states that the Risk Characterization shall contain a description of "the horizontal and vertical extent and concentrations of oil and/or hazardous material in all evaluated media." Other scenarios where the characterization of soils in the saturated zone is warranted include locations where contaminated fill materials may be present at or below the groundwater table, and sites where the discharge of aqueous/liquid waste streams may have significantly contaminated soils at or below the groundwater table.

Should soil samples being analyzed for Toxicity Characteristic Leaching Procedure (TCLP) be preserved with methanol? [Volume 5, Number 2, August 1999]

No. The TCLP analysis is a leaching procedure, so the use of preservatives such as methanol is not appropriate and is not permitted by the method. For cases when TCLP analysis will be performed, the Department recommends the following steps to maintain sample integrity:

(1) Use an EnCoreTM sampler or similar device to obtain a (minimum) 25-gram sample. While such devices cannot stop biodegradation, they can help prevent volatilization.
(2) Analyze the sample ASAP (the TCLP method allows up to a 14-day holding time for unpreserved soil samples).
(3) Consider freezing the sample until the analysis can be performed.

DELINEATING THE EXTENT OF A DISPOSAL SITE

When delineating the boundaries of a disposal site, is it appropriate to define the limits of the disposal site in terms of the area where levels equal or exceed RCs? [Volume 3 Number 1, June 1996]

No. It is not appropriate to define the limits of a site based on whether concentrations meet or exceed RCs. RCs are notification limits, not disposal site limits. However, this does not mean that it is necessary to extend the investigation to the point of finding no detectable levels of contaminants. Site boundaries can be approximated if you determine that contaminant levels are dropping off and are not likely, both currently and in the future, to extend much beyond where you have measured them.

In defining the extent of contamination in either groundwater or soil, there should be a reasonable amount of certainty that any real or potential problems are ruled out, taking into consideration: the concentrations of oil and/or hazardous material, contaminant persistence and mobility, the extent to which the source has been mitigated, receptor impacts, and foreseeable land uses. It should be confirmed that concentrations are clearly decreasing away from the source of the release and, in the case of groundwater impacts, no highly concentrated "slug" of contamination has migrated past the outlying monitoring points.

BACKGROUND

Could arsenic levels associated with former orchards be considered "background"? [Special Edition 4, February 1995]

The definition of background in the MCP sets out two criteria to be met in order for a contaminant to be considered background. First, the levels of oil or hazardous material present must be "ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern". The second criteria states that the levels must be "attributable to geologic or ecologic conditions, atmospheric deposition of industrial process or engine emissions, fill materials containing wood or coal ash, releases to groundwater from a public water supply system and/or petroleum residues that are incidental to the normal operation of motor vehicles." Both of these criteria must be met in order for the levels detected to be determined to be background. Arsenic from a former orchard may fulfill (at some locations) the first requirement, but it does not fulfill the second requirement: it is therefore not appropriate to consider arsenic levels associated with former orchards as background.

NO SIGNIFICANT RISK

If remediation reduces site contaminant levels below a level of "no significant risk", why is it necessary to attempt to achieve background? Why is it necessary to consider the feasibility of attaining background to achieve a Class A RAO, while it is not necessary to consider the feasibility of going to background to achieve a Class B RAO? [Special Edition 4, February 1995]

The MCP requirement (310 CMR 40.1020) to achieve or approach background conditions, where feasible, arises from the M.G.L. c. 21E, 21E Section 3A(g) definition of a Permanent Solution. A Permanent Solution is a measure or combination of measures that ensure the attainment of a level of No Significant Risk and, where feasible and to the extent possible, restores the location to the conditions which would exist in the absence of the disposal site (i.e., background). Notice that the background requirement is separate from the risk-based requirements: if it is feasible to go beyond the minimum requirement of eliminating significant risk, it must be done. Thus, any time a remedial action is undertaken at a site, the issue of restoring the site to background must be addressed. The feasibility evaluation should be conducted in accordance with the criteria set forth in Subpart H of the MCP (310 CMR 40.0860). A policy specifically addressing the feasibility of cleaning up to background is currently being developed by the Bureau of Waste Site Cleanup.

The defining characteristic of sites eligible for a Class A RAO is that a Permanent Solution has been implemented (i.e., remedial actions have achieved a Permanent Solution) at the disposal site. A disposal site where no remedial action has been conducted cannot obtain a Class A RAO [310 CMR 40.1035(3)(a)]. At sites eligible for a Class B RAO, it has been determined through assessment only that a level of No Significant Risk exists, and thus, no remedial action is necessary: a Permanent Solution has not been implemented at such sites (i.e., remedial actions were not necessary). Since the need to achieve or approach background conditions, where feasible, is triggered by the implementation of one or more remedial measures at a site, evaluating the feasibility of achieving or approaching background conditions is a requirement at sites achieving Class A RAOs only. In other words, if remediation is taking place at a site, plans for those actions should consider the feasibility of going beyond the minimum risk-based requirements. On the other hand, if no risk-based remediation is necessary, and no remedial actions are planned, then the regulations do not require actions to be taken solely for the purpose of restoring background conditions.

ELEVATED BACKGROUND AND "NO SIGNIFICANT RISK"

How is it possible to have "No Significant Risk" in an area where there are high background concentrations? Does it matter if the levels representing background concentrations would otherwise pose an unacceptable risk if the same levels and constituents were due to a release? [Volume 3 Number 1, June 1996]

The purpose of the risk characterization is to determine the need for remedial measures at the disposal site based on the requirement to meet or achieve a level of No Significant Risk. 310 CMR 40.0902(3) of the MCP provides that when concentrations of oil or hazardous materials are at or below background, these concentrations shall be considered to pose No Significant Risk. To comply with M.G.L. c. 21E, s.3A(g), the Department requires cleanup of contamination attributable to a release of oil or hazardous materials, not of conditions which would exist in the absence of the disposal site. Therefore, even where background levels (which are accurately established and documented) are elevated, they are defined by the regulations to pose No Significant Risk in the context of c. 21E and the MCP.

SAMPLE COLLECTION AND ANALYSIS

Should filtered or unfiltered groundwater and surface water samples be collected for the risk assessment? [Special Edition 4, February 1995]

The Exposure Point Concentration for a chemical in groundwater or surface water should be representative of the concentration of the chemical which the receptor contacts. Groundwater samples taken from monitoring wells often contain high levels of particulate matter which, when acidified, releases solubilized naturally-occurring metals. If the exposures being evaluated would not include the high particulate levels observed in the monitoring well (or surface water), then the samples should be filtered to provide a better estimate of the Exposure Point Concentration. Water collected from a tap should not be filtered, nor should water collected with a low-flow sampling pump that is designed to minimize

turbidity, as these samples provide estimates of the concentration which the receptor would contact (e.g., you drink what comes out of the tap). When highly turbid groundwater is collected from a recently developed monitoring well for the purpose of evaluating drinking water standards, it may be appropriate to filter the sample so that the particle content is comparable to that in water from a supply well.

Can I average the soil contaminant concentrations detected in different soil borings across my site when performing a Method 1 risk characterization? [Volume 1 Number 4, April-May 1994, Revised]

Yes, under specific conditions. Unlike groundwater monitoring wells, which are considered separate exposure points, soils within the same soil category are considered a single exposure point. Therefore, soil contaminant concentrations measured across a contiguous contaminated area belonging to the same soil category may be averaged and compared to Method 1 soil standards [see 310 CMR 40.0973(3)(b)]. The average contaminant concentrations within any hot spot in the area would also be compared to the Method 1 soil standards.

What types of samples may be averaged? Is it acceptable to calculate exposure point concentrations for groundwater based upon data collected over a long period of time? Can you average concentrations to assess whether or not you exceed UCLs? [Special Edition 4, February 1995]

Samples taken at or within the same Exposure Point may be considered when calculating an Exposure Point Concentration. The definitions of both "Exposure Point" and "Exposure Point Concentration" (EPC) are important in deciding how to treat the data. A general discussion of Exposure Points is presented at 310 CMR 40.0924, and a more detailed discussion specific to Method 1 (and 2) is found at 310 CMR 40.0973(3). The definition of Exposure Point may also affect the way the EPC is calculated: (a) "hot spots" must be treated as separate exposure points with separate EPCs (for all Methods), (b) monitoring wells and water supply wells are treated as separate and distinct Exposure Points with EPCs calculated for each well (for Methods 1 and 2), and (c) a contiguous volume of soil within a single soil category is treated as an Exposure Point with separate EPCs for each area of contiguous/same category soil (for Methods 1 and 2). There is more flexibility in a Method 3 risk characterization to identify Exposure Points based upon site-specific factors.

In general, taking the arithmetic mean of the concentrations at the Exposure Point would result in a representative Exposure Point Concentration, although there are situations in which a higher value may be appropriate (see 310 CMR 40.0926): (1) for the evaluation of acute exposures, (b) for the evaluation of chemicals associated with lethal or severe health effects, (c) for situations in which the available data is inadequate to calculate a representative average, and (d) for screening evaluations.

DEP specifically recommends that multiple groundwater samples be taken over a period of time in order to calculate representative Exposure Point Concentrations. (Drinking water regulations, in fact, require that drinking water standards be compared to the average of four consecutive quarterly samples.) If the data are too old, however, the data may not represent current site conditions, so such temporal averaging should be limited to one or two years worth of data. Since hydrologic conditions, infiltration and well construction details can result in variations in chemical concentrations over time, the LSP should apply the Response Action Performance Standard (RAPS) when averaging data (e.g., LSPs should not average in low or ND levels if they know that the results are due to temporal abnormalities - like a rainstorm the day before - that mask the true levels in the aquifer).

Upper Concentrations Limits are compared to "the arithmetic mean of the concentration of the chemical in soil and groundwater" with a separate average concentration calculated for each hot spot identified (310 CMR 40.0996(2)).

EXPOSURE POINT CONCENTRATION

Under a Method 1 Risk Characterization, may "non-detects" be used in order to determine an Exposure Point Concentration for that contaminant? [Volume 4, Number 1, May 1997]

To answer this question, the more fundamental question: 'What is the extent of the Exposure Point?' must first be answered. If samples collected outside of an Exposure Point contain non-detect levels of the contaminant in question, then this data cannot be used to determine the Exposure Point Concentration of the Exposure Point. If samples collected inside the delineated Exposure Point contain non-detect levels of the contaminant in question, then this data can be used to determine the Exposure Point Concentration for the Exposure Point. If non-detects are averaged with other data to determine the arithmetic mean of an exposure point, half the detection limit of the analytical method should be used as the value of the non-detect. See Sections 5.8.2 and 7.3.3.5 of the "Guidance for Disposal Site Risk Characterization" for additional detail.

May sidewall samples that exhibit non-detect levels of the contaminant(s) of concern be used to determine an Exposure Point Concentration for an excavation under Method 1 Risk Characterization? [May 1997, Revised November 2017]

Data from sidewall samples may be averaged to determine the Exposure Point Concentration for the excavation as long as the sampled sidewall area is within the Exposure Point, based upon the Conceptual Site Model, and includes the smear zone, which is where residual NAPL contamination is most likely to be, if present. Moreover, prior to averaging sidewall data alone to determine an Exposure Point Concentration, you should have adequately determined the extent of contamination to ensure that significant contamination does not continue beyond any sidewall of the excavation.

I have a disposal site at which four sidewall samples taken from an excavation with levels of contamination slightly above the applicable cleanup standard for a contaminant. The Exposure Point for this site is defined to be the excavation pit area and any area of contamination extending beyond the existing sidewalls and floor of the excavation. Additional soil removal is performed and the sidewalls are re-sampled. Three of the sidewall samples now indicate non-detect levels of the contaminant. The fourth sidewall sample now shows a reduction in contaminant levels, at the applicable cleanup standard. However, this level is more than two orders of magnitude greater than half the detection limit of the analytical method used for the non-detect samples. Does the one sidewall sample with measurable levels of contamination represent a Hot Spot? [May 1997, Revised November 2017]

No. A Hot Spot cannot be created as a result of a remedial action, specifically the soil excavation scenario described here. Also, an Exposure Point Concentration for an Exposure Point cannot "increase" as a result of a remedial action provided:

- the remedial action does not introduce an additional mass of a contaminant to the Exposure Point;
- the original Exposure Point Concentration was calculated correctly; and

the original Exposure Point Concentration was determined based upon an adequate characterization of the Exposure Point.

If a Hot Spot cannot be created as a result of a remedial action, does the operation of an LNAPL recovery system automatically change, by definition, whether or not a soil contamination Hot Spot exists? [November 2017]

No. A soil contamination Hot Spot can still exist, regardless of the operation of an LNAPL recovery system.

