MassDEP's Response to Public Comments on the Public Hearing Draft of Proposed Amendments to the Massachusetts Contingency Plan, 310 CMR 40.0000

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
This Response to Comment summary does not contain public comments on proposed PFAS-related amendments which were finalized December 27, 2019; a summary of PFAS-related public comment was published with the final PFAS provisions.			
40.0005: Effective Date	Haley & Aldrich	We recommend that use of the new risk characterization protocol (see 40.0926(8)(a)(2)) be optional for sites that notify prior to the publication date. A two-month phase-in process could have negative impacts on "non-simple" sites in active redevelopment that have already notified, assessed, and conducted risk characterizations based on current regulations. By the time the new regulations go into effect, these sites could be in the middle of implementing Release Abatement Measures, cleanups and/or construction based on that risk characterization. Remedial goals established for these sites would have been based on risk characterizations performed under the current regulations; once construction begins, collecting additional data may be impossible. Without collecting more data, a no-conditions site closeout might no longer be possible for some of these sites, which would be very disruptive to development. Also see comment at Note to Reviewer 61 re: CERCLA AULs.	The final regulation does not provide an option to rely on previously completed risk characterization for sites that have not yet reached a Permanent Solution. Doing so would exclude sites from the new requirements and would be inconsistent with the intent of ensuring that appropriately conservative EPC estimates are used to support risk characterizations and site closure decisions. To provide for the transition to the applying the new provisions, the effective date of the final regulation is six months from its first publication in the Massachusetts Register.
40.0005: Effective Date	LSPA	Effective Dates: The LSPA proposes that MassDEP wait at least 90 days after publication for amendments (other than Reportable Concentrations) to take effect. Although previous amendments have become effective after 60 days, the changes to Subpart I in particular are likely to have substantial impacts on sites that are already approaching MCP closure. The extra 30 days would allow some of these sites to achieve a Permanent Solution prior to the effective date. In particular, if these sites require an AUL with 30-day notice to record interest holders, then 60 days would not be sufficient.	The final regulation does not provide an option to rely on previously completed risk characterization for sites that have not yet reached a Permanent Solution. Doing so would exclude sites from the new requirements and would inconsistent with the intent of ensuring that appropriately conservative EPC estimates are used to support risk characterizations and site closure decisions. To provide for the transition to applying the new provisions, the effective date of the final regulation is six months its first publication in the Massachusetts Register.
40.0005: Effective Date	LSPA	The transition provisions provide for only a limited time to achieve compliance on a wide variety of topics. For sites nearing completion under the existing regulations, significant changes to risk assessment requirements could require a substantial amount of otherwise appropriate (under the current regulations) work to be redone, at a significant cost in terms of both time and money to achieve site closure. We ask that MassDEP re-evaluate the proposed timelines and consider allowing certain transitional provisions to phase in for sites currently past Phase I in the cleanup program.	To provide for the transition to applying the new provisions, the effective date of the final regulation is six months from its first publication in the Massachusetts Register.

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40.0005: Effective Date	NAIOP	A two-month phase-in process could have negative impacts on "non-simple" active redevelopment sites that have already notified, assessed, and conducted risk characterizations based on current regulations. By the time the new regulations go into effect, these sites could be in the middle of implementing RAMs, cleanups, and/or construction based on that risk characterization. Remedial goals established for these sites would have been based on risk characterizations performed under the current regulations; once construction begins, collecting additional data may be impossible. Without collecting more data, a “no conditions” site closeout might no longer be possible for some of these sites, which would be very disruptive to development. NAIOP suggests that the use of the new risk characterization protocol be optional for sites that notify prior to the publication date. Alternatively, the new requirements should not apply to disposal sites for which a risk characterization performed in accordance with 40.0900 has been submitted to the Department prior to the effective date of the amendments.	The final regulation does not provide an option to rely on previously completed risk characterization for sites that have not yet reached a Permanent Solution. Doing so would exclude sites from the new requirements and would inconsistent with the intent of ensuring that appropriately conservative EPC estimates are used to support risk characterizations and site closure decisions. To provide for the transition to applying the new provisions, the effective date of the final regulation is six months from its first publication in the Massachusetts Register.
40.0005: Effective Date	National Grid	Changes being proposed in the Amendments will have significant impact on the assessment and characterization of risk at ongoing sites. "For many of these sites, we are working with individual property owners to gain access to their properties to perform response actions under complex legal agreements. Some of these agreements have been negotiated over a period of years. We believe additional time is warranted for these amendments to take effect, so we have time to work through the proposed changes with the individual property owners prior to becoming effective. We believe that the amendments should take effect six months after the publication date instead of the proposed two months.	To provide for the transition to applying the new provisions, the effective date of the final regulation is six months from its first publication in the Massachusetts Register.
40.0006(12): Active Exposure Pathway Mitigation Measure	Haley & Aldrich	We support what we believe is the intent of this clarification to the definition of Active Exposure Point Mitigation Measure. However, we note that the current Vapor Intrusion Guidance includes discussion of pressurized systems (block-wall and sub-slab), and the revised language would appear to exclude these from the definition of Active Exposure Point Mitigation Measures.	The definition has been revised to include systems that maintain a positive pressure field. MassDEP believes, however, that maintaining the operating parameters for these systems is more complex generally than it is for subslab depressurization systems. Therefore, when such systems are used to support a Permanent Solution, a corresponding change has been made to 310 CMR 40.1025(3)(d)5. to require that the system be operated with remote monitoring that continuously monitors and continuously transmits key operational data to a website that meets Department specifications. For subslab depressurization systems, remote monitoring that continuously monitors and continuously transmits key operational data remains an option in the final regulation.

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40.0006(12): Active Exposure Pathway Mitigation Measure	LSPA	Definition of Active Exposure Pathway Mitigation Measures (AEPMMs): The new definition limits AEPMMs intended to deal with vapor intrusion issues as systems which create or maintain a negative pressure field to prevent or mitigate vapor intrusion. As a general comment, we disagree with the approach of including a design standard in the definition of what is essentially a performance standard. In particular, this definition excludes the Active Pressurization Techniques which are listed as options for Active Mitigation Systems in Section 3.4 of MassDEP's Vapor Intrusion Guidance (Policy #WSC-16-435). The definition of AEPMMs should be revised to include active pressurization, to be consistent with the Vapor Intrusion Guidance. We suggest building in adaptive management and flexibility by adding a third option for the purpose of an AEPMM as "Such other mechanism that is consistent with response action performance standards, proposed by the LSP of record and approved in writing by MassDEP."	The definition has been revised to include systems that maintain a positive pressure field. MassDEP believes, however, that maintaining the operating parameters for these systems is more complex generally than it is for subslab depressurization systems. Therefore, when such systems are used to support a Permanent Solution, a corresponding change has been made to 310 CMR 40.1025(3)(d)5. to require that the system be operated with remote monitoring that continuously monitors and continuously transmits key operational data to a website that meets Department specifications. For subslab depressurization systems, remote monitoring that continuously monitors and continuously transmits key operational data remains an option in the final regulation. The suggested edit related to including a third option "consistent with response action performance standards" has not been made. The intent of the revisions to the AEPMM definition was to provide more specificity to preclude Active Remedial Systems from being (incorrectly) identified as a type of AEPMM. The specificity in the AEPMM definition is intended to prevent a blurring of the line between AEPMM and Active Remedial Systems, the latter of which cannot be operated in support of a Permanent Solution.
40.0006(12): Active Exposure Pathway Mitigation Measure	NAIOP	The word "sole" is unnecessary in the definition. An SSDS could also do double duty as a "radon system" as well.	The suggested edit was made.
40.0006(12): Active Exposure Pathway Mitigation Measure	OHI Engineering, Inc.	Recommend adding clause "(c) or similar measure used to eliminate an exposure pathway."	The suggested edit would be inconsistent with the intent of the revisions and was not made. The intent of the revisions to the AEPMM definition was to provide more specificity to preclude Active Remedial Systems from being (incorrectly) identified as a type of AEPMM. The specificity in the AEPMM definition is intended to prevent a blurring of the line between AEPMM and Active Remedial Systems, the latter of which cannot be operated in support of a Permanent Solution.
40.0006(12): Active Exposure Pathway Mitigation Measure	Vertex	"Active Exposure Pathway Mitigation Measure: (a) creating and maintaining a negative pressure field beneath and/or surrounding a building to prevent or mitigate the migration of subsurface OHM vapors into a building; or" While using a system to maintain a negative pressure field below or around a building is the most common means of mitigating vapor intrusion, it is not the only system available. In areas with a high water table, with soils with low porosity, etc., alternative methods may be used including but not limited to: Positive pressure systems that create a positive pressure field in the unit and not a negative pressure field below the unit ,or fresh air exchange such as those generated by HRV/ERV systems, etc. If this requirement applies only to SSDS I would assume more people would switch to rely on positive pressure which costs generally the same as SSDS but removes the requirements for active exposure mitigation as defined in the MCP.	The definition has been revised to include systems that maintain a positive pressure field. MassDEP believes, however, that maintaining the operating parameters for these systems is more complex generally than it is for subslab depressurization systems. Therefore, when such systems are used to support a Permanent Solution, a corresponding change has been made to 310 CMR 40.1025(3)(d)5. to require that the system be operated with remote monitoring that continuously monitors and continuously transmits key operational data to a website that meets Department specifications. For subslab depressurization systems, remote monitoring that continuously monitors and continuously transmits key operational data remains an option in the final regulation. The suggested edit related to including a third option "consistent with response action performance standards" has not been made. The intent of the revisions to the AEPMM definition was to provide more specificity to preclude Active Remedial Systems from being (incorrectly) identified as a type of AEPMM. The specificity in the AEPMM definition is intended to prevent a blurring of the line between AEPMM and Active Remedial Systems, the latter of which cannot be operated in support of a Permanent Solution.

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40.0006(12): Anthropogenic Background	Haley & Aldrich	We support this clarification but question how to define “ash landfill.” Is there a formal definition? Can we refer to the MassDEP’s most recent list of “Inactive & Closed Landfills & Dumping Grounds?” Does COMM-97-001 cover these types of landfills?	The exclusion of "ash landfills" is intended to be parallel to the exclusion of landfills (dumps, etc.) in the definition of “historic fill”, and consistent with the concept expressed in that definition that it “may contain, but is not primarily composed of” these materials. Thus an ash landfill would be a landfill that is primarily composed of ash (e.g., an ash monofill.) The “Inactive & Closed Landfills & Dumping Grounds” list may be a useful reference, but it is not a definitive source – there may be unlisted ash landfills yet to be re-discovered. COMM-97 applies to landfills regulated by the MassDEP Solid Waste Program, so the applicability of COMM-97 to a specific ash landfill would depend on how it is regulated.
40.0006(12): Anthropogenic Background	Larry McTiernan	Regarding the definition and Note to Reviewers, how is one to distinguish “layers that are primarily ash” from “ash landfills”? Is the exception for ash landfills meant to comprise only known/documented landfills?	The exclusion of "ash landfills" is intended to be parallel to the exclusion of landfills (dumps, etc.) in the definition of “historic fill”, and consistent with the concept expressed in that definition that it “may contain, but is not primarily composed of” these materials. Thus an ash landfill would be a landfill that is primarily composed of ash (e.g., an ash monofill.) The “Inactive & Closed Landfills & Dumping Grounds” list may be a useful reference, but it is not a definitive source – there may be unlisted ash landfills yet to be re-discovered. COMM-97 applies to landfills regulated by the MassDEP Solid Waste Program, so the applicability of COMM-97 to a specific ash landfill would depend on how it is regulated.
40.0006(12): Anthropogenic Background	NAIOP	NAIOP appreciates MassDEP’s clarification that coal, coal ash, and wood ash are still considered within the definition of anthropogenic background.	MassDEP appreciates this support.
40.0006(12): Anthropogenic Background	OHI Engineering, Inc.	Definition under (c) is too ambiguous. Recommend adding the term "permitted" in front of ash landfill so that the definition would read "....excluding permitted ash landfills..."	The exclusion of "ash landfills" is intended to be parallel to the exclusion of landfills (dumps, etc.) in the definition of “historic fill.” *Permitted* landfills (ash or otherwise) are addressed through the “Adequately Regulated” provisions – *unpermitted* landfills (ash or otherwise) are addressed through the waste site cleanup program, if needed. MassDEP intends to exclude unpermitted ash landfills from the definition of anthropogenic background.
40.0006(12): Anthropogenic Background	Weston & Sampson	With the addition of coal, coal ash or wood ash, MassDEP should clarify and provide guidance on the application of these terms/definitions, specifically is MassDEP planning to update and finalize of the Draft Historic Fill/Anthropogenic Background Technical Update.	MassDEP does intend to finalize the Historic Fill/Anthropogenic Background Technical Update and incorporate related changes to reflect the final MCP amendments.
40.0006(12): Conceptual Site Model	Haley & Aldrich	The proposed language is vague. "Foreseeable future" covers what time period? A guidance document would be useful.	MassDEP is working on developing guidance on this issue. Additionally, the LSPA is developing a toolkit related to the climate change provisions.

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40.0006(12): Conceptual Site Model	NEH	Commenter supports the addition of climate change impact considerations to the definition of Conceptual Site Model (CSM). Suggest adding the following to the definition, "…assessing current and foreseeable future site characteristics and risk, ***including climate change impacts based on current science/models,*** …"	The suggested edit, while consistent with the intent of adding the "current and foreseeable future" site characteristics terms to the CSM framework, was not made; it is addressed in the related edits to the foreseeable period of time provision at 40.1005(1).
40.0006(12): Conceptual Site Model	Weston & Sampson	With reference made to climate change in the Conceptual Site Model (CSM) and other sections of the MCP, guidance is needed on the scope and elements LSPs must consider in its development of the CSM.	MassDEP is working on developing guidance on this issue. Additionally, the LSPA is developing a toolkit related to the climate change provisions.
40.0006(12): Consultant-of-Record	LSPA	Consultant-of-Record is defined as "each consultant, other than a Licensed Site Professional, who provides professional services…unless and until such person notifies the Department in writing that he or she is no longer engaged or employed to provide such services…" Could MassDEP please provide examples of services a Consultant-of-Record might provide, and list the specific circumstances when it is appropriate to have a Consultant-of-Record instead of an LSP? There is a BWSC form to resign as LSP; how does one resign as Consultant-of-Record? What are the potential consequences if a Consultant-of-Record does not notify MassDEP in writing that he or she is no longer engaged? It is the LSPA's understanding that this definition and the definition of Audit Follow-up Plan were added to the MCP in 2014 and are intended to only apply in those circumstances in which a PRP may receive an NOAF that identifies concerns whose resolution does not require that the PRP hire an LSP. We are not sure that MassDEP achieved this goal because 40.1160(2)(c) requires that an Audit Follow-up Plan include the seal of an LSP and 40.0015(3) identifies an Audit Follow-up Plan as an LSP Opinion. If not tethered to this concept, the definition of "Consultant-of-Record" is overbroad and untenable - it could include every member of the LSP's team.	The change proposed to the "Consultant-of-Record" definition was to correct a grammatical error. The LSPA's comments, however, highlighted that a definition of the term is no longer necessary. Consultants-of-Record made submittals during the transition from the pre-1993 21E program to the 1993 privatized program. Under the MCP's transition provisions (formerly at 310 CMR 40.0600) there were requirements related to No Further Action Statements submitted by Consultants-of-Record. Since Consultants-of-Record no longer make MCP submittals, the Department has deleted the Consultant-of-Record definition and also removed the term from the "Audit Follow-up Plan" definition. The only other occurrence of the term is at 310 CMR 40.1404(2)(d), in reference to previously submitted No Further Action Statements. The term was retained in this instance and its meaning is sufficiently clear in this provision.
40.0006(12): Containerized Waste	Haley & Aldrich	We support this clarification.	MassDEP appreciates this support.
40.0006(12): Containerized Waste	MassDOT	40.0006(12) Containerized Waste means discarded oil and/or hazardous material at a site, excluding Contaminated Media, that is contained in drums, etc. Containerized Waste - What if testing of contaminated media in drums/tanks indicates that it is a hazardous waste? Will that media then become containerized?	If testing of remediation waste in drums/tanks indicates that it is a hazardous waste, then it is managed as an uncontainerized hazardous waste pursuant to 310 CMR 40.0033. The fact that it is a hazardous waste is unrelated to its containerized/uncontainerized status.

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40.0006(12): Containerized Waste	NAIOP	Please clarify whether spent granular activated carbon (GAC) that is generated as a result of response actions at a site would be considered a Containerized Waste. The new definition seems to exclude soil, sediment, and groundwater that is placed in containers, but spent GAC seems to still fit under the definition of item b), discarded oil and/or hazardous material discovered, managed, generated, or accumulated as part of a response action.	GAC accumulates OHM within a container and the resulting material would be considered Containerized Waste. The management of the spent GAC will depend on whether the OHM is considered a hazardous waste. If the OHM is not a hazardous waste, the spent GAC may be managed as a solid waste. If the OHM is a hazardous waste, the containerized waste (GAC) must be managed at a licensed facility per 310 CMR 30.801. (Note that whether waste is/is not containerized does not determine whether it is/is not a hazardous waste requiring special management per 310 CMR 30.000.)
40.0006(12): Containerized Waste	National Grid	We do not have a specific comment on the proposed change, but we request that the Department clarify whether spent granular activated carbon (GAC) that is generated because of response actions at a site would be considered a Containerized Waste. The new definition appears to exclude soil, sediment and groundwater that are placed in containers, but spent GAC seems to still fall under b) discarded oil and/or hazardous material discovered, managed, generated, or accumulated as part of a response action.	GAC accumulates OHM within a container and the resulting material would be considered Containerized Waste. The management of the spent GAC will depend on whether the OHM is considered a hazardous waste. If the OHM is not a hazardous waste, the spent GAC may be managed as a solid waste. If the OHM is a hazardous waste, the containerized waste (GAC) must be managed at a licensed facility per 310 CMR 30.801. (Note that whether waste is/is not containerized does not determine whether it is/is not a hazardous waste requiring special management per 310 CMR 30.000.)
40.0006(12): Downgradient	NAIOP	Contamination caused by storm water sheet flow from an off-site, “uphill” source should also be eligible for downgradient property status. Recommend adding language, "...in reference to surface water ***and storm water sheet flow…*** "	The suggested change was not made. The Department believes that the spread of contaminants by sheet flow is too difficult to track to the source property(ies) to allow for practical application under the DPS provisions.
40.0006(12): Historic Fill	Wes Stimpson	While this is not currently a proposed change, the definition could benefit from a clarification as to what is meant by “pervasive use and release of such materials” as the term is used in (c). Does the material to which the contaminant concentration is being attributed have to have both a pervasive use and a pervasive release to the environment or just have a pervasive use? For example, lead found in the fill might be attributed to lead used in building flashings, pieces of which were found in fill. Lead building flashings could be considered to have a pervasive use but there really isn’t a documented pervasive release history of flashing material found in fill. Would the lead concentrations attributed to building flashing found in the example given qualify as meeting criteria (c)?	As noted, there was no change proposed to this regulation. The intention is both conditions – use and release – must be common/pervasive. It does NOT include unusual release of commonly used (and typically safely disposed) materials.

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40.0006(12): Hot Spot	LSPA	Definition of Hot Spot to include “areas of waste disposal, including but not limited to Manufactured Gas Plant Waste, shall be considered Hot Spots.” This will likely lead to UCLs being exceeded since a Hot Spot has to be treated as a separate exposure point and exposure points are compared separately to UCLs. The LSPA expects that this will lead to more engineered barriers or fixation being required for a site to achieve a permanent solution. Consider this another way: Is every area where wastes were disposed of going to be treated as a hot spot? Does that include C&D debris, the barn that was buried in place, a knoll in the back 40 where materials accumulated over time? Are these areas no longer “areas of waste disposal” when the waste is removed? Hot spots need to be relatable to measurable concentrations in environmental media, not to a subjectively defined area. It is unclear to the LSPA what MassDEP is trying to accomplish. Aren’t areas of waste disposal already adequately addressed as “sources” that must meet the MCP requirements for source elimination and/or control?	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern. In the final regulation, "areas of waste disposal", including coal tar deposits, are not included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). This provision allows a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar. Additionally, coal tar is not included in the Method 3 Ceiling Limits (formerly Upper Concentration Limits) at 310 CMR 40.0996. Instead, it is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution). Regarding MCP provisions related to sources, those provisions focus on limiting migration, while the new coal tar provisions focus on limiting exposures.
40.0006(12): Hot Spot	LSPA	Modification to “Hot Spot” definition. The term “areas of waste disposal” that has been added to the Hot Spot definition should have some scale or size component and should also be a defined term. Without such perspective, the regulation revisions could compel one to address tiny pockets of waste material (for example, thin layers or small isolated pockets of hardened tar which are commonly associated with former MGPs) as individual little hot spots, with analytical data required for each little pocket or layer. The revisions need to allow for judgment on the part of the LSP regarding a reasonable approach to developing EPCs for such heterogeneous deposits. In addition, if the intent, as suggested by MassDEP during an LSPA presentation, is to address areas where waste is present as a discrete layer/zone separate from soil, then the LSPA suggests the following language: "...in all cases, areas or zones of discrete waste, including but not limited to MGP waste, shall be considered hot spots." Otherwise, as written, it suggests that the intent is to refer to waste disposal locations, such as those referenced in the historic fill definition “municipal solid waste dump, burning dump, landfill, waste lagoon or other waste disposal location.”	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern. In the final regulation, "areas of waste disposal", including coal tar deposits, are not included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). This provision allows a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar.

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40.0006(12): Hot Spot	LSPA & Wes Stimpson	At a minimum, a definition of “waste,” as used in this definition, needs to be added to the definitions section. In addition to the MGP Wastes cited and defined, are waste sludges associated with plating operations to be included? How about waste oil released to the environment as NAPL? How about released NAPL petroleum products? Released NAPL petroleum products, from tanks and other sources, are no longer suitable for their intended use and could be considered “waste.” Is it MassDEP’s intention to include petroleum NAPLs in this definition such that NAPL is a Hot Spot requiring sampling and analysis? MassDEP has yet to address risks associated with direct exposure to petroleum NAPLs, but the proposed revision is not an appropriate way. Including petroleum NAPLs as “waste,” and implementing this approach, would also move the way petroleum NAPLs are regulated back to the pre-2014 regulation changes.	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on visible coal tar waste deposits. It was not MassDEP's intention to include petroleum NAPLs in the proposed waste provisions.
40.0006(12): Hot Spot	MassDOT	40.0006(12) Hot Spot , in all cases, areas of waste disposal, including but not limited to Manufactured Gas Plant waste, shall be considered Hot Spots. The term "areas of waste disposal" seems vague. MGP waste is defined, but what is meant by "areas of waste disposal" being included in the Hot Spot definition?	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. In the final regulation, "areas of waste disposal", including coal tar deposits, are no longer included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.).
40.0006(12): Hot Spot	NAIOP	The new requirement that all areas of waste disposal, including all MGP Waste, be considered a Hot Spot is overly broad. MGP Wastes and other disposed materials may consist of a wide variety of materials, several of which may be inert or are not likely to have significant contaminant concentrations. These materials may include rubber, plastic, clinker, and carbon black. We recommend revising the definition to require evaluation of areas of waste disposal as potential Hot Spots. If contaminant concentrations in these areas do not meet the criteria for a Hot Spot then the area would not be identified as a Hot Spot. Recommended changes: The areal extent and spatial pattern of a Hot Spot may be determined through the analytical results from multiple samples taken within the area, or the results of limited sampling in combination with other knowledge about the release, such as the presence of discoloration, odors or a defined source area. In all cases, areas of waste disposal, including but not limited to Manufactured Gas Plant Waste, shall be (considered) evaluated as potential Hot Spots.	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. In the final regulation, "areas of waste disposal", including coal tar deposits, are no longer included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.).

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40.0006: Hot Spot	National Grid	The proposed changes to the Hot Spot definition to include all “areas of waste disposal” of MCP Waste as Hot Spots will lead to further confusion during assessment of these sites. What would be considered an “area of waste disposal”? Is this a discrete layer of a waste material or would just a few pieces of MGP waste such as coke or hardened tar or tar in the form of droplets of NAPL within the soil matrix meet the definition? Would you have to isolate those pieces to quantify the Hot Spot? If that is the intent of the proposed changes, permanent closure at these heavily developed sites would likely be technically infeasible since it would require relocation of existing utilities, buildings, and other infrastructure. Even a droplet of product may exceed Upper Concentration Limits (UCLs) if sampled separately from the soil and to address these types of UCLs you would either need to remove, stabilize, or cover (with an Engineered Barrier) the soil with the droplet or piece of tar.	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern. In the final regulation, "areas of waste disposal," including coal tar deposits, are not included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). This provision allows a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar. Regarding the comparison of coal tar concentrations to Upper Concentration Limits, in the final regulation, coal tar is not included in the Method 3 Ceiling Limits section (310 CMR 40.0996). Instead it is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).
40.0006(12): Hot Spot	OHI Engineering, Inc.	The inclusion of waste material in the definition leaves too much to interpretation. This concern exists even with the addition of the MGP Waste definition. The soil around former MGP plants has been reworked to scatter impacts and "EPCs accounting for this disparity are more appropriate." The existing language of the Hot Spot definition, "such as the presences of discoloration, odors or a defined source area" already provides MassDEP with the opportunity to require these areas be treated as hot spots. "The MCP should be based on Risk and not loosely defined terminology."	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar, so a definition of "MGP waste" is no longer needed. In the final regulation, "areas of waste disposal," including coal tar deposits, are not included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are now designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)(3). This provision allows a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risk from coal tar.
40.0006(12): MGP Waste	Haley & Aldrich	We support the addition of this definition.	The final regulation focuses only on visible coal tar deposits, as that type of waste was MassDEP's main concern initially, so the definition of "MGP Waste" is no longer needed.
40.0006(12): MGP Waste	Larry McTiernan	Is it correct that the definition not include purifier-box wastes?	MassDEP agrees that "waste" and "area of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially, so definitions of other types of waste, including Manufactured Gas Plant Waste, are no longer needed.