VPH/EPH STANDARDS AND METHODS

I have been using the "toxicity multipliers" approach outlined in the draft VPH/EPH analytical methods issued by DEP in August 1995 to calculate TPH values at petroleum sites. The May 1996 Issues Paper on implementing the VPH/EPH approach indicates, however, that toxicity multipliers will not be used in applying the new VPH/EPH standards that will be incorporated into the MCP. Can you explain the reason for this switch? [Volume 3 Number 2, December 1996, Clarified]

Yes. When the draft methods were issued, a proposal was made to weight each aliphatic and aromatic fraction to be commensurate with its derived Reference Dose. In this manner, a single "weighted" TPH value could be calculated and reported that would be protective of human health exposures. However, since the publication of the draft methods, it has become clear that pathways and concerns other than human exposure will be the controlling consideration in developing Method 1 standards for a number of these fractions. For this reason, the original proposal for a single "weighted" TPH standard has been dropped. Instead, individual (unweighted) standards have been developed for 6 specific aliphatic and aromatic fractions. The need for laboratories to report weighted values has been eliminated from the final VPH and EPH analytical methods.

What are the new VPH/EPH reporting requirements for closed sites? [November, 2001]

DEP has adopted a prospective (site closure on or after October 31, 1997) and retrospective (site closure before October 31, 1997) position on the application of the VPH/EPH approach. Most responsible parties did not have ready access to the tools and procedures needed to adequately characterize the total risks posed by petroleum contamination until publication 19 1997 of the draft VPH/EPH Implementation Policy, analytical methodologies, and Method 1 cleanup standards.

In general, MassDEP will not require reevaluation of petroleum-contaminated sites properly closed before October 31, 1997. However, MassDEP reserves the right to do so in cases where direct and compelling exposure concerns are believed to be present, and where human health is being directly threatened. In cases where parties voluntarily conduct VPH/EPH testing at sites closed before October 31, 1997, the applicable "re-opener" language is contained in 310 CMR 40.0317(17). Under the provision of this section of the MCP, a notification obligation would exist for this newly obtained VPH/EPH data if such information would change or negate the findings of the closure document.

All sites closed on or after October 31, 1997 must demonstrate compliance with the applicable cleanup standard by use of the VPH/EPH approach or by use of another scientifically valid and health-protective approach. There are no "grand-fathering" provisions for sites that were not closed-out before October 31, 1997.

ENVIRONMENTAL RISK

When do you choose a qualitative vs. quantitative Environmental Risk Assessment? [Special Edition 4, February 1995]

The Stage I Environmental Screening is often thought of as a "qualitative" procedure, although it may include limited comparisons of site concentrations to some criteria. The Stage II Risk Characterization is typically a quantitative evaluation, although it may have many qualitative components. Thus, it is not accurate to describe the distinctions between Stage I/Stage II environmental assessments as qualitative vs. quantitative. There are times, however, when a qualitative Stage I risk characterization would be sufficient: if the presence or absence of "significant risk of harm" can be clearly determined from qualitative information about the potential for current or future exposure of Environmental Receptors to contamination. A quantitative assessment would not be required if, for example, the contamination present is immobile and no Environmental Receptors have been identified at the site. Sometimes qualitative information, such as visible evidence of a fish kill, would be sufficient to conclude that there is

an environmental problem and a Stage II evaluation would not be needed to confirm the conclusion. Other qualitative criteria which may be used in a Stage I assessment are described at 310 CMR 40.0995(3)(a) and (b).

Must every OHM present in the environment at a site always be included in a site risk characterization? [November, 2002]

No. An OHM is not required to be included in a site risk characterization if that OHM is:

- present at a low frequency of detection (that is, less than 10% of the samples) and in low concentrations and there is no historical or present use of the chemical at the disposal site; or
- present at levels that are consistent with "background" concentrations in the area; or
- not subject to the requirements of the MCP because it is specifically exempt from the definition of "release" set forth at 310 CMR 40.0006 (e.g., pesticides -that were applied consistent with the label instructions); or
- not subject to the requirements of the MCP because it is specifically exempt from the definition of "disposal site" as described in 310 CMR 40.0006 (e.g., lead-based paint residues that emanated from the point of original application of such paint).

BIOACCUMULATING CHEMICALS

What are bioaccumulating chemicals (40.0942(1)(c))? Is there a definition? Is there a list of what chemicals bioaccumulate? [Special Edition 4, February 1995]

Bioaccumulating chemicals are those that amass and can be detected in biological tissue after uptake. If bioaccumulating chemicals are present within two feet of the ground surface and Environmental Receptors have been identified for the disposal site, then Method 1 alone is not sufficient to characterize risk at the site and a site- specific (Method 3) environmental risk characterization is required (310 CMR 40.0942(1)(c)). For the purpose of judging the need for such an evaluation these chemicals should be considered bioaccumulating: mercury, cadmium, PCBs, dioxin and most pesticides.

This list does not include all chemicals which bioaccumulate, of course, but presents a subset of chemicals, the presence of which in surficial soil would trigger a more detailed evaluation. This list is intentionally limited to a small number of chemicals in order to focus the site-specific environmental risk characterizations on those sites which have the greatest likelihood of posing a significant risk of harm to the environment. However, once a Method 3 environmental risk characterization is conducted, the list of chemicals of concern to be evaluated would not be limited by this list: other chemicals which may bioaccumulate (lead, for example) or have other environmental impacts should also be considered.

SUBPART J: Permanent & Temporary Solutions

Class A, B or C Response Action Outcome Status under the Amended MCP

If my client has a property where a Class A-1 Response Action Outcome was achieved. What is the closure status of her property under the amended 2014 MCP? [June 2014, Reviewed November 2017]

The amended MCP defines a Class A-1 Response Action Outcome achieved prior to June 20, 2014 as a Permanent Solution with No Conditions. 310 CMR 40.1055 specifies Transition Provisions that translate the Response Action Outcome categories applicable prior to the 2014 MCP amendments into types of Permanent and Temporary Solutions . Note, the amended MCP retains a definition of Response Action Outcome at 310 CMR 40.0006 that indicates that the terminology applied to closure statuses prior to June 20, 2014.

SOURCE ELIMINATION AND CONTROL

Performance Standards for Permanent and Temporary Solutions related to Sources Elimination and Control, Migration Control and NAPL

Prior to the June 20, 2014 amendments, the former provision at 310 CMR 40.1003(5) was generally referred to as the "source elimination and control" requirement applicable to all Permanent or Temporary Solutions (formerly Class A, B or C Response Action Outcomes). How have the requirements related to addressing sources changed in the amended MCP? [June 2014, Revised November 2017]

The 2014 MCP amendments provide greater clarity regarding what is defined as a source and performance standards for adequately addressing them. A definition of Source of OHM has been added to 310 CMR 40.0006. and three separate performance standards related to the required control of sources needed to achieve a Permanent or Temporary Solution are provided. These performance standards are:

- Source Elimination or Control (310 CMR 40.1003(5);
- Migration Control (310 CMR 40.1003(6); and
- Nonaqueous Phase Liquid or NAPL (310 CMR 40.1003(7).

ACTIVE EXPOSURE PATHWAY MITIGATION MEASURES (AEPMMs)

Air purifying units mitigate exposure from indoor air contamination. Pump and treat systems can be used to provide hydraulic plume control to prevent contamination of a water supply well. Can either of these be considered Active Exposure Pathway Mitigation Measures (AEPMMs) for the purpose of achieving a Permanent Solution with Conditions? [June 2014, Reviewed November 2017]

No. An Active Exposure Pathway Mitigation Measure (AEPMM) is intended to include long term mitigation systems that operate at the point of exposure to maintain a level of No Significant Risk with a high degree of confidence and minimal maintenance. Active subslab depressurization systems to prevent or mitigate vapor intrusion and point-of-entry water treatment systems for the treatment of private water supplies are considered AEPMMs.

Air purifying units are not considered AEPMMs because their operation cannot be relied upon to maintain a level of No Significant Risk over a prolonged period of time. Remedial systems treating disposal site source areas and pump and treat systems designed to control the migration of and treat a groundwater contaminant plume are not considered AEPMMs because they are not directed at and maintained at the point of exposure.

What steps do I need to take to set up the remote telemetry communication between an Active Exposure Pathway Mitigation Measure used to prevent vapor intrusion and MassDEP? What exactly must the remote telemetry be monitoring to meet the requirement at 310 CMR 40.1025(3)(d) and 310 CMR 40.1026(3)(d)? Does the telemetry need to send information about drops in differential pressure or just shutdowns and restarts? [June 2014, Revised November 2017]

Active Exposure Pathway Mitigation Measures (AEPMM) used to prevent the migration of subsurface OHM vapors into a building that are part of a Permanent Solution, Temporary Solution or Remedy Operation Status require the use of remote monitoring technology to provide immediate notification to both MassDEP and the owner and operator of the building protected by the AEPMM upon failure of the AEPMM, as the result of loss of power, mechanical failure or other significant disruption of the effectiveness of the system (pursuant to 310 CMR 40.1025(3)(d) and 40.1026(3)(d), respectively).

MassDEP has posted information on its website regarding: 1. how to set up communications between each remote telemetry device and MassDEP and register the remote telemetry system; and 2. what must be communicated in the event of a system shutdown or restart. At the point when you intend to operate an AEPMM system as part of a Permanent Solution, Temporary Solution or ROS, you must complete the online initial registration and conduct an initial shutdown and restart test.

Notifications to MassDEP of AEPMM shutdowns and restarts are to be made automatically either by emailor text message. Systems may also be designed to send notifications for other triggers, such as a loss of pressure, reduction in air flow, or scheduled maintenance. MassDEP will accept notifications that exceed the minimum requirements of 310 CMR 40.1025(3)(d).

When an Active Exposure Pathway Mitigation Measure is part of a Permanent Solution with Conditions, there is a requirement at 310 CMR 40.1025(6) to notify MassDEP and any occupants of the building if the mitigation system is not working for 30 consecutive days. Is this notification made orally or in writing, or both? If in writing, is there a transmittal form required? [June 2014, Reviewed November 2017]

The notification must be made no later than the 30th day and should be made in writing to the occupants of the building. A copy of this notice sent to the building occupants may be used to provide notice concurrently to MassDEP. There is no specific transmittal form currently available for this notice, so it should be sent by mail to the appropriate MassDEP regional office to the attention of the Bureau of Waste Site Cleanup. Note that you should not provide this notice using BWSC 126 Miscellaneous Document Transmittal Form as it is not intended for transmitting time-sensitive documents.

When an Active Exposure Pathway Mitigation Measure is part of a Permanent Solution with Conditions, there is a requirement at 310 CMR 40.1025(5) to certify that financial resources are available for the immediate repair or replacement of the system components in the event the Measure experiences failure. What should be included with this certification of financial resources? Is there a specific transmittal form required? [June 2014, Reviewed November 2017]

A statement that adequate financial resources will be available for such repairs or replacement must be included with the Permanent Solution Statement report submittal. There is no specific transmittal form for this certification other than the Permanent Solution Statement Transmittal Form, BWSC104.

ACTIVITY AND USE LIMITATIONS (AULs)

Permanent Solution with Conditions but No AUL Required

310 CMR 40.1013 specifies limitations, assumptions and conditions on site activities and uses that result in a Permanent Solution with Conditions, but do not require an AUL. These include: a recommendation for use of Best Management Practices for non-commercial gardening; the presence of OHM concentrations consistent with Anthropogenic Background; residual contamination within a public way or rail right-of-way; and OHM in groundwater above the GW-2 standards in an area without an occupied building. How is information about these conditions conveyed to the public or a potential user or developer of the property where the conditions apply? [June 2014, Reviewed November 2017]

Information about these conditions is conveyed first in identifying these closures as "Permanent Solutions with Conditions" in MassDEP's records and online file viewer. In addition, Section E of BWSC104, the Permanent and Temporary Solution Statement Transmittal Form which is viewable online, specifically indicates the condition or conditions that apply to the Permanent Solution. Finally, the Permanent Solution Statement pursuant to 310 CMR 40.1056(2)(j) requires documentation related to these conditions, including the description of Best Management Practices for Gardening, the location of Anthropogenic Background and residual contamination in public ways/rail rights-of-way, and obligations to ensure that any future construction at the disposal site does not result in OHM impacts to indoor air).

The MCP requires that a narrative description of the basis for implementing an AUL be included as Exhibit C to Form 1075. What information should be included in this description? [June 2014, Reviewed November 2017]

Exhibit C must contain the elements described at 310 CMR 40.1074(2)(e-g), which includes descriptions of why the AUL is appropriate to maintain a Permanent or Temporary Solution; release events or site history that resulted in the contamination subject to the AUL; and the contaminated media and approximate vertical horizontal extent of the contamination subject to the AUL.

Keep in mind that the descriptions in Exhibit C should provide sufficient detail so that a reader who is unfamiliar with MCP requirements and terminology can understand the conditions that warrant the implementation of an AUL. Exhibit C does not require a separate LSP signature and seal.

I am planning to sell my property which has an AUL. Are there any MCP requirements related to the property transfer? [June 2014, Reviewed November 2017]

Pursuant to 310 CMR 40.1074(5), all future instruments of transfer (e.g., deeds, easements, mortgages, and leases) must include a reference to the AUL. This reference, which should include the date, county and registry book/page numbers associated with the AUL, ensures that the AUL stays in the chain of title so that all future recorded interests will be informed that the AUL exists on the property. In addition, 310 CMR 40.1074(5) also requires that a copy of the new deed containing the reference to the AUL be submitted to MassDEP when the property is sold. This requirement applies to both the seller and the buyer of the property; it will be satisfied when either submits the copy of the new deed. Upon receiving a copy of the new deed, MassDEP is able to confirm that the reference to the AUL in the deed was made as required, and update its records to reflect the current property owner.

What form do I use to provide MassDEP with a copy of the new deed upon the sale of a property with an AUL pursuant to the requirement at 310 CMR 40.1074(5)? [June 2014, Reviewed November 2017]

BWSC113, the AUL Transmittal Form, should be used to submit the copy of the new deed. To indicate that you a submitting a copy of the deed, check Section B. Box 11 ("Submit a Registry copy of a Deed, referencing a Notice of Activity and Use Limitation…"). Note that an LSP signature and stamp (i.e.,

completion of Section D, the LSP signature and stamp) and a certification of the current property owner (i.e., completion of Section H) are not required when BWSC113 is used for this purpose.

I am implementing a new Notice of Activity and Use Limitation (AUL). Do I need to pay a fee related to the AUL? [June 2014, Reviewed November 2017]

Yes, as of June 20, 2014, a Notice of AUL that is implemented as part of a Permanent Solution requires that a one-time Notice of AUL Fee be paid. The Notice of AUL fee for a non-Homeowner is $2,000 ($1,000 for a Homeowner that files a Homeowner Certification Form). The payment of the fee should be sent to MassDEP, PO Box 4062, Boston MA 02211-4062 along with page one of the BWSC113 AUL Transmittal form. Box G5 of BWSC113 should be checked to indicate that the AUL fee has been sent. Note: the AUL fee is applicable to the initial AUL, and does not apply to confirmatory AULs, AUL amendments or AUL terminations.

I intend to record and submit a Notice of AUL with a Permanent Solution Statement with Conditions at the end of the first year from notification. What fees will be applicable? [June 2014, Revised November 2017]

Both the one-time Notice of AUL fee ($2,000 non-Homeowner, or $1,000 for a Homeowner) and the one-time Permanent Solution fee ($1,470 non-Homeowner, or $735 for a Homeowner) are applicable. These fees can be paid with one check or separately with two checks. Page one of the related BWSC transmittal forms (BWSC113 Notice of AUL, and BWSC104 Permanent Solution) should be included with the payment to ensure it is credited to the correct disposal site. Also, please include the Release Tracking Number on the face of the check.

Is an AUL necessary in a situation where contamination is located in soil under a building, the soil is categorized as S-3, and the S-3 soil standards are met? [Volume 3 Number 1, June 1996, Revised]

In accordance with the MCP 310 CMR 40.1012(2)(a)(1.), Activity and Use Limitations (AULs) are required where a Method 1 or 2 Risk Characterization is conducted and residual soil concentrations exceed the S-1 standards. In order to avoid the need for an AUL, S-1 standards must be met even though the soil is appropriately categorized as S-2 or S-3. The only exception is when the residual contamination, at or below UCLs, is confined to a depth of greater than 15 feet. In such a case an AUL is not necessary except for Class A-4 and B-3 RAOs [see 310 CMR 40.1012(3)(b]. This AUL exception holds true regardless of the presence or absence of a building above the contaminated area.

Is it possible, for the situation described above, to use a Method 3 Risk Characterization to avoid the need for an AUL? [Volume 3 Number 1, June 1996]

A Method 3 Risk Characterization is a site-specific approach, as opposed to the more generic approach taken in a Method 1 or Method 2 Risk Characterization. In the situation described above, a Method 3 Risk Characterization would likely eliminate the exposure pathway of direct contact and incidental ingestion of soil located under the building. However, that does not eliminate the need for an AUL. If a level of No Significant Risk was reached based upon the elimination of potential exposure pathways at the disposal site, then an AUL is necessary to ensure that the assumptions are upheld and interested parties are put on notice of the site conditions.

How do you decide whether to use a Grant of Environmental Restriction or a Notice of Activity and Use Limitation? [Special Edition 4, February 1995]

With one exception, the choice is up to the property owner. A Grant of Environmental Restriction must be used whenever a private water supply well is decommissioned and the impacted property is connected to a municipal drinking water supply, in order to change the groundwater category at a site, as described at 310 CMR 40.0932(5)(d). Beyond this requirement, the decision on what type of Activity and Use

Limitation to employ at a disposal site is a matter of personal choice of the property owner. In either case, you must detail the nature of the limitations imposed by the instrument.

With respect to AULs, does the property owner have the option of using either the Grant of Environmental Restriction or Notice of Activity and Use Limitation? [Volume 1 Number 1, November 1993, Clarified]

In the case of implementing an AUL to prevent human exposure to soil contamination, the answer is "yes". The property owner may use either type of AUL to provide notice of the residual soil contamination at the site. In the case of implementing an AUL to restrict the future use of the groundwater as a private drinking water supply [310 CMR 40.0932(5)(d)], only a Grant of Environmental Restriction (a deed restriction) can be used.

If a risk assessment is conducted using Method 2 or Method 3, and a level of no significant risk is achieved, but the residual levels exceed the Method 1 S-1 standards, is an AUL required? If a level of no significant risk is established by Method 3, assuming unrestricted use, but the contaminant levels at the site exceed the S-1 standards, is an AUL required? [Special Edition 4, February 1995, Clarified]

Not necessarily. Using Method 2, concentrations higher than the Method 1 S-1 levels may be identified for a site, and meeting such Method 2 S-1 standards would not require an AUL. An AUL would be required if the site met only the Method 2 S-2 or S-3 Standards. When conducting a Method 3 Risk Characterization, Activity and Use Limitations are not required if the risk assessment demonstrates that the site is acceptable for unrestricted use (i.e., no limitations on site use were assumed or implied in the assessment). Target cleanup levels based upon such an assessment could, in fact, be greater than the corresponding Method 1 S-1 Standards. If, however, the risk assessment assumed some limitations on site use (e.g., that the site would remain industrial with no exposure to children, or that contaminated soil at depth up to 15 feet would never be excavated), then an AUL would be required. Section 40.1012 of the MCP describes when AULs are required, when they are not required, when AULs are expressly prohibited, and when they are considered an optional tool.

Is there any situation where exposures are assumed to be limited in the risk assessment, but an AUL is not required? [Special Edition 4, February 1995, Clarified]

Yes, but these exceptions are limited to three specific situations for which the decision that no further restrictions are needed to limit future exposure has been made by DEP in the regulations. The three examples are: (1) AULs are not required to prevent installation of private wells in areas not considered to be current or future groundwater resource areas (i.e., not GW-1 groundwater), (2) AULs are not required if the residual contamination is located within a public way or within a rail right-of-way, and (3) AULs are not required to control exposures to contaminated soil located at a depth greater than 15 feet from the ground surface (310 CMR 40.1012(2)), except for Class A-4 and B3 RAOs.

When you are submitting an RAO to the Department, and you do not want to use an Activity & Use Limitation at the site, is it necessary to meet the S-1/GW-1 standard, or is it sufficient to meet the S-1/GW-"X" standard for the site (where "X" is the groundwater category for the site)? [Special Edition 4, February 1995]

In order to avoid an AUL in this situation, it is only necessary to meet those S-1/GW-X standards which are determined to be applicable to that site. If the groundwater below the site is not considered GW-1, then an AUL-free cleanup could be achieved by meeting the S-1/GW-2 and/or S-1/GW-3 standards.

Can I use an Activity and Use Limitation (AUL) to restrict current activities that could result in exposure to residual contamination that remains at my site? [Volume 1 Number 4, April-May 1994, Clarified]

With certain limitations. AULs are tools by which potential exposures may be eliminated or reduced by modifying or restricting peoples' actions in contaminated areas. They are, in effect, a form of remedial action and the distinction between proposed AULs and implemented AULs becomes important in the risk characterization process (just as there is a difference in exposure potential at a site where there has been a completed soil excavation and one where the excavation is simply being proposed for the future).

The MCP requires that the risk assessment evaluate the current site uses in order to protect receptors who may be currently exposed [see 310 CMR 40.0923(2)]. If an AUL is in place and effective in reducing or eliminating exposures, then it may be considered in the current use scenario (again, the AUL is treated similarly to already excavated soil).

Proposed (or ineffective) AULs, on the other hand, cannot be used in the risk characterization to assume limited exposures from current site activities and cannot justify a risk assessment which does not adequately evaluate current exposures [see 310 CMR 40.0923(4)(a)]. Proposed AULs are intended to eliminate potential future exposures from site activities which could result in significant risk of harm due to residual contamination that remains on the property [see 310 CMR 40.0923(3)(b)]. A proposed AUL may be evaluated as a potential remedial measure, but the current exposures without the AUL must also be included in the risk characterization.

When is an Activity and Use Limitation (AUL) required for residual contamination in soil as part of a Response Action Outcome? [Special Edition 1, May 1994, Revised]

Generally, an AUL is necessary any time the achievement of a level of No Significant Risk is based on an assumption that activities at the disposal site are or will be limited in some way to prevent human exposure to residual soil contamination. Specifically, an AUL is required when the S-2 or S-3 standards are used (these standards were developed using assumptions that exposure to these levels would be limited). Likewise, when using Method 3, an AUL is required any time assumptions are made in the cumulative receptor risk characterization that human access and exposure to residual soil contamination will be limited.

An AUL is not required in cases where the residual soil contamination: is at background levels; meets or is below the S-1 levels or UCLs; is located within an public roadway, or is located at a depth greater than 15 feet from he ground surface [see 310 CMR 40.1012(3)].

Does a property owner have the option of using either the Grant of Environmental Restriction or Notice of Activity and Use Limitation? [Special Edition 1, May 1994]

For AULs designed to prevent human exposure to soil contamination, the answer is "yes". The property owner may use either type of AUL. When implementing an AUL to restrict the future use of the groundwater as a private drinking water supply [see 310 CMR 40.0932(5)(d)], only a Grant of Environmental Restriction (a deed restriction) can be used.

The MCP requires public notice of AULs applied to a site [see 310 CMR 40.1090 and 40.1403(7)]. Does MassDEP provide a format for legal notices? [Special Edition 1, May 1994, Clarified]

Yes. The information package entitled "Instructions for Public Notices of Response Action Status" contains nine forms to be used for the legal notices required by the revised MCP. The package is available at all MassDEP Regional Service Centers as well as the Bureau of Waste Site Cleanup, 7th Floor, One Winter Street, Boston. Please note that the MCP also requires that a copy of recorded AULs be provided to local officials of the community in which the site is located (i.e. the Chief Municipal Officer, the Board of Health, Zoning and Building Code Officials).

If soil at a disposal site is categorized as S-1 and soil concentrations meet S-2 cleanup levels, can an Activity and Use Limitation (AUL) be implemented in order to submit an RAO for a permanent solution without conducting cleanup actions? [Volume 2 Number 1, July 1995]

No. AULs cannot be used in lieu of meeting any applicable cleanup standard (in this case, the S-1 soil standards) in support of a Class A or B RAO [see 310 CMR 40.1012(4)]. However, if the site is categorized as S-2 and the S-2 cleanup levels are met, then an AUL must be implemented in support of a Class A or B RAO.

Is it necessary to use an Activity and Use Limitation (AUL) with a Class C RAO? [Volume 3 Number 1, June 1996]

No, an AUL is not required with a Class C RAO. A Class C RAO is available at a disposal site where no substantial hazards exist and a Temporary Solution has been achieved. However, where a Temporary Solution is expected to be in place for a long period of time, an AUL may be useful as a means of providing notice of the residual contamination to future holders of an interest in property at the disposal site.