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40.0006(12): MGP Waste	LSPA	Singling out a specific type of waste (MGP waste) for the addition of a specific definition would not appear to be necessary. These materials do not have unique toxicity or mobility issues and can be appropriately addressed under the existing regulations. For example, “oil” is a very well-studied form of OHM, and there are many regulations and guidance documents relating to oil (or non-aqueous phase liquid [NAPL]). While oil and tar from MGP tend to be dense(D) NAPL (vs lighter petroleum LNAPL), MGP DNAPL and petroleum LNAPL are similar in many ways, including some mobility similarities in the subsurface (i.e., mechanics of fluid flow through porous media) and chemical composition (BTEX, PAHs, petroleum hydrocarbon ranges). Of more concern is the subsequent revision requiring sampling of MGP Waste and comparing those results to Soil Upper Concentration Limits. This is not currently required for petroleum NAPL sites, nor should it be. The proposed language suggests that “oil” from one source should be treated differently than “oil” from another source, and this is not technically justified from either a fate and transport or toxicological perspective.	Through decades of oversight, MassDEP has observed that exposures to coal tar at MGP sites have not always been assessed and managed in ways that protect public health. Sites with extensive coal tar deposits are prevalent throughout the Commonwealth. MassDEP believes amending the MCP to ensure consistent and protective management practices at these sites is justified. MassDEP disagrees that coal tar is similar to petroleum NAPLs. Based on information in the scientific and technical literature, coal tar contains higher concentrations of PAHs and is more toxic than petroleum NAPL. Coal tar is generally more viscous and less mobile than petroleum NAPLs, and it is commonly present at or near the ground surface, resulting in the potential for human direct contact and inhalation exposures. In contrast, LNAPL is often found at or near the groundwater table. MassDEP's LNAPL regulations and guidance focus on mobility in the saturated zone, while coal tar-related amendments focus on eliminating exposure to accessible coal tar. Regarding the comparison of coal tar concentrations to Method 3 Ceiling Limits (formerly Upper Concentration Limits), in the final regulation, coal tar is not included in the Method 3 Ceiling Limits section (310 CMR 40.0996). Instead it is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions under which a condition of No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).
40.00006(12): MGP Waste	NAIOP	The Department has proposed the following new definition in the MCP: Manufactured Gas Plant Waste and MGP Waste means tars, oil, coke, and other by- products formed in the coal gasification process. MGP Waste may consist of a wide variety of materials, several of which are not likely to have significant contaminant concentrations. The last phrase in the new definition - “and other by-products formed in the coal gasification process” – would include these materials. This issue is also addressed in our comments below (see, e.g., comments on Notes to Reviewers 68 and 69). But more broadly, and even understanding the history of MassDEP’s concern in this regard, NAIOP feels strongly that it is inappropriate to focus on a single industrial waste. Why is there no such additional definition, or specific inclusion in other parts of the MCP, for other commonly-encountered industrial wastes such as tannery wastes or plating wastes? Since it is impractical for the Department to include definitions for all of the past and present industrial wastes produced in the Commonwealth, we recommend that any changes to the MCP should focus on a contaminant type (e.g., tar, oil, heavy metals) regardless of the manufacturing process used to produce it.	MassDEP agrees that "waste" and "area of waste" were not clearly enough defined in the public hearing draft. The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially, so a definition of "Manufactured Gas Plant Waste" is no longer needed. Regarding its focus on one single type of waste, MassDEP has observed through decades of oversight that exposures to coal tar at MGP sites have not always been assessed and managed in ways that protect public health. Sites with extensive coal tar deposits are prevalent throughout the Commonwealth. MassDEP believes amending the MCP to ensure consistent and protective management practices at these sites is justified.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): MGP Waste	National Grid	* Question the need to create a special definition for Manufactured Gas Plant Waste and MGP Waste. This definition would imply that the wastes from this manufacturing process need special designation to distinguish them from wastes from other processes (i.e., tanneries, degreasers, metalplating operations, smelters, dry-cleaners, etc.), many of which are much more toxic. The most common MGP wastes (coal tar residuals) are like petroleum products in composition & mobility and potential risks posed by these materials are neither unique nor extraordinary. * The proposed definition is very broad and would include other materials such as ash, which could be considered a by-product. This could potentially lead to confusion on how to treat ash on MGP sites since the ash could also meet the definition of Anthropogenic Background. Would that mean that ash on MGP sites could not meet thatdefinition, and if so, why would ash on an MGP site be different from any other coal burning process? * Neither changes to Hot Spot definition or MGP Waste definition are necessary; they will lead to confusion during assessment and characterization of risk at MGP sites. The MCP already addresses these conditions to some extent including identifying waste deposits as a potential source of oil and/or hazardous material (OHM) contamination and we sample these deposits using the existing MCP regulations to determine if they would be considered a Hot Spot and a potential source of contamination. * If the Department feels that the risk at sites is not being adequately characterized, then regulation changes should be more focused on the actual sampling and assessment of discrete areas or layers of waste materials and using the existing Hot Spot definition to determine if these deposits should be treated as separate exposure points in a risk assessment. But, all waste deposits from all processes should be treated the same.	MassDEP agrees that "waste" and "area of waste" were not clearly enough defined in the public hearing draft. The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially, so definitions of "waste" and "Manufactured Gas Plant Waste" are no longer needed. Regarding the Hot Spot provisions proposed in the public hearing draft, "Areas of Waste", including coal tar deposits, are no longer included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). Regarding its focus on one single type of waste, MassDEP has observed through decades of oversight that exposures to coal tar at MGP sites have not always been assessed and managed in ways that protect public health. Sites with extensive coal tar deposits are prevalent throughout the Commonwealth. MassDEP believes amending the MCP to ensure consistent and protective management practices at these sites is justified. With regard to statements that other types of waste (tannery waste, plating waste) are no less problematic than coal tar, in contrast with coal tar sites, MassDEP has observed that the visible, physical materials from these other processes are not often found at the ground surface. Further, because they contain contaminants that are target analytes for the chemical analyses typically applied at sites, these wastes can be more readily characterized in a quantitative risk assessment than coal tar.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): MGP Waste & Hot Spot	GZA	The proposed addition of a specific definition for “Manufactured Gas Plant (MGP) Waste,” in conjunction with the modification of the “Hot Spot” definition and revisions to the approach to developing Exposure Point Concentrations (EPCs), could result in extremely conservative cleanup approaches that would not offer commensurate benefits with respect to risk reduction or environmental restoration. Based on GZA’s experience, MGP residuals are being appropriately assessed and remediated at Massachusetts sites under the current regulations at the overwhelming majority of sites where these materials are present. The addition of several waste-specific clauses to the MCP to address MGP residuals is not warranted in our opinion. Furthermore, the new requirement to compare concentrations in waste materials to Upper Concentration Limits (UCLs) appears to directly contradict the original intent of the MCP and the guidance provided by MassDEP since 1993. The MCP clearly states that UCLs apply to soil and groundwater and MassDEP has not issued guidance conflicting with that approach since the promulgation of the 1993 regulations. Many sites have progressed through various phases of assessment and remediation toward either a Temporary or Permanent Solution based on the existing regulation and guidance; in some cases, redevelopment planning has been based on these evaluations. Sites which have not reached a Permanent Solution (a significant percentage of MGP sites due to the unique challenges these materials pose) would now face a retroactive requirement to reevaluate these deposits under different rules. This could lead to extensive additional assessment costs and jeopardize beneficial redevelopment projects. Based on GZA’s experience, the net effect of these changes taken collectively would be to drive all sites at which there is contamination by MGP residuals to active remediation (excavation/disposal, in situ stabilization or an Engineered Barrier). While remediation of these types of deposits is often a prudent alternative, the current regulations allow for some flexibility based on the specific nature of the deposit, the average concentrations of constituents of concern (COC) relative to UCLs and the potential for exposure to the MGP residuals. In some cases, capping of these deposits in conjunction with an Activity and Use Limitation (AUL) that limits/controls potential disturbance of the material can effectively address the MCP requirements for achieving No Significant Risk (NSR) and source control. It is GZA’s opinion that the current regulations adequately address these materials and provide for sufficiently conservative site closures, provided that the MGP residuals are appropriately characterized in terms of nature, extent and potential exposures. We believe that rather than revise the regulations, MassDEP could address the deficiencies noted in characterizing, what we believe are a limited number of MGP sites, by issuing guidance that emphasizes the proper approach to characterization and remediation under existing regulations. At a minimum, GZA recommends that MassDEP address the confusion regarding the evaluation of UCLs for waste deposits. The language at 310 CMR 40.0996(3)(b) indicates that an arithmetic average can be used for the UCL comparison for a Hot Spot (which now includes waste deposits). However, 310 CMR 40.0926(13) references “a conservative estimate of the average concentration” for comparison to UCLs. This language could lead to a conservative interpretation of the concentration to be used for waste materials along the lines of the EPC language requiring the upper confidence limit (ucl) on the mean value approach. We recommend that 310 CMR 40.0926(13) explicitly reference 310 CMR 40.0996(3)(b) to clarify that an arithmetic average is appropriate for the comparison to UCLs within a waste deposit. GZA also notes that the term “areas of waste disposal” that has been added to the Hot Spot definition should have some scale or size component. Without such perspective, the regulation revisions could lead one to address tiny pockets of waste material (for example, thin layers or small isolated pockets of hardened tar which are commonly associated with former MGPs) as individual little hot spots, with analytical data required for each little pocket or layer. The revisions need to allow for judgment on the part of the LSP regarding a reasonable approach to developing EPCs for such heterogeneous deposits.	MassDEP agrees that "waste" and "area of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar, so a definition of "area of waste disposal" is no longer needed. In the final regulation, "areas of waste," including coal tar deposits, are no longer included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). This provision would allow a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar. Regarding the comparison of coal tar concentrations to Method 3 Ceiling Limits (formerly Upper Concentration Limits), coal tar is not included in the Method 3 Ceiling Limits section (310 CMR 40.0996) in the final regulation. Instead it is addressed in a new section (310 CMR 40.0997) , which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): MGP Waste & Hot Spot & Readily Apparent Harm	Wood	Except for waste material that is present in the environment as a pure waste, the existing regulations are sufficient to ensure that MGP waste is appropriately remediated. * Waste (such as liquid tar or oil) which is sufficiently fluid to invade surrounding porous media is by definition Non-Aqueous Phase Liquid (NAPL). For MGP waste present as a NAPL that has invaded soil pores or fractures in bedrock, the remedial objective for a Permanent Solution (per 310 CMR 40.1003(7) is currently to address "all Non-stable NAPL" and to remove "all NAPL with Micro-scale Mobility if and to the extent feasible based upon consideration of CSM principles." If the performance standard has been met for removing all Non-stable NAPL and removing NAPL with Micro-scale Mobility to the extent feasible, then it should not be necessary to compare remaining concentrations of NAPL in soil to Soil UCLs. * For waste that is contained within tanks, holders, piping or other structures and has not yet reached the environment, the comparison of OHM concentrations in the waste to Soil UCLs also seems inappropriate. The need for remediation should be based on other criteria, such as whether the waste poses a threat of release per 310 CMR 40.0312, or whether the waste represents a source of contamination that requires elimination or control per 310 CMR 40.1003(5). * The proposed MCP revised text "Where a Hot Spot is comprised in whole or in part of waste material, including Manufactured Gas Plant Waste, the concentrations of oil and/or hazardous material within the waste shall be considered the concentration of the OHM in soil" is confusing. In cases where waste material is mixed with soil, the concentrations of OHM in the soil mixture, not in the waste material itself, should be considered the concentration of OHM in soil. Waste material mixed with soil or incorporated into soil is already regulated by the MCP and the standard of care is to sample and analyze the mixture as contaminated soil and follow MCP requirements for soil.	The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially. Regarding the suggestion that coal tar should be treated like petroleum NAPL, MassDEP disagrees. Based on information in the scientific and technical literature, coal tar contains higher concentrations of PAHs and is more toxic than petroleum NAPL. Coal tar is generally more viscous and less mobile than petroleum NAPLs, and it is commonly present at or near the ground surface, resulting in the potential for human direct contact and inhalation exposures. In contrast, LNAPL is often found at or near the groundwater table. MassDEP's LNAPL regulations and guidance focus on mobility in the saturated zone, while the revised MCP provisions focus on eliminating exposure to accessible coal tar. Regarding the Hot Spot provisions proposed in the public hearing draft, "Areas of Waste", including coal tar deposits, are no longer included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3. This provision would allow a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar. Regarding the comparison of coal tar concentrations to Method 3 Ceiling Limits or M3CLs (formerly UCLs), in the final regulation coal tar is not included in the M3CLs section (310 CMR 40.0996). Instead it is addressed in a new subsequent section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public safety and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): Hot Spot & MGP Waste	Wood	It may be appropriate to compare OHM concentrations in pure waste to UCLs in evaluating whether the material poses a risk to public welfare. However, defining the waste as a hot spot and comparing the waste concentrations to Soil UCLs are problematic for the risk characterization process. Instead, separate UCLs should be developed for waste material. The MCP definition of “Hot Spot” makes no reference to any specific environmental medium (soil, groundwater, surface water, sediment, etc.). In the Risk Characterization section of the MCP, section 310 CMR 40.0924 (4) states that “Hot Spots shall be considered distinct Exposure Points.” The designation of Hot Spots as distinct Exposure Points indicates that risks to health, safety, public welfare, and environment at Hot Spots must be characterized. However, the MCP does not include a procedure for evaluating risk to health associated with potential exposure to “waste material” nor “areas of waste disposal.” * Under the proposed revisions, any “disposal area” (hardened tar at 5 to 10 feet below ground surface [bgs], for example) would be defined as a Hot Spot. Concentrations of OHM in the “waste material” would be considered the “soil concentrations.” In a Method 1 risk characterization, an exposure point concentration (EPC) for OHM in the waste material (the hot spot) would be compared to Method 1 soil standards, although receptors would not be exposed to waste material with the same frequency and intensity as exposure to soil. Therefore, treating them as soil for the evaluation of human health risk is inappropriate. * In a Method 3 risk characterization, the exposure assessment for the Hot Spot would be a substantial challenge. Determination of ingestion rates, dermal contact surface areas, dermal absorption rates for potential exposure to hardened tar would be difficult at best. In addition, identifying frequency of exposure for hardened tar would also be very difficult. Unlike soil that is generally accessible to receptors of all ages, it is probable that people would be less likely to be in direct contact with the waste material than they would for soil. The hardened tar is clearly visible, and it does not provide the same opportunity for contact (dermal contact, incidental ingestion, and inhalation of wind-derived dust). Consistent with the MCP at 310 CMR 40.0923(3) (b), certain activities and uses that might otherwise be reasonably foreseeable can be eliminated from further consideration through an Activity and Use Limitation (AUL). For example, excavation within the footprint of the Hot Spot might be prohibited to prevent future exposure to the waste material located at depth (5 to 10 feet bgs). This is a reasonable approach for protecting health and the environment, if OHM concentrations do not exceed UCLs (or OHM concentrations have been immobilized or treated by fixation) and the waste material does not pose a risk to public welfare. * Based on the above considerations, it would be more straightforward to require that OHM concentrations in waste material be compared to UCLs developed specifically for waste material. Designation of waste material as a hot spot would require that EPCs of OHM in the waste material be evaluated in a human health risk characterization, which does not appear to be necessary.	The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially. Regarding the Hot Spot provisions proposed in the public hearing draft, "areas of waste disposal," including coal tar deposits, are no longer included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). This provision would allow a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar. MassDEP agrees that quantifying exposures to coal tar and risks from those exposures would be challenging, and that is the reason for encouraging qualitative assessment of coal tar Exposure Points. In regard to comparing coal tar concentrations to Method 3 Ceiling Limits (formerly Upper Concentration Limits), in the final regulation, coal tar is not included in the Method 3 Ceiling Limits section (310 CMR 40.0996). Instead it is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): MGP Waste & Hot Spot & Readily Apparent Harm	Wood	The inclusion of MGP waste in the definition of RAH does not appear to be technically justified. Without the proposed revision, tars and oils are already included in the definition of readily apparent harm. It is not clear how MassDEP can assert readily apparent harm to ecological receptors based on visible evidence of coke or oxide box waste. Is the proposed regulation change based on documented toxicological impacts of coke or oxide box waste on terrestrial and benthic organisms? Or is the presence of visible coke or visible oxide box over a 2-acre terrestrial area or 1,000 square feet of sediments assumed, as a matter of policy, to represent an obvious threat to the environment? It seems that the requirements for a Permanent Solution that were promulgated with MCP revisions in 2014 (relative to source elimination or control, migration control, and NAPL) should be sufficient to ensure that MGP wastes are being adequately remediated. What is the impetus for the regulatory revisions currently proposed for MGP wastes? Have MGP wastes been left in place at sites without appropriate controls? If so, would it be better to address these sites on an individual basis rather than to promulgate additional regulatory changes?	The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially. MassDEP agrees that the reference to waste, including coal tar, in the readily apparent harm section is unnecessary, and it has been removed. Regarding the necessity of the revisions, MassDEP has observed through decades of oversight that exposures to coal tar ar MGP sites have not always been assessed and managed in ways that protect public health. Sites with extensive coal tar deposits are prevalent throughout the Commonwealth. MassDEP believes amending the MCP to ensure consistent and protective management practices at these sites is justified. Note that the 2014 revisions related to source elimination or control, migration control, and NAPL focused mainly on preventing migration, while the new coal tar provisions focus on preventing exposures.
40.0006(12): Monitoring Well	ECR	This definition would appear to require that monitoring wells at all sites need to have GPS coordinates. The cost impact at legacy sites with many dozens of wells would be significant, and, in my opinion, would outweigh the benefits of having this information. At homeowner sites and many small commercial sites, this requirement would increase costs with little or no benefit to human health or the environment. It is therefore recommended that the GPS coordinate requirement be deleted.	MassDEP intends the inclusion of GPS data to apply to wells installed after the effective date of the requirement. It is MassDEP's understanding that well location coordinates are being recorded at most sites with equipment that is in common use (e.g., cellphone apps) and therefore this requirement is not expected to entail additional costs beyond those associated with including this information in MCP submittals.
40.0006(12): Monitoring Well	Haley & Aldrich	We support the idea of geolocating monitoring wells used in response actions, but the requirement to geolocate should not be made part of the definition. A better place for this would be 40.0028 Well Maintenance and Security. Including Global Positioning System (GPS) coordinates of wells used in MCP submittals would not be difficult, but for the associated data to be usable by the public, MassDEP or Licensed Site Professionals, a format for providing the coordinates will be necessary. For example, MassDEP could develop a “Monitoring Well Table” to be included with each Licensed Site Professional submittal. Also – MassDEP’s Bureau of Water Resources already collects much of this information from well drillers; adding the requirement to collect and submit well-specific GPS coordinates to the well driller regulations would complement the proposed changes to the MCP.	MassDEP agrees with this comment and as suggested, has incorporated the requirement into 310 CMR 40.0028. The title of that provision has been revised to "Well Installation, Geolocation, Maintenance and Security." MassDEP is coordinating the implementation of this requirement with MassDEP's well driller program to ensure consistency in the performance standards for geolocation information and to avoid redundancy in reporting this information to the Department.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): Monitoring Well	LSPA	As MassDEP rolls out requiring GPS coordinates for monitoring wells, please consider allowing .CSV files (or some other electronic format) to be uploaded and automatically checked. Requiring hand entering of GPS coordinates into an RMR-like form would be cumbersome and prone to errors. The LSPA suggests the MassDEP keep the current definition of Monitoring Well and instead add a provision requiring that all Monitoring Wells used to support LSP Opinions have documented GPS coordinates. Some discussion of phasing in this provision for new wells and managing of existing wells that are not alreay GPS located should be considered.	MassDEP will take this comment into account as it implements this provision.
40.0006(12): Monitoring Well	NAIOP	NAIOP supports the idea of geolocating monitoring wells used in response actions, but the requirement to geolocate should not be made part of the definition of a monitoring well. A better place for this requirement is 40.0028, Well Maintenance and Security. (Recomendation too remove GPS reference in definition.) Note that the Bureau of Water already collects much of this information (and more) from well drillers; adding the requirement to collect and submit well-specific GPS coordinates to the well driller regulations would complement the proposed changes to the MCP. Finally, the requirements for providing well location data should also apply to wells installed by MassDEP.	MassDEP agrees with this comment and as suggested, has incorporated the requirement into 310 CMR 40.0028. The title of that provision has been revised to "Well Installation, Geolocation, Maintenance and Security." MassDEP is coordinating the implementation of this requirement with MassDEP's well driller program to ensure consistency in the performance standards for geolocation information and to avoid redundancy in reporting this information to the Department. It is MassDEP practice to document GPS coordinates for wells it installs.
40.0006(12): Monitoring Well	NECSEMA	NECSEMA opposes the proposed change to require GPS coordinates for monitoring wells. The anticipated benefits do not justify additional costs. If MassDEP has performed a cost-benefit analysis, please provide it. Lack of consistency in collecting information is likely to contribute misinformation.	MassDEP intends the inclusion of GPS data to apply to wells installed after the effective date of the requirement. It is MassDEP's understanding that well location coordinates are being recorded at most sites with equipment that is in common use (e.g., cellphone apps) and therefore this requirement is not expected to entail significant additional costs beyond those associated with including this information in MCP submittals.
40.0006(12): Monitoring Well		The proposed change would add significant costs if an on-ground field survey (conducted by a land surveyor) is needed to meet the requirements for GPS coordinates. Smart phones are able to determine GPS coordinates, in some areas the cell service is not available. We recommend no change to the definition.	MassDEP intends the inclusion of GPS data to apply to wells installed after the effective date of the requirement. It is MassDEP's understanding that well location coordinates are being recorded at most sites with equipment that is in common use (e.g., cellphone apps) and therefore this requirement is not expected to entail significant additional costs beyond those associated with including this information in MCP submittals. Issues related to areas where the GPS signal is inadequate to access coordinates can be addressed through guidance.
40.0006(12): Monitoring Well	Vertex	The use of GPS to locate wells is dependent on the accuracy and resolution of the GPS system being used. The level of precision for locating a well versus completing calculations (such as groundwater flow direction) may be different. In many cases, standard tape measure or survey techniques may be more acurate, and if conducted properly, can be located at a longitude and latitude. In addition, some GPS have excellent X and Y, but poor Z, and can vary from day to day depending on satellite network accessiblity, which is out of the control of the user. Also points inside buildings can not be GPS located so they should be excluded. There are often many monitoring wells and soil gas points in buildings where GPS signal is poor.	MassDEP notes these concerns about the implementation of this requirement. Issues related to areas where the GPS signal is inadequate to access coordinates can be addressed through guidance.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): Monitoring Well	Vertex	GPS should not be a requirement from a regulatory standpoint. I would put this in the same category with performing work that meets CAM and Representative Evaluations guidance rather than requiring GPS well locations. If GPS is required, then MassDEP should set specific instructions, precision, accuracy, etc. to meet the regulatory goals. Without setting minimum expectations, the data obtained will range from excellent to unusable with no way for MassDEP to know the data quality.	MassDEP intends to identify GPS data quality standards in guidance to implement this requirement.
40.0006(12): Monitoring Well	Vertex	Why only wells and soil gas points? How about soil borings, tank excavation and sidewall samples, collection of sediments etc.? If you set minimum standards, then we could collect everything with GPS.	MassDEP focused this requirement on wells because of the potential utility of this information to the assessment of nearby properties and because, unlike test pits and other sampling points, wells are typically kept in use for several years.
40.0006(12): Monitoring Well	Weston & Sampson	While the benefit of GPS located data points is evident, defining how GPS coordinates for monitoring wells are obtained, reported and made available for public use should be well defined prior to implementation as this has cost implications for stakeholders.	MassDEP intends to identify GPS data quality standards in guidance to implement this requirement.
40.0006(12): Monitoring Well	Wes Stimpson	The required level of GPS position accuracy should be stated.	MassDEP intends to identify GPS data quality standards in guidance to implement this requirement.
40.0006(12): Non-Potential Drinking Water Source Area	Haley & Aldrich	Is this meant to exclude inactive landfill and landfills that were closed prior to the implementation of the current permitting system?	Yes. The revision is intended to apply to facilities permitted under 310 CMR 19.00.
40.0006(12): Radiation	Haley & Aldrich	We support these additions.	MassDEP appreciates this support.
40.0006(12): Rail-Right-of-Way	NECSEMA	It is ambiguous whether rail-rights-of-way that are owned by but not currently in use by MBTA and other transit authorities are covered by the definition.	This definition is related to the exception for the need for an Activity and Use Limitation at 310 CMR 40.1012(3) and 40.1013. The Rail Right-of-way exemption from the need to record an AUL applies to land that is "in use for rail transportation" and does not extend to ancillary facilities.
40.0006(12): Rail Right-of-Way	Weston & Sampson	Definition should include rail yards and maintenance facilities where the source of contamination is demonstrated to originate from the typical railroad operations vs. discrete releases which could occur at ancillary support facilities.	This definition is related to the exception for the need for an Activity and Use Limitation at 310 CMR 40.1012(3) and 40.1013. The Rail Right-of-way exemption from the need to record an AUL applies to land that is "in use for rail transportation" and does not extend to ancillary facilities.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0006(12): Remedial System	Haley & Aldrich	We recommend leaving in the deleted text, "The term does not include Exposure Pathway Mitigation Measures." Although not strictly necessary, it does provide clarity in an area that is easy to misinterpret.	"Exposure Pathway Mitigation Measures" was eliminated from the definition of Remedial System because it is not necessary. The definition of Active Remedial System already excludes Active Exposure Pathway Mitigation Measure, which is the distinction that is key to the provision at 310 CMR 40.1040(2)(a), that provides for Permanent Solutions in cases where the operation of Active Exposure Pathway Mitigation Measures is ongoing, but not where other types of Active Operation and Maintenance (Active Remedial Systems or Active Remedial Monitoring Programs) are ongoing.
40.0020(5)	Haley & Aldrich	We support this addition.	MassDEP appreciates this support.
40.0020(5)	NAIOP	The requirement to "restore the remedy" in 40.0020(5)(b) may be too constraining. Our proposed change to that language recognizes that a different remedy may now be more appropriate, given the time elapsed since the original implementation and any changes in site usage or activities. Proposed language: (a) notify *in writing* the Department in accordance with the procedures set forth in 310 CMR 40.0300, and notify EPA Region 1 *(delete "immediately")within two hours* of gaining knowledge of any such change in activity, use and/or potential exposure; and (b) undertake any and all necessary response actions, including any response actions necessary to restore the remedy selected under CERCLA and any Permanent Solution or Remedy Operation Status that may have existed at such disposal site pursuant to 310 CMR 40.0111(10) or 310 CMR 40.0111(11) prior to such change in activities, uses and/or exposures*, or to implement an equally or more protective remedy.*	MassDEP has retained the language as proposed to be consistent with the corresponding provision at 310 CMR 40.00020(1) that applies to non-CERCLA sites. Additionally, MassDEP does not believe the suggested language to allow for a different remedy is appropriate. Under CERCLA, PRPs cannot undertake a change in remedy unilaterally; there is a process to implement new remedies that involves EPA and MassDEP review/approval.
40.0028: Well Maintenance and Security	Haley & Aldrich	Support the clarification that wells must be maintained and secure until they are properly decommissioned. Also, regarding the proposal to require geolocation of monitoring wells, we believe that requirement should be addressed in 40.0028, rather than in the definition of Monitoring Well, as proposed.	MassDEP appreciates this support. As suggested by the commenter, the requirement to geolocate wells has been added to 310 CMR 40.0028.
40.0028: Well Maintenance and Security	NAIOP	Proposed language: 40.0028: ***Monitoring*** Well ***Installation, Geolocation ,*** Maintenance, and Security "***Geolocation data (latitude and longitude) shall be provided for a(A)ny*** well installed or constructed for the purposes of sampling, monitoring or remediating environmental media or environmental conditions as part of response actions conducted under the MCP. ***Each monitoring well*** shall be maintained..."	The final regulation incorporates several of these suggested edits, including edits to the title of this section.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0031(8): Remediation Waste (mixing)	Weston & Sampson	Mixing/Dilution of Remediation Waste - Clarification on the timing and intent should be incorporated into this change. A common means of soil characterization involves stockpiling followed by characterization which could lead to violation of this provision as written.	In response to this comment, the provision has been revised to remove the prohibition of mixing Remediation Waste with media that "is uncontaminated" in recognition that some unintentional mixing may be practically unavoidable during the stockpiling process. With that edit, the prohibition is focused on prohibiting the mixing of Remediation Waste with environmental media that "contains significantly lower concentrations" of OHM. While MassDEP acknowledges the potential for mixing of soils during the stockpiling process, consistent with this provision, efforts should be made, including through pre-characterization and screening, to limit mixing of uncontaminated and lesser contaminated soil with soil of higher levels of contamination.
40.0031(8)(a): Remediation Waste (mixing)	Haley & Aldrich	As written this appears to preclude amending soil for geotechnical purposes such as jet grouting or soil solidification. Suggest adding the following language "...amendments to achieve specific remedial goals, not including dilution, ***or geotechnical purposes*** , and..."	In response to this comment, "geotechnical" was added to the clause that references the acceptable use of amendments "…to achieve specific remedial or geotechnical goals."
40.0031(8)(a): Remediation Waste (mixing)	NECSEMA	NECSEMA opposes the proposed change as currently written. During construction projects where both Remediation Waste and non-contaminated soil that is unsuitable for re-use (on-site) are generated, it is common practice to send both materials off-site together as Remediation Waste, rather than to try to treat the soils as separate waste streams. This activity appears to not be allowed under the proposed language in subparagraph (a). NECSEMA believes that subparagraph (b) alone would achieve the apparent goal of clarifying that an RP cannot mix Remediation Waste with other materials to dilute waste streams.	While MassDEP acknowledges the potential for mixing of soils during the stockpiling process, consistent with this provision, efforts should be made, including through pre-characterization and screening, to limit mixing of higher levels of contamination with environmental media with significantly lower concentrations of OHM.
40.0041(1)	NAIOP	NAIOP supports the proposed change to clarify that wastewater from a disposal site is Remediation Waste.	MassDEP appreciates this support.
40.0046(3)	Haley & Aldrich	We support these changes.	MassDEP appreciates this support.
40.0046(3)	MassDOT	Does this mean that addition of remedial additives for soil stabilization will not require submission of a Remedial Additives Plan? Please confirm.	It is intended to allow for the use of additives without prior approval near schools, daycares or occupied residences IF the additive does not contain VOCs, is not being used to treat VOCs, or otherwise does not have the potential to volatilize OHM. Soil stabilizers that meet these criteria would be allowed without prior approval.
40.0049: Remedial Air Emissions	OHI Engineering, Inc.	Any changes to this section should add an exemption to the 95% removal rate where the influent concentrations are low and/or the detected concentrations are near the detection limits of the field instrumentation.	The proposed amendment did not include the provision addressed by this comment.
40.0115	Haley & Aldrich	Note to Reviewer 23: Support the proposed addition of adequately regulated provisions for disposal sites with radioactive materials and agree with use of the MassDPH dose-based approach to evaluate risks from radionuclides.	MassDEP appreciates this support.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0115	LSPA	The LSPA supports this proposed revision related to sites with radioactive materials. The proposed language clarifies that MCP risk assessment methods will not be used to evaluate risk to radionuclides at MCP sites; rather, MassDPH dose-based methods will be used. This clarification removes the confusion that previously existed, as dose-based assessments yield different outcomes at these sites than an MCP risk assessment would.	MassDEP appreciates this support.
40.0115(1)	Vertex	It is recommended that both the "dose" and "risk" approaches be used to evaluate radioactive materials, to be consistent with the USEPA Superfund Program. If only one approach can be selected, then the "risk" approach developed by the USEPA is preferred.	For consistency with our sister agency and simplicity, the final regulation employs the dose approach used by MassDPH (as proposed in the public hearing draft).
40.0185: Downgradient Property Status	OHI Engineering, Inc.	40.0184(1)(c)1. OHI recommends omitting the words ***"...by fencing or otherwise preventing access."*** The wording is too prescriptive and not needed. Recommend adding a DPS Submittal requirement that the submittal shall present a plan/include a discussion of the exposures to receptors and how they will be addressed in the maintenance of the DPS.	MassDEP agrees with the comment that it 310 CMR 40.0184(1)(c)1. as drafted is too narrow in terms of describing the reasonable steps that might be taken to prevent exposure. In response to this comment, 310 CMR 40.0184(1)(c)1. was revised to be more general, by deleting the reference to "fencing or preventing access." The reference to fencing and preventing access comes from MGL c. 21E, § 5D which lists the steps a person with DPS must take to prevent the exposure of people to oil or hazardous material at the property such person owns or operates. With respect to the suggestion that the DPS Submittal include a plan/discussion of exposures to be addressed in the maintenance of the DPS, MassDEP agrees that such a discussion would be beneficial. However, depending on case-specific factors, it may not be appropriate to require that information at the time of the DPS submittal. For example, at the time of the submittal, such exposures may not yet be known and/or the upgradient source property may be in the process of assessing and addressing the exposures. Given these considerations, MassDEP did not add the suggested discussion to the DPS Submittal requirements.
40.0191: Response Action Performance Standards & 40.1005	NAIOP	The impacts of climate change are of concern to NAIOP and its members. However, we disagree with the approach taken in the proposed regulations, which could be read to require every PRP to conduct its own separate study of the effect of climate change on its site. NAIOP's proposed rewording of 40.0191(2) and 40.1005 makes it even clearer that climate change has to factor into the decision of the remedial alternative, but also makes it clear that a PRP can rely on studies performed by Commonwealth agencies rather than having to conduct its own study. Proposed Language: 40.0191(2)(b) use of accurate and up-to-date methods, models, standards and practices, equipment and technologies which are appropriate, available and generally accepted by the professional and trade communities conducting response actions in accordance with M.G.L. c. 21E and 310 CMR 40.0000 under similar circumstances; Add: ***(c) a consideration of the impacts of climate change, as predicted by Commonwealth agencies at the time, on various remedial alternatives; and*** **(d)** investigative practices which are scientifically defensible, and of a level of precision and accuracy commensurate with the intended use of the results of such investigations.	It is MassDEP's intent that persons conducting response actions use information, including climate change forecasts, made available or otherwise recognized by the Commonwealth. The reference to EOEEA guidance in 40.0191(2)(a) was added because EOEEA is leading efforts to make vetted information on climate change vulnerabilities available to state agencies, municipalities and others.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0191: Response Action Performance Standards & 40.1005	NECSEMA	NECSEMA recommends that these proposed sections be deleted. It is not possible to incorporate into the definition of foreseeable future and Remedial Action Performance Standards the impacts of climate change. Climate change models vary widely over different time frames and it will be impossible for an LSP to incorporate these proposed requirements into an opinion with any degree of confidence lacking specific guidance from the MassDEP. Such foreseeable use opinions would be speculative at best.	MassDEP is working on developing guidance on this issue. Additionally, the LSPA is developing a toolkit related to the climate change provisions.
40.0191: Response Action Performance Standards & 40.1005	NEH	Commenter supports the addition of climate change impact considerations to RAPS and recommends the following additional text- (3) "…shall be protective of….the environment, and *impacts of climate change* and shall include…" (3) *(f) remedial actions that incorporate climate change resilience to the extent practicable and consistent with response action requirements and objectives and commensurate with EOEEA guidance and local ordinances.*	MassDEP included a portion of the suggested text at 40.0191(3)(f).
40.0191: Response Action Performance Standards	OHI Engineering, Inc.	Recommend against the proposed change given the variability in anticipated climate change impacts.	It is MassDEP's intent that persons conducting response actions use information, including climate change forecasts, made available or otherwise recognized by the Commonwealth. The reference to EOEEA guidance in 40.0191(2)(a) was added because EOEEA is leading efforts to make vetted information on climate change vulnerabilities available to state agencies, municipalities and others.
40.0191: Response Action Performance Standards & 40.1005	Weston & Sampson	Edits related to climate change and reasonable foreseeable timeframe as well as requiring keeping abreast of current climate change thoughts and standards is probably subjective, and beyond the capabilities of most LSPs who do not work in the climate change adaptation discipline. How would one evaluate a coastal site, vs one in a low area but closely inland vs a site inland but in an area prone to flooding or in an area that saw flooding say in an extreme rain event (Mother's Day storm or Huricane Irene) but normally would not be thought to be in a vulnerable area.	MassDEP is working on developing guidance on this issue. Additionally, the LSPA is developing a toolkit related to the climate change provisions.
40.0313(1)	Haley & Aldrich	Note to Reviewer 27: We support this clarification.	MassDEP appreciates this support.
40.0313(1)	Vertex	"(1) a release to the environment indicated by the presence of Nonaqueous Phase Liquid (NAPL) in a groundwater monitoring well, excavation, or subsurface structure in which NAPL has come to be located at a measured thickness equal to or greater than ½ inch (0.04 feet) at any location..." This seems to be contradictory. First part indicates its a release in a well, excavation or structure, last part indicates at any location. Remove the term "at any location".	The term "at any location" refers to the area where the monitoring well, excavation or subsurface structure is located. It is intended to differentiate this requirement from the more stringent notification requirement at 310 CMR 40.0313(4)(f)3. for 1/8 inch volatile LNAPL present in a groundwater monitoring well, excavation, or subsurface depression within 30 feet of of a School, Daycare, Child Care Center or occupied Residential Dwelling.
40.0313(2)	Haley & Aldrich	Note to Reviewer 28: We support this clarification.	MassDEP appreciates this support.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0313(2)	LSPA	The LSPA supports the intention of clarifying reporting obligations for Underground Storage Tanks. We recommend the following edits: "(2) a release to the environment indicated by the presence of oil and/or hazardous material within ten feet of the exterior wall of an Underground Storage Tank or ancillary piping,…"	The provision was revised to include the recommended edit.
40.0313(2)	OHI Engineering, Inc.	Recommend changing "...underground storage tank and ancillary piping" to "underground storage tank system" to more accurately tie to 310 CMR 80.00 (as well as the former 527 CMR 9)	A chief consideration in drafting the proposed amendment was to specifically reference "ancillary piping" to make it clear that headspace results of 100 ppm or greater within 10 feet of tank piping is also subject to the 72-hour notification requirement. Because the MCP has a definition of "Underground Storage Tank," we believe it is appropriate to reference the MCP definition, rather than the UST System regulations definition of "UST System" in 310 CMR 80.00, which has a very similar stem to the MCP definition, but contains additional text that is not relevant to how the definition is used in the MCP. The provision has been amended to capitalize the term "Underground Storage Tank" to indicate that it is a term defined in the definition section of the MCP (310 CMR 40.0006) and to add "or within ten feet" before "ancillary piping" to further emphasize that the measurement applies to both the tank and the piping.
40.0313(2)	Vertex	"a release to the environment indicated by the presence of oil and/or hazardous material within ten feet of the exterior wall of an underground storage tank and ancillary piping, as established by measurement of equal to or greater than 100 parts-per-million (ppm) by volume of total organic vapors "as benzene" in the headspace of a soil or groundwater sample using a headspace screening method, and where such sample was obtained:" This says that a release has to be within 10 feet of a tank, AND, piping. Is it not a release if, for instance, we detect vapors at the end of a 15 foot tank away from the piping? Should that "AND" be an "OR"?	The suggested change from "and" to "or" has been made. In addition, the provision has been amended to capitalize the term "Underground Storage Tank" to indicate that it is a term defined in the definition section of the MCP (310 MR 40.0006) and to add "or within ten feet" before "ancillary piping" to further emphasize that the measurement applies to both the tank and the piping.
40.0313(4)(f)	NAIOP	NAIOP is recommending that the presence of a Condition of Substantial Release Migration at a school or daycare be tied to the same risk-based criteria used in assessing risk at these facilities: Add proposed language: (f) releases to the groundwater or to the vadose zone that have resulted or have the potential to result in the discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling *at concentrations exceeding residential threshold values, as those values may be established by the Department.* Conditions that indicate a potential discharge of vapors into a School, Daycare or Child Care Center or occupied Residential Dwelling include, but are not limited to: 1. soil or soil gas impacted with one or more volatile organic compounds *at concentrations above applicable soil gas screening levels established by the Department* 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;	While the suggested edits do reflect MassDEP's Vapor Intrusion Guidance with respect to appropriate values to be used in assessing potential Conditions of Substantial Release Migration, MassDEP has not made these changes. At this time, MassDEP wants to maintain those values as guidance values, not regulation. If MassDEP intended to apply them strictly, as regulation, it would be appropriate to put them out first for public review and comment in an amendment package.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0314	NECSEMA	NECSEMA is in general agreement with the proposed change. However, the language "substantial likelihood of a leak" from the current regulation should be retained to clarify that reporting is required only when the leak is suspected. Revision should also reflect/reference MassDEP's Underground Storage Tank Enforcement Discretion Directive, dated September 8, 2017. NECSEMA suggests the following revisions to this section: "Except as provided in 310 CMR 40.0317, persons required to notify under 310 CMR 40.0331 shall notify the Department not more than 72 hours after obtaining knowledge of a threat of release of oil and/or hazardous material to the environment from an Underground Storage Tank, as established by a tightness test failure pursuant to 310 CMR 80.32 *(and any associated enforcement discretion directive), which indicates there is a substantial likelihood of a leak within required testing thresholds.* "	The final regulations retain the amendment as proposed in the public hearing draft. Adding additional qualifying text, "a substantial likelihood of a release," in the MCP is inconsistent with the intent of eliminating discrepancies between the MCP and Underground Storage Tank (UST) Systems regulations (310 CMR 80.00) by directly referencing the tank tightness test result provisions in the UST regulations. With regard to referencing the UST program's 2017 enforcement directive in the MCP, MassDEP does not believe it is necessary. Any directive in effect that applies to the implementation of tank tightness test results at 310 CMR 80.32 would apply to the amendment as written.
40.0317(13)(a)	Haley & Aldrich	Note to Reviewer 31: As written this could be read to apply to disposal sites that are not in compliance. We suggest the addition of commas as follows: ..."the soil has been excavated and transported either from a disposal site in compliance with 310 CMR 40.0000, or from a location that is not a disposal site, in compliance with all applicable regulations and license, permit or approval requirements..."	The suggested edit was made.
40.0317(13)(a)	NAIOP	Recommend wording this provision as *"(a) the soil has been excavated and transported to the facility in compliance with all applicable regulations and license, permit or approval requirements; and"*	The suggested edit was not made. MassDEP believes it is helpful for clarity and implementation of this provision to maintain the information that such soils may originate from disposal sites and non-disposal sites.
40.0317(19)	NECSEMA	NECSEMA proposes the addition of releases to UST system components designed to contain a release, e.g., turbine pump sumps, dispenser sumps, transition sumps, etc. 310 CMR 80.00 defines these types of releases as leakage which must be investigated. If, following the investigation it is determine that the component functioned as designed and the regulated substance was not released from the containment system, then a release to the environment did not occur. This change will ensure consistency in MassDEP's spill hotline response and save time and effort on releases which did not reach the environment.	This change was not made. The suggested change has the potential to create confusion regarding how it would work with the notification required for threats of release, specifically 310 CMR 40.0312(1)(b), which requires TOR notification for situations where it is likely that the quantity of the release, if it occurred, would be equal to or greater than the applicable Reportable Quantity specified at 310 CMR 40.0351, 40.0352 or 40.1600. Further, 310 CMR 80.00 intentionally uses the term "leakage" instead of release for leaks into these containment structures. Inserting "leakage" into the list of notification exemptions has the potential to muddy the distinction between "leakage" and "release." MassDEP believes this issue would benefit from a Q&A developed with input from NECSEMA.
40.0317(24)	IRWIN Engineers	Support the addition of this conditional notification exemption for "releases of liquid nitrogen or liquid oxygen, provided that such releases are managed according to requirements specified by local public safety officials overseeing the response."	MassDEP appreciates this support; the exemption specifically states that the response to such releases must be conducted "according to the requirements specified by local public safety officials overseeing the response."
40.0317(24)	IRWIN Engineers	Suggest the addition of a clarifying exemption for releases of hydrogen, liquid nitrogen, or liquid oxygen that occur during bulk delivery, tank venting or repair, consistent with MassDEP 2000 letter to Praxair (copy of letter attached).	310 CMR 40.0317(24) was not intended to cover those types of releases already exempt per the referenced 2000 letter; to the extent any such releases are already covered, they remain covered.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0317	IRWIN Engineers	Suggest the addition of additional notification exemption for "accidental releases of refridgerants from HVAC appliances" consistent with the rationale for exempting liquid oxygen and liquid nitrogen, i.e., these releases transition to gas immediately. Refridgerant releases are subject to leak repair provision under 40 CFR 82 that require prompt repair to prevent reoccurance.	MassDEP believes expanding this exemption to all refridgerants is too broad. Ammonia, for example is very dangerous and toxic. Further, expansion of this exemption should also consider other evolving regulatory goals (e.g., greenhouse gas reduction efforts).
40.0321(2)(b)	MassDEP	MassDEP proposed revising the listed PCB (total) that could pose an Imminent Hazard from 10 to 20 ug/g. In the process of finalizing the amendments, MassDEP noted that the proposed revision contained a rounding error and that the correct value is 10 ug/g.	No change was made to the PCB (total) value listed at 310 CMR 40.0321(2)(b). The 10 ug/g value is retained.
40.0336(2)	LSPA	"Within 60 days of receipt of a Notice of Responsibility pursuant to 310 CMR 40.0336(1), the recipient shall provide the Department with a written notice and relevant documentation that supports the recipient's **belief** that any of the following conditions are true: a. the recipient is not a person described at 310 CMR 40.0331(1); (b) a release of oil or hazardous material did not actually occur; (c) conditions posing a threat or release did not actually occur; or (d) a release or threat of release which did occur did not meet one or more sets of notification criteria set forth in 310 CMR 40.0300." The LSPA suggests replacing "belief" with "assertion."	As suggested, MassDEP replaced "belief" with "assertion" and made other clarifying edits to this provision.
40.0441(1)(b)	Haley & Aldrich	Note to Reviewer 39: As written this precludes implementation of Release Abatement Measures (RAMs) anywhere on a site that has an Immediate Response Action condition. Sites with a 72-hr Underground Storage Tank notification or a 2-hr Asbestos in Soil notification somewhere on the property would be forced to stop all RAM work. Suggest replacing "any" with "the" or "a."	Based on public comment, MassDEP decided to not go forward with the limitation in the proposed paragraph (b). The other proposed clarifications regarding when a RAM may be implemented were retained as 310 CMR 40.0441(1)(a) through (d).
40.0441(1)(b)	LSPA	This section implies that a RAM cannot occur on any site where any portion of the site is subject to an IRA. The LSPA recommends changing the language to "a Release Abatement Measure shall not be conducted at ***the*** portion of a disposal site where an Immediate Response Action is required or ongoing, unless otherwise approved by the Department…" Does a presumptive approval of a plan for application of remedial additives under 40.0046 satisfy the need for the RAM to be otherwise approved by the Department?	Based on public comment, MassDEP decided to not go forward with the limitation in the proposed paragraph (b). The other proposed clarifications regarding when a RAM may be implemented were retained as 310 CMR 40.0441(1)(a) through (d).