The MCP (310CMR 40.1074(1)(e)) states that at least 45 days before recording a Notice of Activity and Use Limitation, a property owner must give written notice of the AUL to anyone who holds an easement or other recorded interest in the property. Can the 45-day notice period be shortened if everyone entitled to receive notice agrees to it? [November, 2001]

Yes. If everyone entitled to advance notice of an AUL consents in writing to a period of notice shorter than 45 days, MassDEP will exercise its enforcement discretion and will not cite a violation of the 45-day notice requirement. However, some period of notice must still be given, and the notice must still contain all of the information required by the MCP. The property owner must retain the signed consent letters, and must provide copies to MassDEP upon request.

A certification statement for the waiver of the 45-day requirement will be added to the AUL Transmittal Form, BWSC-113. In the meantime, a certification statement should be prepared in accordance with the requirements in 310 CMR 40.0009 and be attached to Form BWSC-113, which should be submitted to MassDEP with the certified AUL.

When a Notice of Activity and Use Limitation (AUL) has been placed or will be placed on a disposal site, what are a responsible party's obligations to those with easements, leases, mortgages, and other legal interests in the affected property? [November, 2002]

There are two major obligations. First, as stated in 310 CMR 40.1074(1)(e), at least 45 days before recording and/or registering an AUL, responsible parties must notify by certified mail current holders of any recorded interest(s) in the area subject to the proposed AUL of the existence and location of OHM within the proposed area and the terms of the proposed AUL. Holders of recorded interest of a property may include but are not limited to owners, lessees, tenants, mortgagees, and holders of easements or licenses, provided such interests are recorded.

Second, once an AUL has been recorded, it must be referenced in all future conveyances of any legal interest in the affected property. The standard AUL form (Form 1075, 310 CMR 40.1099) includes language requiring that the AUL be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements, or any other instrument of transfer, where an interest in and/or a right to use the property or a portion thereof is conveyed. Failure to implement this obligation is a violation of the terms of the AUL, and is therefore a Class I violation subject to penalties of up to $25,000 per day.

When an AUL requires the maintenance of multiple barriers, is it necessary to delineate each barrier separately? [November 2007]

Yes. When an AUL requires the maintenance of multiple barriers (e.g. pavement and a building), the AUL must delineate the location of each barrier. The AUL serves to identify the location of the barriers so that a property owner (particularly a future property owner) knows the location of the barriers that must be maintained (see 310 CMR 40.1074(2)(e)). Separate delineation of each barrier is required.

How do I delineate barriers within the area subject to the AUL? [November 2007]

The boundaries of the area subject to the AUL must be depicted on a survey plan. If there is a barrier (e.g., some form of cap, pavement or building) within the boundaries of the AUL area that must be maintained to ensure a level of No Significant Risk, that barrier must also be depicted on either a sketch or survey plan. Which type of plan is required for the barrier depends on whether the restrictions that apply in the barrier area are the same or different from the restrictions that apply in the larger AUL area. If, for example, the AUL area includes both landscaping and pavement and the restrictions of the AUL are the same for both paved and landscaped areas (e.g. no excavation below 5 feet), the boundaries of the pavement and landscaped areas do not need to be surveyed. In such a case, a sketch plan will suffice to delineate the boundaries of the pavement and landscaped areas within the larger AUL area boundaries. If, on the other hand, an AUL restricts any or all "excavation under paved areas" and the paved areas represent only a portion of the AUL area (e.g. there are grassy areas which do not have exactly the same restrictions as the paved areas), a survey of the paved area is required because the excavation restriction applies only to the paved areas. The same reasoning would apply to cases where there are multiple barriers within the AUL area or different zones and restrictions within an area covered by a single barrier.

Is it appropriate to record/register an AUL that references the presence and maintenance of barriers not yet in place? [November 2007]

No. It is not appropriate for an AUL to reference a barrier not yet in place if the barrier is necessary to achieve and maintain a condition of No Significant Risk as part of a Permanent Solution (see 310 CMR 40.0923(4)). The reason for this is two-fold: (1) barriers do not serve to prevent exposure until they are in place; and (2) the AUL cannot delineate the location of barriers until they are in place.

Can an AUL be placed on a residential property? If so, under what circumstances may an AUL be used? [November 2007]

An AUL can be placed on a single-family or multi-family residential property. If applicable Method 1 soil standards are exceeded in the top 15 feet of soil at a disposal site, a Method 3 risk characterization may be conducted to evaluate whether a condition of No Significant Risk exists for residential use (see 310 CMR 40.0933(4)&(5) and 40.1012(4)). A Method 3 risk characterization allows parties to consider reduced exposure potential that exists or will result from adequate barriers. Adequate barriers may include, but are not limited to, pavement, buildings and three feet or more of clean soil cover. An AUL that identifies and delineates these barriers and specifies how they are to be maintained must be implemented prior to submitting the RAO in order to be considered in a Method 3 risk characterization.

When a Method 3 risk characterization demonstrates that a condition of No Significant Risk has not been achieved in a future residential scenario for direct contact with contaminated soil, is it appropriate, absent remedial measures, for an AUL to permit residential use "provided specific measures are taken to prevent contact with contaminated soil"? [November 2007]

No. Once it is demonstrated that a condition of No Significant Risk has not been achieved in a future residential scenario, future residential use would be inconsistent with the residual contamination on the property absent additional remedial measures. Future site uses must be limited to those that will pose No Significant Risk, with an appropriate AUL.

An AUL was implemented as part of the remedy to address a past release. Subsequently, another release occurred at the property. If an AUL is selected as part of the remedy for the more recent release, do I need to implement a second, separate AUL or can this newer condition be covered under the existing AUL? [November 2007]

If the soil contamination in the area of the second release does not extend beyond the existing AUL area boundaries, an AUL Amendment may be used to add the second RTN to the existing AUL and make any language changes necessary to maintain a condition of No Significant Risk for both releases. Alternatively, a second AUL can be implemented for the second release.

If, however, the original AUL was implemented on a portion of the property, and the residual soil contamination in the area of the second release extends beyond the existing AUL area boundaries, then a second AUL is necessary to define the AUL area for the second release. This second AUL is completely separate from the original AUL. Care should be taken to ensure that the conditions outlined in the two AULs are not contradictory.

In either of these situations, the property owner always has the option of terminating the existing AUL using Form 1084C, Termination of Notice of Activity and Use Limitation, and immediately thereafter implementing a new AUL that would account for both releases on the property. This new AUL would identify both RTNs, include the residual soil contamination from both RTNs within the AUL area boundary, and include language adequate to maintain a condition of No Significant Risk for both RTNs, consistent with each risk characterization.

When a property subject to an AUL is subdivided through the AUL area, and the owner of one of the parcels on which the AUL area is located wishes to implement an AUL Amendment, is a new metes and bounds description required with the AUL Amendment? [November 2007]

No. There is no requirement in the MCP for a revised metes and bounds description to be attached to the AUL Amendment. During a title exam, the survey plan referenced in the AUL, when reviewed in conjunction with the survey plan referenced in the deed for the subdivision, should enable the reviewer to determine on which portion of the parcel the AUL Amendment applies.

However, it is customary in real estate practice to include information to clarify title. To assist with the clarity of title, it may be to the owners' benefit to include revised metes and bounds descriptions with the AUL Amendment to avoid confusion as to where the AUL Amendment applies. An experienced real estate attorney should be consulted in these situations.

It is important to note that a property owner can amend only the portion of the AUL area he or she owns.

Pursuant to 310 CMR 40.1074(1)(e), "current holders of any record interest(s)" in the AUL area shall be notified of the existence and location of oil and/or hazardous material and the terms of the AUL prior to recording the AUL. How do I know if there are current holders of any record interest for the property to be subject to the AUL? [November 2007]

"Current holders of any record interest" are those individuals or entities that have an interest in the subject property on record at the Registry of Deeds or registered in the Land Registration Office, whichever is applicable. These interest holders include mortgage holders, lessees or tenants if the lease is recorded at the Registry of Deeds or registered in the Land Registration Office, and easement or license holders if such easement or license passes through the AUL area. Property abutters are not record interest holders simply because they abut the property to be subject to the AUL.

A record interest is "current" if the interest exists at the time the AUL is recorded/registered. For example, if a mortgage is discharged before the AUL is recorded, the former mortgage holder is not a "current holder of any record interest".

A thorough title search is necessary to accurately identify all current holders of any record interest. Reviewing the property deed or Certificate of Title (with the memorandum of encumbrances) and any plans for the property can assist in identifying current record interest holders, but does not provide a comprehensive review. MassDEP recommends consulting an experienced real estate attorney or title examiner to conduct a title search to identify current holders of any record interest.

If there are no current holders of any record interest to notify, then there is no required waiting period as specified in 310 CMR 40.1074(1)(e). If there are current holders of any record interest to notify, the record interest holder may waive the waiting period. Such a waiver must be in writing and submitted to the Department (see 310 CMR 40.1074(1)(e)).

Can a record interest holder reject an AUL? [November 2007]

No. Consent of the record interest holder regarding implementation of the AUL is not required. However, if the property is subject to an easement, the disposal site must be cleaned up to a level consistent with the activities prescribed by the easement since such activities qualify as a current use and must be evaluated in the risk characterization. Current uses cannot be restricted by an AUL. Additionally, an AUL that infringes on the rights of an easement holder may subject the property owner to civil liability outside the MCP.

Pursuant to 310 CMR 40.1074(1)(e), current holders of record interest(s) must be notified of an AUL prior to the AUL being recorded/registered. Is there a form for this notice? [November 2007]

No. MassDEP has not created a form to notify current holders of any record interest. Parties intending to record/register an AUL should provide written notice to current holders of any record interest in the form of a letter that conforms to the requirements in 310 CMR 40.1074(1)(e).

This section of the MCP is fairly specific about what information must be given to current holders of any record interest and how it must be sent. The MCP requires that a certified letter, return receipt requested, be sent to all current holders of any record interest that contains the following information: a statement that there is contamination on the site (specify type, and although not required by the regulations, a description of the source of the contamination is useful); a description of where the contamination is located (the AUL survey plan could be used for this purpose); and the terms of the AUL (the uses and activities in the area subject to the AUL that are consistent and inconsistent with the AUL Opinion and obligations for maintaining the AUL).

Also, note the related requirement in 310 CMR 40.1074(1)(f) that the party signing the AUL certify "on a form prescribed by the Department" that he/she did indeed notify current holders of any record interest as required by 310 CMR 40.1074(1)(e). BWSC Form113, Activity and Use Limitation Transmittal form, has a check box to note whether there are such record interest holders, and if so, whether they were provided notice of the AUL.

What are the notification requirements for a Confirmatory AUL? [November 2007]

The public notice requirements for AULs (310 CMR 40.1403(7) and 310 CMR 40.1085(4)(e)) refer only to original, amended, released, or terminated AULs. Confirmatory AULs for simple corrections, such as incorrect references to persons or places or misspellings, do not require notice to the public or local officials.

When implementing a Confirmatory AUL to correct a mistake in the original AUL, must all exhibits to the original AUL be attached to the Confirmatory AUL? [November 2007]

No. The Confirmatory AUL is read in conjunction with the original AUL, so there is no need to duplicate the exhibits attached to the original AUL. If, however, an exhibit changes, that exhibit must be attached to the Confirmatory AUL.

While not required, it may be helpful to include Exhibit A (the metes and bounds description of the property) as an exhibit to the Confirmatory AUL, since the metes and bounds description is customarily used in real estate practice to identify the property. Also, keep in mind that while MassDEP does not require that the exhibits attached to the original AUL be attached to the Confirmatory AUL, the rules of the Registry of Deeds or Land Registration Office may require otherwise.

Note that when exhibits are not attached to the Confirmatory AUL, the AUL Form will reference exhibits that are not actually attached to the document. A clarifying sentence should be inserted into the AUL Form that indicates the exhibits are attached to the original AUL.

The following regulatory sections regarding Activity and Use Limitations refer to forms "prescribed by the Department" but I could not locate these specific forms among those listed at 310 CMR 40.1099 or on the web site. Do forms exist for the following?

310 CMR 40.1074(1)(b) Activity and Use Limitation Opinion
310 CMR 40.1074(1)(f) Certification Statement
310 CMR 40.1403(7)(b) Notice indicating recording of AUL
[November 2007]

The AUL Opinion Form (BWSC113A) provides for the LSP opinion. The AUL Transmittal Form (BWSC 113) provides for the certification statement. Both of these forms are currently available here .

The public notice form specified at 310 CMR 40.1403(7)(b) can be found at http://www.mass.gov/dep/cleanup/pubnot.doc

When there are multiple contiguous parcels of land that form the property on which an AUL will be implemented, may one AUL that references the multiple parcels or portions of such parcels be implemented? If so, how is this situation addressed on Form 1075, Notice of Activity and Use Limitation? [November 2007]

One AUL may be implemented if all parcels are owned by the same individual or entity, and are located in the same county.

The legal description for each parcel must be included in Exhibit A of the AUL. Multiple deed and plan references should also be provided in Exhibit A and cross-referenced on Form 1075. If the area to which the AUL applies includes both recorded and registered parcels of land, the AUL must be recorded at the Registry of Deeds first, and then registered at the Land Registration Office. The original AUL is kept on file at the Land Registration Office.

RESPONSE ACTION OUTCOMES (RAOs)

How do I document and support an RAO achieved after a RAM or an IRA? Should I use the Phase 1 format? [Volume 1 Number 3, February-March 1994]

You may use the Phase 1 format, but the MCP does not require its use. Phase 1 Reports require information specifically for the purpose of Tier Classification which may not be necessary for documenting the achievement of an RAO after these types of preliminary response actions. The exact format is left to the discretion of the LSP who must provide adequate documentation to support the RAO (see RAO submission requirements in 310 CMR 40.1056).

Will future changes to the performance standards in the MCP, such as the Method 1 Cleanup Standards, have implications for RAOs filed today? [Volume 1 Number 3, February-March 1994]

Because we recognize the need to provide PRPs certainty regarding cleanups, MassDEP will not revisit RAOs based on changing standards and likewise would not expect PRPs to do so. However, the

Department has the authority to take or compel action on a case-by-case basis where it identifies conditions at any site, old or new, that pose unacceptable risks to health, safety, public welfare or the environment.

Must all stockpiled or containerized waste be removed from a disposal site prior to filing an RAO Statement? [Volume 1 Number 4, April-May 1994]

Yes. To achieve a Permanent Solution RAO, response actions must result in a level of No Significant Risk [see 310 CMR 40.1035(2)(a)]. Additionally, to achieve a Temporary Solution RAO, any substantial hazard at the disposal site must be eliminated [see 310 CMR 40.1050(1)]. These requirements include removal of remediation waste, which could pose a potential exposure route if left on site. In both instances, all documentation supporting the RAO, including Bills of Lading which have not been previously submitted, must be sent to MassDEP [see 310 CMR 40.1056(2)] and the removal indicated on the RAO Statement (see RAO Form, BWSC-104, Box G).

How should I support the remediation of a sudden spill to pavement in an RAO, where the release was confined to the pavement (i.e., the release did not reach the soil, groundwater or surface water)? I have no analytical data which documents the achievement of the cleanup levels. [Volume 1 Number 4, April-May 1994]

It is possible to support an RAO without laboratory data demonstrating attainment of applicable cleanup levels. In this case, you have other "data", such as visual observations and firsthand knowledge of the nature and extent of the release. Following an adequate cleanup of the pavement, the site may be considered restored to "background" and a Class A-1 RAO Statement may be filed. There is no need to indicate on the RAO Form which risk characterization method or soil or groundwater standards were used because this information is not applicable (see 310 CMR 40.0901). However, the LSP must attach sufficient information (i.e. a description of remedial actions, visual observations and/or field screening) to support his/her finding that background was achieved. It is important to note that this "no analytical data" scenario is only appropriate for very small releases where you are confident that the release has been entirely contained and cleaned up.

I have a site with an approved waiver which has several discrete areas of contamination. Can I use the current MCP to achieve an RAO on a portion of the disposal site and then continue with the response actions under the approved waiver for the remainder of the site? [Special Edition 2, June 1994]

Yes. The waiver recipient can use the current MCP to achieve an RAO on a portion of the disposal site. The current MCP allows an RAO to be submitted for an entire site, entire disposal site, or a portion of a disposal site [see 310 CMR 40.1003(3)]. After filing an RAO for a portion of the disposal site covered by the waiver, the waiver recipient must continue response actions and submit a Waiver Completion Statement or an RAO for the remainder of the disposal site.

When submitting an RAO Statement (form BWSC-004) for a portion of a disposal site, the waiver recipient must indicate in Section A of the RAO form that additional response actions are needed for other portions of the site. This Section should also reference the approved waiver. In addition, the subsequent Waiver Completion Statement should reference any RAO Statements that have been previously submitted for a portion of the disposal site.

Can I file a Response Action Outcome Statement (RAO) after filing a Waiver Completion Statement? If so, is. Is there a fee? [Special Edition 2, June 1994]

Yes, an RAO Statement can be filed after filing a Waiver Completion Statement. Waiver recipients who have already filed a completion statement may wish to submit an RAO Statement to document that the response actions performed at the site meet the cleanup standards of the current MCP as well as the standards of the 1988 MCP. No fee is required when filing an RAO in this situation.

An RAO-P was submitted for a portion of a disposal site. If a Method 3 risk assessment is subsequently performed on the remainder of the site, must the portion that was the subject of the original RAO-P be included in the subsequent calculation of total site risk? [Volume 4, Number 1, May 1997]
The option to submit an RAO-P for a portion of a disposal site is intended to allow for discrete areas of contamination to be dealt with expeditiously and removed from further consideration under the MCP, and may not be appropriate in cases where contaminants from two or more areas of a disposal site have commingled or where receptors may come in contact with contamination at multiple locations. In general, if all of the portions of a disposal site are evaluated using the Method 1 and/or Method 2 risk assessment procedures, there is no need for any "overlap" in the areas considered in these risk assessments. However, if a Method 1 or 2 risk assessment is used as the basis for an RAO-P on one portion of a disposal site, and the remainder of the site is to be evaluated using a Method 3 ("cumulative risk") assessment, any potential exposures to residual contamination in the area for which an RAO-P has been submitted should be included in the Method 3 calculation of total site risk. The only situation in which the area previously assessed under Method 1 or 2 need not be included in the Method 3 cumulative risk evaluation is if it can be demonstrated that the risk associated with the remaining portion of the site is an order of magnitude below the MCP cumulative risk limits (i.e., a cumulative excess lifetime cancer risk no greater than one-in-one million, and a cumulative hazard index no greater than one). For more detail see Section 3.5 of the Guidance for Disposal Site Risk Characterization.

When in the MCP process should a determination of feasibility to achieve or approach background be made for permanent solutions? [November, 2001]

The MCP (310 CMR 40.1020) requires that a background feasibility evaluation be performed at all sites where a remedial action is taken to achieve a Class A Response Action Outcome, regardless of when in the MCP Process (IRA, RAM or Comprehensive Response Action) the remedial actions are taken. Further, the MCP Regulations (310 CMR 40.0852) state that the feasibility of achieving or approaching background for permanent solutions must be evaluated during Phase III in accordance with 310 CMR 40.0860 where Comprehensive Response Actions are or have been taken to achieve a Class A Response Action Outcome and background levels have not been achieved. For Preliminary Response Actions, the feasibility of achieving or approaching background must be conducted at all sites before a Class A RAO statement is submitted. A determination of feasibility to achieve or approach background for Preliminary Response Actions can be made before a permanent solution is implemented or during the implementation of the permanent solution when a definitive decision requires site-specific implementation data.

To be selected as a Permanent Solution, must an Engineered Barrier be the only feasible alternative? Is a detailed Phase III evaluation required? [November, 2001]

Yes. In accordance with the provisions of 310 CMR 40.0191 (1) and (3), 40.0857(2)(b), 40.0859(4), 40.0860 (3) and (4), 40.1036(4)(e), and 40.1056(2)(f), an Engineered Barrier is not an acceptable Permanent Solution at a disposal site unless a detailed Phase III evaluation (310 CMR 40.0858) demonstrates the lack of a feasible alternative to reduce concentrations of oil or hazardous materials in soils to levels below Upper Concentration Limits and to levels that approach or achieve background. A formal guidance policy on Engineered Barriers is being developed by the MassDEP.

Why does MassDEP recommend at sites with documented impacts to groundwater that a minimum of one year of quarterly monitoring after the completion of remedial actions be conducted before one can reach conclusions about an RAO? [November, 2001]

Groundwater monitoring is a critical element in characterizing sites and evaluating the need to implement remedial measures; it is also used to demonstrate compliance with cleanup standards (310 CMR 40.1004). Ongoing impacts to groundwater from contaminated soils can vary with seasonal groundwater fluctuations and infiltration of precipitation. Changes in groundwater quality can be observed as groundwater passes through the monitoring location. Seasonal and antecedent precipitation events can significantly influence groundwater quality within any given well on any given day. At sites where

groundwater remediation has been conducted, it is essential that sufficient post-remedial groundwater monitoring be conducted to determine if contaminant "rebound" has occurred. The amount of spatial and temporal monitoring points needed to make reasonable and meaningful conclusions is necessarily a site-specific decision, based on several factors, including the way the release occurred (sudden release versus historical releases), the characteristics of the chemical(s) released, the homogeneity and characteristics of the geologic formation(s), and the sensitivity of potential pollutant receptors (human and environmental). A preferred approach to address these variables is to obtain at least four measurements over a one-year period, coinciding with seasonal groundwater table variations. Although it may be possible to adequately characterize and close out a site with fewer than the recommended number of sampling rounds (spring, summer, fall, and winter), sufficient technical justification must be provided to MassDEP to demonstrate compliance with Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare, and the Environment (310 CMR 40.0900) and with the Provisions for Response Action Outcomes (310 CMR 40.1000).

While performing due diligence on a parcel, it was determined that current groundwater conditions were inconsistent with an RAO that had been submitted by a previous owner. Concentrations of Contaminants of Concern identified in the RAO were recently found to exceed applicable cleanup standards that were in effect at the time the RAO was filed, whereas the RAO was based on Contaminants of Concern levels below No Significant Risk standards. Are there requirements to notify MassDEP in this case or to retract the RAO? What party is responsible for undertaking these actions? [October 2004]

In accordance with 310 CMR 40.0317(17), a party required to notify (see 40.0331) is required to report levels of oil or hazardous materials in excess of Reportable Concentrations at closed sites if such data would negate the RAO. This requirement also applies to other types of site closures described at 310 CMR 40.0317(17). Note that prospective buyers are not among the parties required to notify (unless and until they purchase the property and become a current land owner). With respect to retraction, only the party that files an RAO (or any other submittal) can retract it. The party that submitted the RAO should be informed of new knowledge that negates the RAO. The party that submitted the RAO should proceed to provide release notification and RAO retraction, as appropriate. Any other party required to report (310 CMR 40.0331) must also notify if and when they obtain this knowledge. Of course, anyone can inform MassDEP of this situation (even if they are not required to notify), so that the agency can respond as appropriate.

PERMANENT AND TEMPORARY SOLUTIONS

May I achieve a Permanent Solution at a site using Method 1 if the concentrations of all oil and hazardous materials in all groundwater monitoring wells are below appropriate GW standards, even if NAPL is present? [May 1997, Revised November 2017]

In some cases, yes. In accordance with 310 CMR 40.1003(7), a Permanent Solution cannot be achieved at a disposal site where NAPL is or was visibly present at levels requiring notification under 310 CMR 40.0300 until response actions are taken to adequately assess the nature, extent and mobility of the NAPL, and where necessary, conduct remedial actions to adequately contain or remove the NAPL. Those response actions must ensure that for Permanent Solutions, the absence of Non-Stable NAPL under current site conditions and the foreseeable future. Additionally, all NAPL with Micro-scale Mobility must be removed if and to the extent feasible based upon consideration of CSM principles.

In those cases where NAPL with Micro-scale Mobility remains at a site, an AUL as specified at 310 CMR 40.1012(2)(d) is required as part of the Permanent Solution.

RECLASSIFCATION OF WELLHEAD PROTECTION AREAS DURING THE RAO PROCESS

If a site is in a Zone II area, can the groundwater category be redefined during the RAO process by virtue of an LSP Opinion such that GW-1 standards do not need to be met? [Volume 5, Number 2, August 1999]

No. The MCP does not allow use of an LSP opinion (as part of an RAO submittal) to reclassify groundwater categories if the site is within a defined Zone II area. Zone II areas may only be reclassified by conducting a Zone II redelineation according to MassDEP's Bureau of Resource Protection (BRP) regulations. However, the amount of data needed to support a reclassification is substantial and the submittal must undergo review and approval by BRP.