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0441(1)(b)	NAIOP	NAIOP does not agree with the reinsertion of the need for MassDEP approval of a RAM (40.0441(1)(b)) and recommends deletion and the following changes to (1)(a). The current language not has been in place since at least 2007, and NAIOP is not aware that it has led to significant problems with respect to response actions at sites. Proposed language: 310 CMR 40.0441 (1)(a) A Release Abatement Measure may be conducted: *1. at any time prior to the achievement of a Permanent Solution; or 2. to perform additional remedial action(s) at a site for which a Permanent Solution Statement has been submitted, in accordance with 310 CMR 40.0400 and 40.1067;*	Based on public comment, MassDEP decided to not go forward with the limitation in the proposed paragraph (b). The other proposed clarifications regarding when a RAM may be implemented were retained as 310 CMR 40.0441(1)(a) through (d).
40.0441(1)(b)	National Grid	Some of our sites are large and include multiple contiguous properties. Working on these sites requires at times performing multiple response actions to address different conditions on the individualproperties under different agreements with the property owners. Frequently, these response actions include performing a RAM on one property (for instance soil management during building improvements) and an Immediate Response Action (IRA) on an adjacent one (e.g., addressing NAPL in an isolated well or wells). Additional clarity is warranted to the changes regarding conducting ongoing RAMs when IRA conditions are encountered that may not have any impact on the RAM being conducted even though both response actions may be within the same portion of a site. We also believe, as presented elsewhere in the MCP, that a presumptive approval by the Department after a period of time is warranted for this change.	Based on public comment, MassDEP decided to not go forward with the limitation in the proposed paragraph (b). The other proposed clarifications regarding when a RAM may be implemented were retained as 310 CMR 40.0441(1)(a) through (d).
40.0441(1)(b)	OHI Engineering, Inc.	MassDEP should consider a written procedure for converting a RAM to an IRA to eliminate needless duplication. For example, where a RAM is already in progress when an IRA is discovered shall be terminated or converted to an IRA either verbally or approved by MassDEP at the time of notification (of the IRA).	Based on public comment, MassDEP decided to not go forward with the limitation in the proposed paragraph (b). The other proposed clarifications regarding when a RAM may be implemented were retained as 310 CMR 40.0441(1)(a) through (d).
40.0442(3)(b)	Haley & Aldrich	We suggest clarifying this section by adding *"...that could prevent or impede the implementation of likely response actions in the future."*	In response to public comment that the proposed change created ambiguity, MassDEP did not include the change in the final regulation.
40.0442(3)(b)	LSPA	The LSPA recommends that the language "completed prior to initiation of construction" be followed by *"which would impede future response actions".*	In response to public comment that the proposed change created ambiguity, MassDEP did not include the change in the final regulation.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0442(3)(b)	NECSEMA	NECSEMA opposes the change. MassDEP is inserting themselves into the project management aspect of development projects rather than focusing on "education of an already sufficiently-regulated issue." NECSEMA recognizes that the regulation uses the term "to the extent feasible," but that introduces ambiguity.	In response to public comment that the proposed change created ambiguity, MassDEP did not include the change in the final regulation.
40.0443(2): RAM Approvals	Haley & Aldrich	Note to Reviewer 41: As written this would require MassDEP approval for any and all Release Abatement Measure (RAM) activities included in a RAM Plan if one element of that RAM Plan is application of remedial additives near sensitive receptors. We suggest rewording to clarify that MassDEP approval is required only for the application of remedial additives near sensitive receptors, and that other elements of the RAM plan may proceed without MassDEP approval.	In response to this comment, the provision was clarified to apply to the portion of the plan related to the application of remedial additives near sensitive receptors addressed at 310 CMR 40.0046(3).
40.0461(3)	Haley & Aldrich	Note to Reviewer 42: See comment at Note to Reviewer 39. Suggest replacing "any" with "a" or "the." Note to Reviewer 39: As written this precludes implementation of Release Abatement Measures (RAMs) anywhere on a site that has an Immediate Response Action condition. Sites with a 72-hr Underground Storage Tank notification or a 2-hr Asbestos in Soil notification somewhere on the property would be forced to stop all RAM work.	The suggested change was made to replace "any" with "a."
40.0461(3)	National Grid	Request that the Department clarify that emergency repairs of utilities are allowed even if they are within an area where an IRA is required.	MassDEP believes that it would be beneficial to have further discussion of a carve out for emergency repairs. No change is being made at this time.
40.0462(1): URAM Oral Approval	Haley & Aldrich	Note to Reviewer 44: We support this revision.	MassDEP appreciates this support.
40.0500: Tier Classification and Response Action Deadlines Note 46	NAIOP	NAIOP concurs with these changes.	MassDEP appreciates this support.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0500: Tier Classification and Response Action Deadlines	OHI Engineering, Inc.	MassDEP should consider the necessity and utility of Tier Classification Extension requirements. These documents are an economic burden on PRPs and MassDEP resources while providing little investigative or remedial benefit. The process does not eliminate non-compliance or enforcement issues and is a resource burden on both PRP and MassDEP. We recommend that this scenario be specifically addressed under 310 CMR 40.0560(7) extension process and retaining the section on notification of delay, reclassification and transfer.	Tier Classification Extensions establish that work toward a Permanent Solution is ongoing at disposal sites where the work has exceeded the initial response action deadlines established in 310 CMR 40.0560. In an effort to reduce the need for a Tier Classification Extension where it is otherwise evident that such work is ongoing, the proposed amendments eliminate the need for the Extension where Status Report and Periodic Evaluation Opinions are being submitted.
40.0501	MassDOT	Scope and Applicability (7) As specified in 310 CMR 40.1067(4)(c), 5(c), and (6), an RP, PRP, or Other Person shall have a valid Tier Classification or Extension thereof to conduct remedial actions at disposal sites where a Permanent Solution Statement has been previously submitted. If for example, a RAM is submitted to conduct construction related remedial actions at a disposal site following a PSS, is it DEP's intent that a Tier Classification Extension also be submitted? Please clarify the intent of this revision with regard to PSS AMs.	The proposed amendments are consistent with the existing provisions at 310 CMR 40.1067 in requiring a Tier Classification for remedial actions that *exceed the scope of a RAM* (i.e., conducted as a Phase IV Comprehensive Remedial Action) or remedial actions occurring in the area of or affecting an Engineered Barrier. Work after a Permanent Solution that is performed as a RAM does not require a Tier Classification or Extension.
40.0560(7), suggest TC Ext text for TS	GZA	GZA endorses the changes to the Tier Classification (TC) requirements, which generally simplify what had become a complex process after the 2014 amendments. However, we note that for sites in Temporary Solution (TS) where active remediation or monitoring is not being conducted and the TC has lapsed (which was acceptable under the previous regulations), there is some uncertainty regarding the path to compliance under the revisions, as no transition provisions are included. GZA recommends that this scenario be specifically addressed under 310 CMR 40.0560(7), consistent with the wording for 310 CMR 40.0560(7)(g) or (h) for TC after termination of Remedy Operation Status (ROS) or for response actions after a Permanent Solution Statement (PSS) has been submitted. We also recommend clarification regarding the mechanism for requesting an alternate schedule for submittal of the post-TS status reports that will serve to maintain a TC. Would this include a specific box on the BWSC108 form?	MassDEP has added an additional provision for Tier Classifications that have expired at 310 CMR 40.0560(7)(i) for Tier Classifications that have expired. With respect to the frequency of the post-Temporary Solution Status Reports where no Active O&M is occurring, MassDEP has eliminated the requirement for annual status reports in the final regulation.
40.0560(7)	LSPA	There are currently no provisions for reclassifying a site after Tier Classification has expired. The LSPA believes that some direction should be provided for this situation, even if it requires contacting MassDEP to establish a new site specific timeline. Suggested wording: “Tier Classification Extension for Remedial Actions after the expiration of Tier Classification. A Tier Classification Extension Submittal submitted to the Department pursuant to 310 CMR 40.1067(4)(c) and 310 CMR 40.1067(5)(c) following the expiration of an existing Tier Classification shall take effect on the date the Tier Classification Extension Submittal is received by the Department and, unless otherwise specified by the Department, shall be effective for a period of two years. An RP, PRP or Other Person shall notify the Department pursuant to 310 CMR 40.0560(7) if additional extensions are required thereafter.”	MassDEP has added an additional provision at 310 CMR 40.0560(7)(i) for Tier Classifications that have expired.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0560(7)	National Grid	For sites in Temporary Solution where active remediation or monitoring is not being conducted and the Tier Classification has lapsed (which was acceptable under the previous regulations), there is some uncertainty regarding the path to compliance under the revisions, as no transition provisions are included.	MassDEP has added an additional provision at 310 CMR 40.0560(7)(i) for Tier Classifications that have expired.
40.0560(7)(c)2.	LSPA	"(c) Contents of a Tier Classification Extension Submittal. The Tier Classification Extension Submittal shall consist of the following: 2. a description of the status of response actions, including a plan and a proposed schedule for implementing such plan, which details the steps that will be taken in order to achieve, at a minimum, a Temporary Solution, if not already achieved, at the disposal site pursuant to 310 CMR 40.1000 within one year of the effective date of the Tier Classification Extension, and a schedule for achieving a Permanent Solution, if feasible;" The LSPA requests that "one year" be changed to "two years." Per 40.0560(7)(d)(2), "Unless otherwise specified by the Department, the Extension shall be effective for a period of two years beyond the effective date of the Tier Classification Extension;" therefore, for consistency and simplicity the deadline to achieve a Temporary Solution after a Tier Classification Extension should also be two years.	The suggested edit was not made. The achievement of a Temporary Solution, in such cases, is already beyond the original deadline to achieve a Temporary or Permanent Solution within five years from Tier Classification. The Department believes, therefore, that the steps and schedule should target achieving a Temporary Solution in a short time period, i.e., within a year.
40.0560(7)(d)	LSPA	The LSPA applauds the changes to the Tier Classification (TC) requirements, which generally simplify what had become a complex process after the 2014 amendments. However, the LSPA believes the approach should be to remove Tier Classification Extension requirements under Temporary Solution Status. This would remove confusion, administrative burden, and decrease transition requirements for sites currently under Temporary Solution.	The intent of requiring that Tier Classification Extensions be provided for disposal sites with Temporary Solution Status is to establish that the person conducting response actions at such sites is continuing to pursue a Permanent Solution. In the final amendments, MassDEP has included transition provisions for sites with Temporary Solution Status to clarify the Tier Classification Extension requirements at 310 CMR 40.0560(7)(i). For disposal sites with an unexpired Tier Classification in effect, no additional Tier Classification Extension would be necessary provided that the Status Report (where Active O&M is occurring) or the five year Periodic Evaluation (where no Active O&M is occurring) is being submitted at the required frequency. In such cases, the ongoing submittals have the effect of signalling that response actions toward a Permanent Solution are ongoing. Where no Tier Classification is currently in effect, the transition provision timeframes for submitting the Tier Classification Extension are based on whether or not Active Operation and Maintenance is occurring a the disposal site.
40.0560(7)(d)3.	Haley & Aldrich	Note to Reviewer 52: We support the intent to provide clarification in this area, but we note that no provision has been made for transition of existing sites. Many existing sites with Temporary Solution status have no effective Tier Classification now – how will these sites come into compliance under the new regulations? We suggest including a transition time period of one year, within which the next status report submittal would be deemed to meet the requirements for a Tier Classification Extension. See also Note to Reviewer 58.	MassDEP has included transition provisions for existing sites with Temporary Solution status where the Tier Classification has expired at 310 CMR 40.0560(7)(i).