TEMPORARY SOLUTIONS

Under the 2014 revisions to the Massachusetts Contingency Plan is there still a requirement to conduct a 5-year Periodic Review of a Temporary Solution? Does it matter if a Permanent Solution was feasible? [June 2014, Reviewed November 2017]

A Periodic Review is still required every 5 years pursuant to 310 CMR 40.1050(4) for a Temporary Solution where achievement of a Permanent Solution is not currently feasible (formerly a Class C-1 Response Action Outcome). Pursuant to 310 CMR 40.1050(4)(b)(6), this Periodic Review must include a description of the type and frequency of monitoring to be conducted during the upcoming 5-year period (i.e., prior to the next Periodic Review). A 5-year Periodic Review is not required for a Temporary Solution where a Permanent Solution is Feasible (formerly a Class C-2 Response Action Outcome) since response actions towards a Permanent Solution are ongoing. In such case where response actions are continuing toward a Permanent Solution, a valid Tier Classification must be in effect at the time the Temporary Solution Statement is submitted to the Department.

CLASS C RESPONSE ACTION OUTCOMES

When the April 2006 MCP amendments went into effect, all sites with a Class C RAO prior to April 2006 became Class C-1 (i.e., a Permanent Solution is not feasible). If a Permanent Solution is in fact feasible at such a C-1 site, when must a Class C-2 RAO be filed? [February 2009]

The 2006 amendments made all existing Class C RAOs Class C-1 by default (i.e., unless and until the RAO is recategorized, it is deemed Class C-1). Parties conducting response actions must in the next 5-year Periodic Evaluation report either affirm that the site is indeed C-1 or, if a Permanent Solution is feasible, file a Class C-2 RAO (as specified in 310 CMR 40.1051(3)(b)1 and 40.1051(5). Nothing precludes the party conducting response actions from reclassifying a RAO from C-1 to C-2 sooner than the due date of the Periodic Evaluation, however. Note that a valid Tier I Permit and Tier II Classification or extension thereof, is required at the time a Class C-2 RAO is filed and for the duration of the operation of the remedial program.

SUBPART K: Audits

AUDITS

Is an LSP Opinion required on an Audit Follow-up Plan for a site with an approved waiver? [Special Edition 2, June 1994]

No. An LSP Opinion is not required on an Audit Follow-up Plan for a site with an approved waiver. The consultant of record may submit the information required by an Audit Follow-up Plan.

SUBPART L: Cost Recovery

NO Q&As

SUBPART M: Administrative Record

NO Q&As

SUBPART N: Public Involvement

PUBLIC INVOLVEMENT

Is there current guidance for developing a Public Involvement Plan? [Volume 5, Number 1, June 1999]

Interim Policy WSC-800-91, Public Involvement Plan Interim Guidance For Waiver Sites, is the only policy that provides guidance for developing a Public Involvement Plan, and must be used to ensure that the Plan meets the MCP requirements. Since the policy was written under the old MCP for Waiver sites, it needs adjusting for the Public Involvement Plan to comply with current regulations. These adjustments include:

- noting the name, address and telephone number of the Licensed Site Professional (LSP) and the Potentially Responsible Party (PRP) on the cover page;
- revising the introduction to include the concept of privatization and LSPs;
- correcting the citation for the public involvement section of the MCP to 40.1400;
- eliminating references to Waiver sites and documents;
- correcting the names of preliminary response actions and the phases of assessment and cleanup;
- revising 4.3 Notification of Major Milestones and Events to include notification triggers listed in 40.1403 of the MCP;

For tips on revising the PIP policy to reflect current regulations, contact the MassDEP Regional Public Involvement Coordinator (contact the DEP Regional Service Centers for the name and telephone number of the Regional Public Involvement Coordinator). MasssDEP plans to update the PIP policy, incorporating input received from the overall program evaluation, over the next few months.

When should PIP interviews be conducted and who should be interviewed? [Volume 5, Number 1, June 1999]

Before developing a Draft Public Involvement Plan, interviews must be conducted to identify community concerns and to obtain information and feedback from community members on topics such as:

- What information they would like to receive and in what format (e.g. fact sheets, public meetings, direct mailings, electronic mailings)

- What are the most useful sources of information about the site? (e.g. individuals, groups, media sources).

- What would be the most convenient and accessible location for a site information repository?

  Community concerns are then summarized and listed in the Draft PIP according to the following categories:

- Nature and extent of contamination

- Neighborhood health issues

- Routes of exposure

- The site remediation process

- Opportunities for public involvement during the remedial response action process

- Other Concerns

Where and when in the site cleanup process these concerns will be addressed must be noted in the Public Involvement Plan, Section 3.0 Addressing Public Concerns.
At a minimum, the key petitioner, Chief Municipal Officer, Board of Health Chairman and Conservation Commission Chairman of the community in which the site is located must be interviewed. Other people or organizations who may be contacted for interviews include: other petitioners; site abutters; neighborhood representatives including school, business, and local residents; community organizations; local Department of Public Works; hazardous waste coordinator; fire chief; and local environmental organizations.

How many public meetings are required for sites designated as Public Involvement Plan sites? [Volume 5, Number 1, June 1999]

At a minimum, the PRP must conduct a public meeting to present the Draft Public Involvement Plan and solicit comments on it . Public meetings should also be held prior to the start of a public comment period to allow for questions and discussion on the document and to better prepare the public for providing comments. The community may request additional public meetings at any point in the process.

If a site related document is available for comment at the same time that the Draft Public Involvement Plan is available, then one public meeting may be held to present both documents. Public meetings on MCP documents should not be combined with meetings or hearings on documents or permits for other regulatory programs.

How far in advance of the public meeting for the Draft Public Involvement Plan must a legal notice be issued? [Volume 5, Number 1, June 1999]

A legal notice must be published at least 14 days prior to the public meeting to present the Draft Public Involvement Plan. The legal notice must be published in a form that has been established by the Department, Form #7 found in the Public Notices of Response Action Status Instructions and Forms package available at the Regional Service Centers. In general, the public should be notified 14 days in advance of public meeting to discuss site activities.

When is a press release required? [Volume 5, Number 1, June 1999]

A press release is required at least 14 days before the public meeting to present the Draft Public Involvement Plan. Press releases may also be used when significant findings are discovered at the site, when program milestones are reached, or when schedules are delayed.

What is a Public Involvement Plan (PIP)? [Volume 5, Number 1, June 1999]

A Public Involvement Plan is an agreement between the person conducting response actions and the public about how they will share information, and how the public will be able to comment on plans for assessment and cleanup. Plans are tailored to the specific conditions presented by individual sites. A site may be designated a Public Involvement Plan (PIP) site once it has been Tier Classified as a Tier I or Tier II site. 310 CMR 40.1405 of the MCP states that once a site is designated a PIP site through the submittal of a petition, a Public Involvement Plan must be developed. While MassDEP requires that certain activities be conducted at all PIP sites, the specific activities at each site must reflect the needs of the particular site community. The party responsible for conducting response actions at a site is also responsible for conducting public involvement activities at the site and carrying out the activities listed in the Public Involvement Plan during the site cleanup process.

Once a PIP is developed, is the content locked in stone? [Volume 5, Number 1, June 1999]

The Plan may be revised as necessary during the course of the assessment and cleanup process to ensure that it continues to reflect the needs and interests of the community. If revisions are proposed, the party conducting response actions must place copies of any proposed changes in the local information repository, and send a notice of the availability of recommended changes to the mailing list. The party conducting response actions must hold a twenty-day public comment period on the proposed revised Plan. At the close of the comment period, the party conducting response actions must review any comments received and revise the Plan as appropriate. The final revised Plan is placed in the information repository. Examples of some plan revisions are changing the location or number of information repositories; frequency of public meetings; names on the notification list; and means of communicating information.

Must a site be designated a PIP site to receive a Technical Assistance Grant (TAG)? [Volume 5, Number 1, June 1999]

No. Any site that is Tier Classified is eligible to apply for a TAG.

Does initiating the PIP process stop assessment or cleanup activities at a site? [Volume 5, Number 1, June 1999]

No. The PIP process is designed to complement the cleanup process by allowing opportunities for public input, which often improves the success of cleanup efforts. Once a site is designated a Public Involvement Plan site, the plans and reports describing results and recommendations for next steps in the assessment and cleanup process are made available for public comment. Documents typically made available for public comment are: Draft Public Involvement Plan; Phase II Scope of Work; Phase II Report; Phase II Risk Assessment Scope of Work; Phase III Remedial Action Plan; Phase IV Remedy Implementation Plan; Immediate Response Action (IRA) or Release Abatement Measures (RAM) plans; and the Response Action Outcome (RAO). All comments must be submitted to the party conducting response actions. Comment periods for these documents are 20 days and are not expected to significantly delay assessment and cleanup activities. MassDEP's public involvement process is designed to address concerns regarding the investigation and cleanup of sites regulated under the MCP.

How should disputes about the public involvement process be handled? [Volume 5, Number 1, June 1999]

If citizens are concerned that the Public Involvement Plan is not being implemented properly, then they should provide the party conducting response actions with specific information on the failure to implement specific sections of the Plan. If the conflict cannot be resolved, then the MassDEP Public Involvement Coordinator for the region in which the site is located should be contacted. The Public Involvement Coordinator will assess the specific complaints, and take whatever action the Department deems appropriate.

Does the use of heavy equipment (e.g., a drill rig) trigger any public involvement requirements? [Special Edition 3, September 1994]

No. The 1988 MCP required notification to local officials of the use of heavy equipment. This provision has been revised in the 1993 MCP. Notification to local officials is now required when: performing residential sampling (e.g., sampling a private well); using respirators and other protective clothing (levels A, B, or C); and filing specific response action submittals with MassDEP (e.g., IRAs taken to abate an Imminent Hazard and their IRACs, RAMs, Phase I/Initial Site Investigation Reports, and threats to public safety). See 310 CMR 40.1403 for the complete list and details of the requirements.

Is notification of environmental sampling pursuant to 310 CMR 40.1403(10) required when sampling is conducted on a right-of-way or any other property owned by a municipality? [November 2007]

Yes. This assumes the sampling is being conducted by a party other than the municipality. Pursuant to 310 CMR 40.1403(10), written notice of such sampling on BWSC Form 123 (Notice of Environmental Sampling) should be given to the Chief Municipal Officer.

Is notification of environmental sampling pursuant to 310 CMR 40.1403(10) required when sampling is conducted on a right-of-way or any other property owned by the Commonwealth? [November 2007]

Yes. This assumes the sampling is being conducted by a party other than an agency or agent of the Commonwealth. Pursuant to 310 CMR 40.1403(10), written notice of such sampling on BWSC Form 123 (Notice of Environmental Sampling) should be sent to the district or regional office of the state authority that oversees the property. In the case of state roads, notices should be mailed to the appropriate MassHighway district office. MassHighway district office addresses may be found at http://www.mhd.state.ma.us/default.asp?pgid=dist/distRoot&sid=wrapper&iid=dist/dist.asp

SUBPART O: Numerical Ranking System

NUMERICAL RANKING SYSTEM (NRS)

Now that the definition of PPA has changed in the MCP, do I have to add 15 points to my NRS score whenever my site is located over a PPA regardless of whether it is in a Non-Potential Drinking Water Source Area or not? [Volume 3 Number 2, December 1996]

Yes, pursuant to 310 CMR 40.1511 (Score Sheet: Human Population and Land Uses, IV. B Aquifers) you must add 15 points to your sites NRS score if it is located above a PPA. If your site is located within an area that meets the NPDWSA criteria, you may deduct 15 points in section six, provided that your total deductions do not exceed 50 points.

My site is located in Massachusetts near the New Hampshire border. There is a Public Water Supply Well in New Hampshire within a half mile of my site. Do I have to score 50 points in my NRS? [Volume 3 Number 2, December 1996]

Yes, pursuant to 310 CMR 40.0511 (Score Sheet: Human Population and Land Uses, IV. C Water Use) you must add 50 points to your site's NRS score if it is located within a zone of protection of a Public Water Supply Well. People scoring sites near the state border should contact the neighboring state's environmental regulatory agency to determine if there are nearby public water supply wells and any regulatory zones of protection established for the well. If there is no specified zone of protection for the out-of-state well, you should use the Massachusetts default half-mile radius to determine if your site is located within a zone of protection.