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40.0560(7)(d)3. & 40.0898(1)(e)	Larry McTiernan	Proposal effectively allows Post-Temporary Solution Status Reports to substitute for Tier Classification Extensions, the allowance for reporting at up to 5-year intervals is not consistent with the requirement for TC Extensions every two years. It would seem, therefore, that the maximum interval for Post-Temporary Solution Status Reports should be two years.	The final regulations make clear that where the Post-Temporary Solution Status Reports are being provided, the requirement for additional Tier Classification Extensions does not apply and the two-year extension period does not apply.
40.0560(7)(d)3. & 40.0898(1)(e)	Larry McTiernan	If DEP approves a five-year interval for a Post-Temporary Solution Status Report, such a report might as well not be required because the Periodic Review would be required at the same time.	The final regulations do not require an annual status report for disposal sites with Temporary Solution status and no Active O&M unless the Department provides written notice to the person conducting response actions to require such a status report. In all other cases, the Periodic Review Opinion would serve to provide the information of the Post-Temporary Solution Status Report.
40.0560(7)(g)&(h): TC ext post ROS or PS	Haley & Aldrich	Note to Reviewer 50: typo at 40.0560(7)(g); should read...shall take effect on the date the Tier Classification Extension Submittal is received..."; typo at 40.0560(7)(h); should read … "shall take effect on the date the Tier Classification Extension Submittal is received…"; missing citation at 40.0560(7)(h); should read "...pursuant to 310 CMR 40.1067(4)(c), 310 CMR 40.1067(5)(c) and 310 CMR 40.1067(6)..."	The suggested edit was made to cite the relevant 310 CMR 40.1067 provisions (note, because of renumbering in 310 CMR 40.1067, the provisions in the final regulations are 310 CMR 40.1067(5), (6)(c) and (7)(a)).
40.0560(7)(h)	LSPA	"(h) Tier Classification Extension for Remedial Actions after a Permanent Solution Statement has been Submitted. A Tier Classification Extension Submittal submitted to the Department pursuant to 310 CMR 40.1067(4)(c) and 310 CMR 40.1067(5)(c) **shall take effect on the date the Tier Classification** is received by the Department and unless otherwise specified by the Department, shall be effective for a period of two years. An RP, PRP or Other Person shall notify the Department pursuant to 310 CMR 40.0560(7) if additional extensions are required thereafter." Please add the word "Extension" after "shall take effect on the date the Tier Classification" to prevent confusion.	The suggested edit was made.
40.0560(7)(h)	LSPA	Suggested italicized addition for clarity: (h) Tier Classification Extension for Remedial Actions after a Permanent Solution Statement has been Submitted ***if required pursuant to 310 CMR 40.1067(4)(c), 310 CMR 40.1067(5)(c), or 310 CMR 40.1067(6)(a) .*** A Tier Classification Extension Submittal submitted to the Department pursuant to 310 CMR 40.1067(4)(c), 310 CMR 40.1067(5)(c), ***and 310 CMR 40.1067(6)(a)*** shall take effect on the date the Tier Classification Extension is received by the Department and unless otherwise specified by the Department, shall be effective for a period of two years. An RP, PRP or Other Person shall notify the Department pursuant to 310 CMR 40.0560(7) if additional extensions are required thereafter.	Text was added to indicate that 310 CMR 40.0560(7)(h) applies only to Post-Permanent Solution remedial actions covered by 310 CMR 40.1067 that require a valid Tier Classification. The suggested edit was made to cite the relevant 310 CMR 40.1067 provisions. (Note, because of renumbering in 310 CMR 40.1067, the provisions in the final regulations are 310 CMR 40.1067(5), (6)(c) and (7)(a).)