MISCELLANEOUS

WETLANDS REGULATIONS (310 CMR 10.00)

When performing characterization and remediation activities in accordance with Massachusetts General Law 21E and 310 CMR 40.0000, are state and federal wetland regulations applicable? [Volume 5, Number 2, August 1999]

Yes. As defined in 310 CMR 10.02:(2), any activity proposed or undertaken within an area specified within 100 feet of a wetland or riverfront [except for minor activities as defined in 310 CMR 10.58(6)(b)] that will remove, fill, dredge, or alter the area is subject to regulation and requires a filing of a Notice of Intent with the local conservation commission. In addition, 310 CMR 10.24 and 10.53 provide specific requirements regarding activities associated with assessing, monitoring, containing, mitigating, and remediating OHM.

HAZARDOUS WASTE REGULATIONS (CMR 30.00)

Do Hazardous Waste LQG and SQG biennial reporting requirements and procedures apply to contaminated media generated at 21E sites? [Volume 5, Number 2, August 1999]

Yes. While the MCP has considerably streamlined the on-site management of contaminated materials, additional regulatory requirements apply once these materials are removed from the boundaries of the disposal site. Like any company that generates a waste product, parties conducting response actions at a 21E site are obligated to comply with all applicable state and federal requirements concerning the off-site transport and disposal of materials classified as "hazardous waste." The most common "hazardous wastes" generated and transported from 21E sites are (a) soils and spent activated carbon contaminated with a hazardous material that is a listed hazardous waste, and (b) soils and spent activated carbon that exhibit a characteristic of a hazardous waste (e.g., fails a TCLP test).

Generators of hazardous waste are divided into two categories: Large Quantity Generators (LQGs) and Small Quantity Generators (SQGs). An LQG is anyone who generates more than 1000 kg (2200 lbs) of a hazardous waste or 1 kg (2.2 lbs) of an acutely hazardous waste in a one-month period. A SQG is anyone who generates in any 1-month's time more than 220 lbs. but less than 2200 lbs. of non-acutely hazardous waste and/or less than one quart (1 kg) of acutely hazardous waste. When transporting hazardous wastes from a disposal site, generators must do the following:

(1) Procure an EPA identification number by filing a Notification of Hazardous Waste Activity Form with MassDEP.
(2) If an LQG, file a biennial report with MassDEP by March 1st of even-numbered years, summarizing the shipment of hazardous wastes during the previous two-year period.
(3) If wastes are shipped for greater than a one-year period, submit an annual compliance fee to MassDEP ($300 for SQG, $1800 for LQG).

For further information on the classification and shipment of hazardous waste, contact the Bureau of Waste Prevention's Hazardous Waste Compliance Assistance Hotline at (617) 292-5898.

FORMS

Is there any way to cut down on the number of original signatures on a BWSC form? [Special Edition 3, September 1994, Revised]

Most forms require two original signatures, those of the LSP and of the person who is certifying the submittal (the Release Notification Form, BWSC-103 just needs a certification signature). LSPs can

certify in place of their client, if they have written authorization from that client. A copy of the written authorization must be attached to each submittal when the LSP is certifying the document for the client.

What is the status of MassDEP electronic forms software? [Special Edition 3, September 1994, Revised]

Electronic versions of BWSC Transmittal Forms are available on the Web. See the Transmittal Forms page for more information.

Is there a form for the Phase 1 Completion Statement? [Volume 1 Number 2, December 1993-January 1994, Revised]

The following forms may be used as a Phase I Completion Statement:

BWSC-108 When the Phase I Completion Statement is submitted as a stand-alone document
BWSC-104 When the Phase I Completion Statement is being used to support an RAO Statement
BWSC-107 When the Phase I Completion Statement is being used to support a Tier Classification Submittal

The MCP requires public notice of Activity and Use Limitations (AULs) applied to a site [see 310 CMR 40.1074 and 40.1403(6)]. Does MassDEP provide a format for legal notices? [Volume 1 Number 3, February-March 1994]

Yes. The information package entitled "Instructions for Public Notices of Response Action Status" contains nine forms to be used for the legal notices required by the revised MCP. The package is available at all MassDEP Regional Service Centers as well as the Bureau of Waste Site Cleanup, 7th Floor, One Winter Street, Boston. Please note that the MCP also requires that a copy of recorded AULs be provided to local officials of the community in which the site is located (such as the Chief Municipal Officer, the Board of Health, Zoning and Building Code Officials).

In the Response Action Outcome (RAO) Statement, what is meant by the "Soil Category" designation (BWSC-104, Section F)? [Volume 1 Number 5, June-July 1994, Revised]

This item refers to the applicable soil categories (S-1, S-2 and/or S-3) which are identified and described in 310 CMR 40.0933 as part of a risk characterization (based on the frequency of use, intensity of use and accessibility). When completing the form, the LSP should indicate which soil category or categories apply to the site, not the Method 1 Soil Cleanup Standard that was met.

The form BWSC-104 indicates that soil cannot exceed S-1 standards if Method I is used to characterize risk at the disposal site and an AUL is not implemented. Per revisions to the MCP, however, an AUL is not needed for contamination above the S-1 standards that is more than 15 feet below the ground surface. Is the form incorrect? [Volume 3 Number 1, June 1996]

Yes. BWSC-104 does not reflect the amendment to the AUL requirements that does not require an AUL for contamination above the S-1 standards, provided the contamination is at a depth of greater than 15 feet. BWSC periodically updates MCP-related forms; this correction will be made in the next update.

Where are forms for AULs located on MassDEP's website? Specifically, I am looking for 40.1074(1)(b) -AUL Opinion; 40.1074(1)(f) - Property Owner Certification Statement; and 40.1403(7)(b)- Public Notice of an AUL. [October 2004]

The AUL Opinion Form, the Property Owner Certification Statement, and the public notice form are available at the BWSC Forms page . The AUL Opinion Form (BWSC113A) is the transmittal form for the narrative AUL Opinion. The narrative AUL Opinion must be attached to Form BWSC113A (BWSC113A was formerly BWSC114) and recorded at the Registry. The AUL Transmittal Form (BWSC113) provides for the property owner certification statement. Form BWSC113 is the transmittal form for sending the

registry certified copy of the AUL to MassDEP. The registry certified copy would include Form BWSC113A.

Section 310 CMR 40.1074(1)(e) requires notice to current record interest holders in the subject area 45 days before recording/registering an AUL. Is there a form for that notice? [October 2004]

No. There is no specific DEP form to provide notice to current record interest holders. The MCP is fairly specific about what information should be given to record-interest holders and how it should be sent. It requires the party to send a certified letter/return receipt requested to all interest holders on record. The letter should contain the following information: a statement that there is contamination on the site (specify type, and although not required by the regulations, it would be useful to describe the source/incident that resulted in contamination); a description of where the contamination is located (one could use the AUL survey plan for this purpose); and the terms of the Notice of AUL (that would be the list of uses and activities in the area subject to the AUL that are consistent and inconsistent with the AUL Opinion and obligations for maintaining the AUL).

310 CMR 40.1074(f) requires that the party signing the AUL certify "on a form prescribed by the Department" that he/she did indeed notify record interest holders as required by 310 CMR 40.1074(e). MassDEP has updated the AUL Transmittal Form (BWSC113) to include a check box to indicate whether record interest holders have been notified or if there were none.

Do BWSC Transmittal Forms require geographic location coordinates for the release/disposal site location? [June 2014, Reviewed November 2017]

Three transmittal forms - BWSC103 Release Notification Form, BWSC107 Tier Classification Form and BWSC104 Permanent or Temporary Solution Statement Form - require that the release/disposal location be reported using latitude/longitude coordinates. Note that prior to the June 20, 2014 amendments, the MCP required that release/disposal site location be provided using Universal Transverse Mercator coordinates. The change to latitude/longitude was made to make the location coordinates reported under the MCP consistent with other MassDEP programs.

Latitude/longitude coordinates can either be manually entered onto the forms or located using the GIS Location Finder. The GIS Location Finder uses the street address and an aerial map to establish the latitude/longitude coordinates for the site. To access the GIS Location Finder on the form, select the “Identify Location of Release” button in Section A of the transmittal forms.

REMEDIAL MONITORING REPORT

The Remedial Monitoring Report (RMR) form on eDEP requires disclosure of "prolonged (greater than 25 percent of Reporting Period) unscheduled shutdowns of the Active Remedial System." How is this calculated in a multi-component system, e.g., air-sparging operation coupled with an SVE Unit? If one component is off-line 30 percent of the time, while the other is off-line 10 percent of the time, is it permissible to average? [November 2007]

No. All critical components of a multi-component system must be operational for at least 75 percent of the reporting period to avoid the disclosure requirement. A critical component is a major system component without which the overall system will not operate to achieve the performance requirements identified in the applicable remedial plan (e.g., IRA Plan, RAM Plan, and Remedy Implementation Plan).

Is a sub slab ventilation system (SSV) or sub slab depressurization system (SSD) considered an Active Remedial System under the MCP, therefore requiring a Remedial Monitoring Report (RMR)? [November 2007]

Yes, unless it is a passive system. An RMR is required in cases where the remedial actions involve Active Operation and Maintenance of a remedy. Active Operation and Maintenance includes use of an Active

Remedial System or Active Remedial Monitoring Program (see 310 CMR 40.0006 for the definition of these terms). An SSV or SSD is considered an Active Remedial System under the MCP if it includes a mechanical or electro-mechanical device that recovers or discharges contaminated soil gas to prevent exposure to vapor-phase contaminants. An RMR is required for such an SSV or SSD.

An SSV or SSD is not considered an Active Remedial System if it does not rely on the use of a mechanical or electro-mechanical device. An RMR is not required for such an SSV or SSD.

eDEP

What is the process for LSPs who wish to register online for the purpose of providing MCP submittals to MassDEP electronically? [October 2004]

It is easy to register to file MassDEP submittals online. Initial registration generally takes less than 15 minutes. Go to www.mass.gov/dep and click on the eDEP icon on the navigation bar on the left side of the page. On the eDEP homepage, click on the New User icon. Answer the questions in "Next Steps" to establish an account and user type.

A security feature of the registration process requires that LSPs submit a proof of identity. This involves printing, signing, and stamping a registration form, and returning it by U.S. mail to MassDEP. This proof of identity is necessary to ensure that the person submitting the MassDEP form is, in fact, the person claiming that identity.

During the period in which proofs of identity are being processed, LSPs will be able to fill out and validate forms in eDEP, but they will not be able to sign and submit those forms that require proof of identity. MassDEP will send an email (usually within a few days) to confirm that the proof of identity has been completed. Thereafter, LSPs will be able to sign and submit new filings as well as any works in progress (saved online) during the confirmation process.

How does the PRP sign the online submittal? [October 2004]

eDEP allows users to share submittals with other registered eDEP users (PRPs) for the purposes of viewing, editing, and/or signing a submittal. All individuals, including PRPs, who need to access DEP's electronic submittals must be registered in eDEP. As part of the registration process each user creates an eDEP "Public Alias". It is the "Public Alias" information that eDEP users, for example LSPs, provide in the "Share this Submittal" section in eDEP that then allows their clients and/or others access to the submittal to review, edit and/or sign.

What are the advantages to online submittals over the traditional paper methods? [October 2004]

There are numerous benefits for the user from electronic submittals including:

- ease of filling out the submittal;
- electronic storage of submittals (no more lost forms!);
- accuracy of data and faster turn-around times;
- online validation, including an administrative completeness check, thus avoiding time-consuming corrections;
- ability to save a work in progress for completion at a later date;

- automatic entry of many of the fields of the submittal/form from data already existing in DEP databases, eliminating the need to enter it again;

- ability to access submittals to view, edit, and/or sign from any internet connection; and

- if filed on-time, an additional one-week grace period beyond what is provided for non-electronic submittals, for the submittal of the hardcopy to DEP.

How does a "Person Making a Submittal" via eDEP sign the submittal? [November 2007]

Both the LSP and the "Person Making the Submittal" (typically the PRP) must register in eDEP. To register, go to the MassDEP homepage and click on eDEP online filing https://edep.dep.mass.gov/DEPLogin.aspx. The registration process is similar to creating any online account with a user name and password. Registration by the LSP also requires submitting a stamped (with his/her LSP stamp) Proof of Identity form to MassDEP. The PRP does not need to submit a Proof of Identity form. The eDEP sharing function allows BWSC documents to be shared, edited and electronically signed by both parties. Signatures on paper copies are not required if a submittal is made through eDEP. The electronic signature is the legal signature for the document.

Is an electronic signature the legal equivalent of a written signature? [November 2007]

Yes. Case law has established the legality of electronic signatures and found that electronic signatures carry the same legal authority as a handwritten signature. The use of the electronic signature is appropriate and legally equivalent to a handwritten signature for eDEP submittals.

To whom can I address questions about eDEP? [November 2007]

As a first step, consult the Frequently Asked Questions on eDEP . If your question is not addressed by the FAQs, you may email your question to BWSC.eDEP@state.ma.us.

Why can't I, as the LSP, upload my supporting documentation after my client (the PRP) signs the eDEP transmittal? [November 2007]

The PRP certifies both the form and the work, including supporting documentation. To ensure that the electronic process does not circumvent the ability of a PRP to review the supporting documentation, the upload of the final supporting documentation must take place before the PRP certification step.

BWSC PRIORITY RESOURCE MAPS

When will the GIS maps be updated? [Special Edition 3, September 1994]

Data on GIS maps is updated continuously. MassGIS may be reached at (617) 727-5227 for further information.

Note: Copies of the Bureau of Waste Site Cleanup Resource Maps, which contain the guidance overlay illustrating Non-Potential Drinking Water Source Areas can be purchased from MassGIS at 251 Causeway Street, Boston, MA 02108. If you have questions regarding the guidance maps or other MassGIS programs please call 617-727-5227 ext. 323.

FEES

A RAM Plan will be filed to address a release of oil at an owner-occupied four-family residence. The site is not Tier Classified and the intent is for the homeowner to complete the cleanup and achieve a Permanent Solution with No Conditions by the end of the first year. Is the homeowner required to pay any fees to MassDEP? [June 2014, Reviewed November 2017]

Yes. The RAM Plan would require a RAM Plan Fee if filed prior to Tier Classification. If the homeowner has filed a Homeowner Certification Form (BWSC120), the Homeowner RAM Plan Fee would be $490. The Homeowner Certification Form should be filed before or concurrently with the RAM Plan to qualify for the $490 alternative homeowner fee rate. Likewise for a homeowner, if a Permanent Solution is filed more than 120 days after notification and prior to Tier Classification, a one-time $735 Homeowner Permanent Solution Fee is applicable. The alternative fees for RAM Plans and Permanent Solution submittals are applicable to submittals made by a Homeowner on or after June 20, 2014.

A developer who is an Eligible Person, Tenant or Other Person who intends to begin performing response actions on an existing site. What should they submit to get a new MCP timeline? What fees should they expect? [June 2014, Reviewed November 2017]

An Eligible Person, Tenant or Other Person who intends to commence work on a an existing site (i.e. a disposal site where a release notification has been made and response actions have been conducted by another party to date) may file a new or revised Tier Classification using transmittal forms BWSC107 and BWSC107D. These forms should be filed within 120 days of becoming an owner, operator or other person. This submittal will allow the Eligible Person, Eligible Tenant or Other Person to set new MCP timelines for response actions as outlined at 310 CMR 40.0570 and new Status Date for fees. The new Status Date will be one year from the date of the BWSC107 submittal. Additionally, the new party will not be assessed an Annual Compliance Assurance Fee for the first year using the new timeline.

Are municipalities exempt from paying fees related to activities conducted under the MCP? [Volume 1 Number 4, April-May 1994, Revised November 2017]

No. Local departments, boards and authorities must pay Annual Compliance Assurance Fees. 310 CMR 4.03(1) states that "Agencies of the Commonwealth shall be exempt from annual compliance assurance fees." In this context, Agencies of the Commonwealth" means state-level agencies under the executive branch and does not include local departments or boards. State agencies, however, are only exempt from paying Annual Compliance Assurance Fees (e.g., Tier I, Tier II, Phase V, RAM, DPS, AUL, and Permanent and Temporary Solution Statement Fees); they are not exempt from paying permit fees (Special Project Permit Application). Authorities at the state, regional and local level are required to pay Annual Compliance Assurance Fees, except for MBTA (per M.G.L. chapter 161A s24).

If I can assert a liability exemption or defense under the Brownfields Act, why am I responsible for annual compliance assurance fees? [November, 2001, Revised November 2017]

Annual compliance assurance fees (ACFs) are payable by any person conducting response actions and are completely unrelated to liability for cleanup under c. 21E, as amended by the Brownfields Act. M.G.L. chapter 21E provides that any person conducting response actions shall pay ACFs. As such, you would be subject to ACFs for the years during which you perform response actions. ACFs are based on the MassDEP's costs for running the program, including the costs for inspection, auditing, and enforcement activities necessary to ensure compliance by persons carrying out response actions.

Can I get a payment plan for any MassDEP fee? [October 2004, Revised November 2017]

Yes, in cases of severe financial hardship, a payment plan may be requested at the time the fee is payable. This includes one-time submittal fees (e.g., RAM, DPS, AUL, and Permanent Solution) and fees

that are invoiced (e.g., Tier I, Tier II, Phase V, Temporary Solution fees). Fee payment plan requests should be made in writing to MassDEP's Boston office, BWSC Cost Recovery, Fees & Revenue Section, One Winter Street, Boston MA 02108. Payment plan schedules are typically on a monthly basis with up to one year with no finance charge.

Which fees are potentially eligible for the Homeowner Fee Rate? [October 2004, Revised November 2017]

A homeowner who is conducting response actions at his or her residence to address a release of oil and who meets the definition of “Homeowner” in 310 CMR 4.02 qualifies for reduced Annual Compliance Assurance Fees, as well as one-time RAM, Permanent Solution, and AUL fees. Qualifying homeowners must submit a certification using MassDEP form BWSC120 to obtain a reduction in fees.

If a homeowner is conducting response actions, but his/her insurance company is actually paying the "bills", can the homeowner complete form BWSC120 to reduce Tier I or Tier II annual compliance fees? [October 2004, Revised November 2017]

In general, if the homeowner is performing the response actions at the site as indicated by the homeowner signing the various submittals made to DEP (e.g., IRA, RAM, Phase I, Permanent or Temporary Solution Statement, etc.), and the same homeowner submits Form BWSC120, (the completed Homeowner Certification Transmittal Form) to MassDEP, then the homeowner qualifies for the lower "Homeowner" fee rates. This is true, even if the homeowner's insurer is paying the environmental consultant directly or reimbursing the homeowner.

Is any fee due with a 5-year Temporary Solution Periodic Evaluation Report (BWSC104)? [October 2004, Revised November 2017]

No. There is no specific fee associated with the submittal of a Periodic Evaluation Report for a site that has achieved a Temporary Solution. However, the party that has filed the Temporary Solution and the Periodic Evaluation Report will be subject to the billing of a Temporary Solution Fee for each year that the Temporary Solution remains in effect, including the year in which it is revised to a Permanent Solution. Annual Compliance Assurance Fees for sites with a Temporary Solution are invoiced by MassDEP.

Is there a fee associated with conducting a URAM? [October 2004]

No submittal fee is required to conduct a URAM.

Does the Annual Compliance Fee change when Phase V Activities are conducted at a site? [October 2004, Revised November 2017]

Yes. Upon receipt of form BWSC 108 indicating that Phase IV activities have been completed and Phase V Operation, Maintenance or Monitoring is necessary (i.e., checking off box 13 (a) in Section B), the site is in Phase V, and is subject to the lower Annual Compliance Assurance Fee.

Is there a location where a PRP can hand-deliver a compliance fee payment? [October 2004, Revised November 2017]

Yes. Hand delivery of a compliance fee payment may be made at the MassDEP Boston Office located at One Winter Street (Downtown Crossing). Payments may be made by check or money order between 8:45 am and 5:00 pm at the MassDEP reception desk on the second floor. The escalator to the second floor is located near the Washington Street entrance of the Corner Mall building. Staff at the main reception desk will log in receipt of the payment. The top portion of the invoice should be included with the payment if

possible to ensure proper crediting.

If the payment is for a one-time RAM, Permanent Solution Statement, DPS, or Notice of AUL submittal fee, the check should include a photocopy of the first page of the RAM, Permanent Solution, DPS, or AUL Opinion Transmittal Form showing the site information and RTN (if one has been assigned). It is also helpful if the invoice number or Release Tracking Number and fee type are written on the face of the check. Checks should be made payable to Commonwealth of Massachusetts

Please note that payments made by mail should be sent to the following locations:

Fee Invoices:

Department of Environmental Protection
Commonwealth Master Lockbox
PO Box 3982
Boston, MA 02241-3982

One-time RAM, Permanent Solution, DPS and Notice of AUL Compliance Fees:

Department of Environmental Protection
PO Box 4062
Boston, MA 02211-4062

Is it common practice that the Annual Compliance Assurance Fees are not billed annually but rather are billed after the site has been closed with a Permanent Solution? I am conducting response actions at several sites where cleanup is ongoing and want to budget for fees that have not yet been billed. [October 2004, Revised November 2017]

MassDEP does not intentionally wait until a Permanent Solution is filed before issuing a fee invoice. However, in some instances a fee invoice may be issued after a Permanent Solution is submitted. This "back-billing" is a result of the required review of database entries for each site to determine the applicable Status Date, fee category and rate, billable party, and mailing address.

Because Annual Compliance Fees are billed retrospectively, and fees are billable for each year, including the year that the Permanent Solution is filed, the final fee invoice is often issued after receipt of the Permanent Solution Statement. The fee category is based on the site status on the annual status date. Thus, the last billable year (the year that the Permanent Solution Statement is filed) is not "over" until the Annual Status Date.

Annual Compliance Assurance Fees should be budgeted for each billable year a site remains within the MCP system. If you want to budget for fees and need to know the amount, please contact the staff in MassDEP's Bureau of Waste Site Cleanup Cost Recovery, Fees & Revenue Section at (617) 292-5545. You may also request to be invoiced at any time if the fees have not yet been invoiced.

Please consult the MassDEP web site for refer additional information on fees.

TIME LINES

How long do I have to complete response actions and file a Waiver Completion Statement after my waiver application has been approved? Can I get an extension of the waiver if more time is needed to finish the work? [Special Edition No. 2, June 1994 revised in Volume 1 Number 5, June/July 1994]

The answer, given in the Special Edition Waiver Q&A, states that "DEP will determine whether a 1 year extension will be granted and with that approval may establish additional conditions and interim deadlines for response actions at the site. If an extension is granted, the waiver recipient may apply for another extension..." This statement implies that DEP directly approves each request for an extension of the Tier II Classification. However, 310 CMR 40.0560(7)(c) actually states that "A Tier II Classification Extension shall take effect 60 days after submission of a complete extension notification to the Department unless the Department issues a written denial for such extension." This means that if the waiver holder has not received a denial from DEP within 60 days after providing the extension notification, he/she can assume the extension of Tier II Classification is approved and continue response actions at the site.

OTHER

MassDEP recommends ASTM's Standard Guide for Greener Cleanups as appropriate for considering and evaluating greener cleanup considerations under the MCP. How do I obtain a copy of the ASTM Standard Guide for Greener Cleanups? [June 2014, Reviewed November 2017]

The standard guide can be purchased directly from ASTM International online at http://www.astm.org/Standards/E2893.htm. Purchasers have the option to (1) immediately download an electronic file of an Adobe PDF, or (2) request shipping of a hard copy.

What happened to the two Remedial Action Design Documents sheets that DEP issued in draft form? [Special Edition 3, September 1994]

These documents have not been issued in final form. BWSC may pursue the development of documents of this nature as guidance for LSPs and others preparing remedial design plans and documentation (e.g., for IRAs, RAMs, and Phase IV remedial systems). Such guidance would provide an outline and format for such documents and facilitate DEP reviews and/or approvals.

When must I apply to the local Conservation Commission for a wetland permit for a 21E site? [Volume 3 Number 1, June 1996]

Wetland permits are required for MCP response actions occurring in a wetland or wetland buffer zone. The presence of contamination in a wetland, absent response actions, does not require a permit. For spills, no prior Conservation Commission approval is required for an IRA to begin, so long as a request for an Emergency Certification is filed with the Commission within 24 hours of BWSC's oral approval of the IRA. For all other response actions (and for continuation of an IRA beyond 60 days), a permit application ("Notice of Intent") must be filed and a permit ("Order of Conditions") must be obtained prior to commencement (or, in the case of an IRA, continuation) of work.

Consistent with the MA Wetlands regulations (314 CMR 10), "wetlands" under the MCP include: 1. coastal and inland surface waters (and the land beneath them) and their 100 year floodplains; 2. "vegetated" wetlands (salt and freshwater marshes, swamps, bogs and wet meadows); 3. vernal pools certified by the MA Endangered Species Program; and 4. beaches, dunes, barrier islands, and coastal banks. In addition, activities within 100 feet of the banks of surface water bodies or their bordering vegetated wetlands ("buffer zone" activities) are subject to wetland permit requirements. If LSPs are uncertain as to whether work needs a wetland permit, a "Request for Determination of Applicability" may be filed with the local Conservation Commission.