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40.0855(3)(a)	NAIOP	Add "...and *on the* updated Conceptual Site Model…"	This provision was revised to read, "and the disposal site Conceptual Site Model, updated as necessary;"
40.0855(3)(a) & 40.0861(2)(a)	Larry McTiernan	It seems wasteful to me to require the CSM to be repeated in Ph III and Ph IV submittals. I can see updates, but not a repeat of the Ph II CSM.	The final regulation requires the inclusion of the CSM in the Remedial Action Plan, "updated as necessary." If no changes have been made to the CSM, the CSM from prior documents may be restated or referenced to meet the requirement.
40.0859: Selection of Remedial Alternative	LSPA, Wes Stimpson	Quantitative remedial goals are necessary to evaluate the feasibility of remedial action alternatives to reduce exposure to OHM by human and/or ecological receptors and impacts to drinking water source areas at a portion or portions of the disposal site to achieve or approach a Permanent Solution at such portion(s) of a disposal site. The outcomes listed in 40.0860 (1) all have quantitative goals that are used to undertake the feasibility evaluation, except 40.1003(7)(a)2., which has proven to be an issue for compliance based on recent NOAFs where MassDEP considered the evaluation of the feasibility of removing NAPL with micro-scale mobility to be inadequate. This concern can be traced to the fact that there are no established endpoints upon which to determine if the required goal is met. How are quantitative criteria for the subject evaluation to be determined for these materials? Is MassDEP suggesting that an arbitrary reduction in risk be used, such as a percentage reduction from current risk? That could be quantified. Maybe some sort of barrier that limits exposure is evaluated or some arbitrary percent reduction in mass is assumed to allow one to undertake the evaluation? This “remediation for remediation sake” needs to be rethought or more direction is needed as to how the endpoint criteria are to be determined, if this feasibility study is to be undertaken and comply with 40.0860.	In the final regulation, the proposed provision at 310 CMR 40.0859(5) was modified and incorporated into 310 CMR 40.0859(2) as (2)(b). The text is consistent with the statutory language and the provisions of 310 CMR 40.1000 that address the achievement of a Permanent Solution, where appropriate, "on portions of a site." The quantitative criteria for evaluating the feasibility a remedial alternative that addresses a portion of a disposal site focused on risk posed to human and environmental receptors or impacts to drinking water source areas would be the same as applied to an evaluation of a remedial alternative to address the entire disposal site (i.e., the costs versus the benefits of a remedial measure that would remediate such portion). With regard to the feasibility of removing NAPL, MassDEP has provided guidance on quantitative lines of evidence for the evaluation that include: transmissivity (Tn) < 0.8, asymptotic recovery decline, and oil saturation near or below residual oil saturation.
40.0859(5)	Haley & Aldrich	Note to Reviewer 54: How do you define "portion"? A feasibility evaluation might determine that it is feasible to remove small quantities of contaminated soil from one corner of a site (for example, removing one 20 yd truckload of contaminated soil from an acre-sized parcel might be feasible.) Is this what is intended?	In the final regulation, the proposed provision at 310 CMR 40.0859(5) was modified and incorporated into 310 CMR 40.0859(2) as (2)(b). The text is consistent with the statutory language and the provisions of 310 CMR 40.1000 that address the achievement of a Permanent Solution, where appropriate, "on portions of a site."

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40.0859(5)	LSPA	The LSPA is concerned about the unintended consequences of this proposed added regulation. For example, there is risk assessment guidance on how a risk characterization to support a Partial Permanent Solution must not overlook cumulative site risk. Without more clarity on MassDEP's intent here, it feels like a similar slippery slope could arise where more focused, limited risk reduction measures are implemented at a "portion of the disposal site," but the cumulative site risk or comprehensive site closure approach becomes muddled or lost. The LSPA thinks the regulations for addressing Substantial Hazards or Imminent Hazards are sufficient to require a more focused remedy for the more pressing exposure issues, and this proposed regulation is unnecessary.	In the final regulation, the proposed provision at 310 CMR 40.0859(5) was modified and incorporated into 310 CMR 40.0859(2) as (2)(b). The text is consistent with the statutory language and the provisions of 310 CMR 40.1000 that address the achievement of a Permanent Solution, where appropriate, "on portions of a site."
40.0861(2)(a) 40.0861(2)(f)(2) 40.0861(2)(g) 40.0861(2)(h) 40.0861(2)(i) Rem Action Plan	Haley & Aldrich	40.0861(2)(g) and 40.0861(2)(e) appear to be redundant. Is the language at 40.0861(2)(h)1. meant to include factors such as removal of an existing building?	In the final regulation, both 310 CMR 40.0861(2)(e) and (2)(g) were retained. 310 CMR 40.0861(2)(g) is more specific than 40.0861(2)(e) and makes it clear that a a discussion as to whether the achievement of a Permanent Solution is currently feasible must be done if a Temporary Solution is the selected remedial alternative. In the final regulation, the provision at 310 CMR 40.0861(2)(h)1. was incorporated into the list of definitive and enterprising steps. It is intended to broadly cover obstacles not strictly related to the implementation of a remedial alternative that may be preventing the implementation of a remedy to achieve a Permanent Solution.
40.0861(2)(h)1.	Larry McTiernan	I find the wording, especially the latter part, very confusing/vague. How do the "change in circumstances or steps that may be taken" differ from the "definitive and enterprising steps" in (h)2?	In the final regulation, this provision was incorporated into the list of definitive and enterprising steps, consistent with the comment. It is intended to broadly cover obstacles not strictly related to the implementation of a remedial alternative that may be preventing the implementation of a remedy to achieve a Permanent Solution.
40.0871(6): Phase IV Implementation	Haley & Aldrich	As written the language would require Department approval for all elements of a Comprehensive Remedial Action plan that includes application of remedial additives near sensitive receptors. We suggest narrowing the scope of the required approval to allow elements other than application of remedial additives near sensitive receptors to proceed.	In response to this comment, the provision was clarified to apply to the portion of the plan related to the application of remedial additives near sensitive receptors addressed at 310 CMR 40.0046(3).
40.0872(1)(a)	NAIOP	Suggested edit: "(a) ensure that the information, plans and reports related to the design, construction, and implementation of the selected remedial alternative are based upon ~~*an updated*~~ *a* Conceptual Site Model *updated as necessary*"	The edit was not made because the proposed change to this provision was not made as it was determined that it was redundant with the reference to the updated Conceptual Site Model added elsewhere in Phase IV at 310 CMR 40.0874(3)(b).

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0897(1)(c)	National Grid	The proposed change does not appear to allow OMM activities to change when site conditions change. It appears that the only possible regulatory mechanism to submit a revised OMM Plan would be to submit a revised Remedy Implementation Plan (RIP) or a revised Temporary Solution Statement. Note that this is not an issue for sites in Remedy Operation Status (ROS) and/or conducting OMM activities as part of Phase V as detailed at 310 CMR 40.0891(3) through (5). We request that the revision at 40.0897(1)(c) be expanded to allow for submission of revisions to Post-Temporary Solution OMM activities with the periodic Status Reports.	The intent of the proposed change was to emphasize that O&M activities must be done according to a submitted plan. The change was not intended in any way to limit the ability to update an operation, maintenance and monitoring plan. Note that the existing Phase IV Status Report provision at 310 CMR 40.0877(4)(b) requires "a description of any significant modifications of the operation, maintenance and/or monitoring program made since the RIP or any preceding Phase IV Status Report." The provision was edited by removing "previously submitted" before "Remedy Implementation Plan" to avoid the inference that modifications can't be made and by adding text that is consistent with 310 CMR 40.0891 requirement to modify the OMM as necessary. 310 CMR 40.0897(3) already addresses the requirement to make modifications to operation, maintenance and monitoring activities as needed in response to changing site conditions. Text was added 310 CMR 40.0897(3) to make it clear that it pertains to OMM plans.
40.0898(1): Post-TS Status/RMR	Haley & Aldrich	Note to Reviewer 58: Is this provision meant to be retroactive? Please clarify due date of Tier Classification Status Report vis a vis due date of annual report. Does this mean that no other submittals are necessary to extend Tier Classification? See also Note to Reviewer 52 re 40.0560(7)(d)(3).	Transition provisions for Tier Classification Extensions for sites with Temporary Solution Status have been added to 310 CMR 40.0560(7). For disposal sites with Temporary Solution status where Status Reports are being submitted at the time that the new regulations take effect, no additional submittal to extend the Tier Classification will be required. The changes to require the annual status report for disposal sites with Temporary Solution Status where no Active O&M is occurring have been revised. For such sites, Tier Classification will be maintained by providing a Status Reports specified in writing by MassDEP, where applicable, and by submitting the five year Periodic Evaluation of the Temporary Solution.
40.0898(1)	Larry McTiernan	Requiring annual reporting for TS sites with no Active O&M is wasteful, since there will be little or nothing to report. Perhaps 0898(1)(b) can be changed to apply to TS sites with no Active O&M but where additional monitoring is nevertheless still being conducted for some reason. Perhaps it would also be helpful to clarify where DEP feels post-TS monitoring is appropriate (or better, where it is not appropriate). It seems there is disagreement in the LSP/MCP community as to what level of monitoring is required/appropriate for Temporary Solution sites. For such sites, especially in GW-1 areas, I often see regular, periodic post-TS monitoring, as if the site was undergoing MNA. But if MNA was not specifically selected as the Comprehensive Remedial Action (as a Temporary Solution), I do not see why such frequent monitoring is necessary; 0897(1) and (2) make it pretty clear to me that such monitoring is not necessary. Said another way, what is the “appropriate monitoring” envisaged in the revision at 0898(1)(c)2?	The changes to require the annual status report for disposal sites with Temporary Solution Status where no Active O&M is occurring have been revised to not require annual status reports for Temporary Solution sites where no Active O&M is occurring. As revised, the Status Report would be required as part of the five year Periodic Evaluation, unless MassDEP requires that they be submitted "upon written notice" to the person conducting response actions at a a greater frequency.

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40.0898(1)	NECSEMA	* The proposed regulation addresses reporting frequency, but does not address sampling frequency at petroleum sites. NECSEMA's experience is that many LSPs feel that sampling frequency must be at least as frequent as the reporting frequency to comply with RAPS. NECSEMA requests that MassDEP clarify this in its response to comments; alternatively update section 310 CMR 40.1057 to state that the sampling frquency is determined by the LSP and is not related to reporting frequency. * In the explanation of the changes to 310 CMR 40.0898(1), MassDEP includes Active Remedial Monitoring Programs in the listing of types of sites that require reporting every 6 months. The majority of sites that NECSEMA believes a less frequent sampling and reporting program would be applicable have Monitored Natural Attenuation (MNA) as the chosen remedial solution, and by definition (310 CMR 40.0006), Active Remedial Monitoring Programs include monitored natural attenuation (MNA) sites. In contrast, the actual regulation language appears to allow less frequent reporting for sites that are not in active operation and maintenance (NECSEMA assumes such as MNA sites). NECSEMA recommends that the explanation be updated to be consistent with the regulatory text changes. * It is unclear in the regulations as written whether sites that are in both Phase V and Temporary Solution status are required to file Status Reports at least every six months (Phase V requirements) or at a less frequent period (the proposed changes to 310 CMR 40.0898). NECSEMA believes that the regulation should more clearly state that these sites can file reports at the frequency listed in 310 CMR 40.0898 (Temporary Solution status reports).	The commenter is correct that 310 CMR 40.0898(1) addresses the frequency of providing Status Reports, not the frequency of the activities (e.g., sampling, inspections and monitoring) covered by those reports; the frequency of the activities can be less than the frequency of the Status Reports. Active Remedial Monitoring Programs are, by definition, Active Operation and Maintenance (Active O&M). The frequency for Status Reports for a site where Active O&M is occurring, whether in Phase V or pursuant to 310 CMR 40.0898 would be the same--every six months.
40.0898(1)(b)	LSPA	"(b) except as provided at 310 CMR 40.0898(1)(c), for a disposal site with a Temporary Solution where Active Operation and Maintenance is not being conducted, a Post-temporary Solution Status Report shall be submitted to the Department within one year of receipt by the Department of the Temporary Solution Statement and annually thereafter until a Permanent Solution is achieved and where applicable, an annual Status Report may be combined with the Periodic Review of the Temporary Solution Opinion required pursuant to 310 CMR 40.1050(4)(b);" Clarification is needed on how this will be handled at existing sites. * When will the first annual Status Report be due if the Temporary Solution was submitted over a year before? * Will RPs of current Temporary Solution Sites be notified that they are now required to submit annual status reports in addition to the five year Periodic Review? * If a site is in Temporary Solution and a status report is now required, what is the transition provision applicable to these sites?	In the final regulation, Status Reports for sites in Temporary Solution where Active O&M is not being conducted are only required to every five years with the Periodic Review Opinion, unless the Department otherwise notifies the person conductng response actions in writing. Considerations for requiring more frequent Status Reports at such sites include stability of disposal site conditions, current and foreseeable disposal site risk and the progress being made toward a Permanent Solution.

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40.0898(1)(c)&(e)	LSPA	"(c) for a disposal site with a Temporary Solution where Active Operation and Maintenance is not being conducted, persons conducting response actions may seek to reduce the frequency of Post-temporary Solution Status Reports to less than an annual frequency upon approval by the Department of a proposal that provides a reduced frequency in number of years not to exceed five and the justification for such frequency based on considerations including but not limited to the stability of disposal site conditions, and current and foreseeable disposal site risk, provided that:" "(e) the submittal of Post-temporary Solution Status Reports at the frequency specified at 310 CMR 40.0898(a) through (c) shall have the effect of maintaining a Tier Classification Extension obtained pursuant to 310 CMR 40.0560(7) for the duration that such Status Reports are submitted to the Department." Per 40.0560(7)(d)2 "Unless otherwise specified by the Department, the Extension shall be effective for a period of two years beyond the effective date of the Tier Classification Extension;" Clarification is needed on how Tier Classification Extensions would now work for Temporary Solution sites where Post-Temporary Solution Status Reports are reduced to a frequency of less than every two years. Would the Tier Extension be valid for more than two years? If so, to aid with tracking, the LSPA suggests that MassDEP could add the Tier Classification expiration date to the Searchable Sites Page. **The LSPA prefers that the added process of Tier Classification Extensions not be added to Temporary Solution sites that are compliant with required status report submittals.** However, if the Tier Classification Extension is retained, MassDEP needs to ensure that such Tier Extensions will extend beyond 2 years. A suggestion is to make the Tier Extension schedule the same as the Post -Temporary Solution Status Reports, and these status reports at no less than 2 years or more than 5 years.	If status reports are being submitted, then a Tier Classification Extension is not required; the Status Reports serve to keep the Tier Classification effective as they indicate that response actions are ongoing. That is the intended effect of the provision at 310 CMR 40.0898(1)(e).
40.0924: ID of Exposure Points	Haley & Aldrich	Note to Reviewer 59: (5) seems redundant to (3)	Paragraph (3) is directed at identification of Exposure Points for current and reasonably foreseeable Site Activities and Uses, whereas paragraph (5) is directed at identification of Exposure Points that account for OHM fate and transport.
40.0924(6): GW Exposure Points	Haley & Aldrich	Is the intent of the language at 40.0924(6)(a) to still allow averaging of Groundwater Exposure Point Concentrations when using Method 3?	310 CMR 40.0924(6)(b) has been revised to clarify that averaging is allowed in some cases under Method 3.

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40.0924(6): GW Exposure Points	NECSEMA	NECSEMA supports the proposed clarifications to 310 CMR 40.0924(6) regarding identification of Groundwater Exposure Points during risk characterization. As NECSEMA has previously conveyed during meetings with representatives of MassDEP, many of the risk assessors our members hire interpret the current regulations to not allow use of the "GW-1 Exemption" for petroleum constituents when methyl-tertiary butyl ether (MTBE) or other additives are detected above background concentrations. NECSEMA understands if the proposed changes are promulgated as drafted, a site with MTBE (or other additives) present above background and below GW-1 Groundwater Standards will be able to use the "GW-1 Exemption" for petroleum hydrocarbon constituents. NECSEMA believes this proposed change will allow for the closure of additional disposal sites with stable/shrinking groundwater contaminant plumes that represent no risk to drinking water resources. NECSEMA also suggests the following wording change for your consideration: In 310 CMR 40.0924(6)(c)(1), NECSEMA recommends that MassDEP include Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH) as examples in the definition of petroleum hydrocarbons to remove any ambiguity of whether they are included in "Total Petroleum Hydrocarbons".	MassDEP made the change to include "Volatile Petroleum Hydrocarbons" and "Extractable Petroleum Hydrocarbons" in the text so that it now reads, *For the purposes of this provision, the term "petroleum hydrocarbons" shall mean the petroleum-derived constituents of crude or fuel oil, such as those constituents defined by the analytical methods for Total Petroleum Hydrocarbons, Volatile Petroleum Hydrocarbons, Extractable Petroleum Hydrocarbons, Benzene, Toluene, Ethylbenzene and Xylenes, but not including additives;*
40.0924(6)(b)4.	NAIOP	NAIOP believes that a contaminant concentration of 10% or less of the applicable GW-1 values, at a minimum of 1,000 feet from the nearest production well, is more than adequately protective of the water supply. Proposed language: *"6. It has been demonstrated through adequate characterization of horizontal migration that groundwater petroleum hydrocarbon concentrations are: a. not detected at or above concentrations equal to or less than 10% of the applicable GW-1 standards at the downgradient edge of the plume, at least 1,000 feet from the Public Water Supply well(s); "*	MassDEP did not make the suggested change. The 1,000 foot buffer applies to petroleum hydrocarbons. The exception for petroleum hydrocarbons from meeting the GW-1 standards is based on a demonstration that the plume is stable/no longer migrating. The suggested change is not consistent with maintaining a clear point of compliance for making such a demonstration.
40.0924(6)(c)	OHI Engineering, Inc.	Section (6)(c) Groundwater Exposure Points should be extended to include other non-persistent compounds. Some consideration of a scientific and defensible demonstration of the impossibility of sites to impact drinking water should be entertained (e.g., such sites may include those with shrinking and significantly remediated plumes with no potential for closure due to inclusion in a Zone II or other similar location.) This section should also address impacts to surface water supply areas where the size and volume of the plum is unlikely to impact the surface water supply at a concentrations which results in exceedance of a drinking water standard.	MassDEP's efforts to develop and support the petroleum exemption were motivated by the high percentage of sites in the 21E program that are impacted by petroleum hydrocarbon contamination. The change was supported by work MassDEP did prior to first adding this exemption to the MCP that looked at the scientific literature on petroleum hydrocarbon fate and transport, including biodegradation and plume stagnation, and its evaluation of the frequency of VPH, BTEX and MtBE impacts on public water supply wells in Massachusetts.
40.0924(6)(c)1.	Vertex	Does this section appropriately address the issue that was brought up by Peterborough Oil v. MassDEP?	Yes. The amendments to this provision (i.e., changing from "oil" to "petroleum hydrocarbons" and specifically excluding additives) provide additional clarity on the issue raised in that case.

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40.0924(6)(c)6.a.	LSPA	"6. It has been demonstrated through adequate characterization of horizontal migration that groundwater petroleum hydrocarbon concentrations are: a. not detected at or above analytical limits appropriate for a GW-1 area at the downgradient edge of the plume, at least 1,000 feet from the Public Water Supply well(s); and" Please clarify what is meant by "analytical limits appropriate for a GW-1 area." The LSPA suggests a revision to *"…not detected at or above analytical limits that are able to detect Method 1 GW-1 standards and/or drinking water standards…."*	This comment pertains to a provision for which an amendment was not proposed. The provision is an existing provision; it appears as redline text in the public hearing draft because the provision was relocated. The phrase "analytical limits appropriate for a GW-1 area" is intended to mean that petroleum hydrocarbons in groundwater are not found to be present by sample analysis that has Reporting Limits capable of quantifying concentrations equal to and less than the GW-1 standards and drinking water MCLs. That is, the analysis achieved Reporting Limits appropriate for GW-1 samples (consistent with guidance for such analysis in MassDEP's Compendium of Analytical Methods).
40.0924(6)(c)6.a	Weston & Sampson	Expand this definition to include sites where GW-1 applies because they are solely classified due to being potentially productive aquifers. In addition, we feel this should expand beyond petroleum. For example, I have an arsenic exceedance in an urban setting, just above GW-1. I have wells surrounding the exceedences and non-potable PPA located 100 m downgradient. Under current rules, I cannot close out site with PSS.	This change was not made. This approach is not appropriate for Potential Drinking Water Source Areas because it requires the existence of an actual drinking water well to demonstrate that the contaminant plume has stabilized at a safe distance from the well. In Potential Drinking Water Source Areas, the likely location of future wells is unknown. Likewise, this approach is intentionally limited to petroleum contamination which is not persistent.
40.0924(6)(c)8.	LSPA	Groundwater exposure points – with respect to GW-1 areas, it is possible that one could have a potential EPC that is less than GW-1 standards and/or does not pose a risk in excess of MCP risk management criteria; this is covered elsewhere in the MCP. Therefore, the LSPA recommends that this clause be deleted.	This provision was moved, but not changed. What is and was always intended is that the Exposure Point, the public water supply, has no petroleum hydrocarbon contamination in order for this exemption to apply.
40.0924(9)	OHI Engineering, Inc.	Section (9) Sediment Exposure Points should include depths of appropriate EPs and consider migration of sediments in areas where sediment migration is likely.	MassDEP agrees that sediment migration and appropriate sampling depths are important considerations for sediment sampling; those considerations should be addressed in the site assessment, sampling plans and CSM. As written, the provision provides flexibility to consider the depth of contamination and the potential exposures that may occur given the location of contamination.
40.0924(10)(b)	LSPA	There are two commas after "uses."	The extra comma was removed.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0924(8) & 40.0926(9)	Wood	While the current MCP is silent on the calculation of indoor air EPCs specifically, indoor air EPCs are addressed in the current Vapor Intrusion guidance. The guidance is similar to what is stated in the proposed sections 310 CMR 40.0924(8) and 40.0926(9), with the major difference that the guidance allows for the use of an arithmetic average to calculate EPCs and the proposed regulations do not. It should first be noted that the specific requirement to use a 95 percent upper confidence limit (UCL) on the mean is dissimilar from what is stated for calculating soil EPCs, which allow for either a 90 percent Chebyshev UCL in any case or a 95 percent lognormal/gamma UCL. MassDEP's stated goal in specifying the 90 percent Chebyshev UCL was that this UCL is able to be calculated using Excel and is applicable to the distribution of any data set. This would be just as applicable to an indoor air data set as to a soil data set. Therefore, I would suggest that, at a minimum, 40.0926(9)(a)2 be changed to be consistent with the proposed 40.0926(8)(2)(a). Regardless, the calculation of a UCL for an air data set in particular may be generally infeasible due to the typically small number of samples available. The general recommendation that is provided in the VI Guidance is to collect 2 to 4 rounds of indoor air data for a residence and 2 rounds for an industrial/commercial building. Per USEPA's ProUCL software, an error message is shown when data sets of 10 or fewer samples are analyzed to calculate a UCL that warns the user of the small data set size. (The size of these data sets is in stark contrast to soil data sets, which typically have larger numbers of samples that are sufficient for calculating a valid UCL.) This would be further compounded if any of the results are not detected, as only detected concentrations are used by the software to determine the distribution of the data set. As such, this may lead a practitioner to suggest, for example, the collection of 2 or 3 samples within each exposure point during a sampling round (rather than collecting, for example, 10 quarterly rounds of indoor air samples, which would suggest a period of 2.5 years to collect a sufficient number of samples to calculate an indoor air EPC). While in general the collection of more samples is a potential solution, it also substantially increases the analytical cost of the indoor air sampling, which is not insignificant. While it is understandable that a conservative estimate of exposure be developed for an indoor air exposure pathway, the requirement to use a maximum detected concentration or a 95th percentile upper confidence limit (UCL) on the mean is also potentially overly conservative. The maximum would represent a point estimate of possibly a worst-case scenario for exposure that is intended to represent a 30-year full-time exposure duration. For example, if six rounds of data are available and a chemical was detected in only two of those rounds, it would not seem reasonable to conclude that the maximum detection is representative of year-round exposure (rather, the average of the detected concentrations and the reporting limits for nondetects could be appropriate.) A UCL on the mean is more likely to better represent potential exposures; however, this could require data sets that are much larger than the indoor air data sets that are currently being used for vapor intrusion evaluations and risk characterizations. In addition to the suggestion to modify the UCL recommendations, another option would be to modify the indoor air EPC section to more closely resemble the proposed soil EPC approach in 310 CMR 40.0926(8) and the groundwater EPC requirements in 40.0926(7)(a), which state [note that there are two 40.0926(7)(a) sections, and I am referring to the second]: A groundwater Exposure Point Concentration shall be a conservative estimate of the temporal mean for the exposure period of concern[,] and shall consider temporal trends. It is the case that indoor air exposures represent a direct exposure, but so does a scenario where groundwater is evaluated as drinking water. See next comment for proposed language change	MassDEP has revised the provision at 310 CMR 40.0926(9)(a)2. to be consistent with this comment and MassDEP's Indoor Air Guidance for calculating indoor air EPCs. The suggested text in i. through iii regarding determining the conservative estimate of the mean was not included, however.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(9)	Wood	Please consider the following alternate language for this section of the MCP: (9) Indoor Air Exposure Point Concentrations (a) A conservative estimate of the average concentration contacted by a receptor over the exposure period of concern, based on concentrations measured in indoor air, shall be used for the Exposure Point Concentration. 1. Except where multiple rounds of data have been obtained in a manner that adequately establishes spatial and temporal variations, maximum concentration values shall be used as the Exposure Point Concentration for each contaminant of concern, 2. When sufficient data are available to characterize the spatial and temporal variability at the Exposure Point, an indoor air Exposure Point Concentration shall be: a. a conservative estimate of the temporal mean for the exposure period of concern[,] and shall consider temporal trends. In this case, a valid justification must be provided indicating that the sample mean is unlikely to substantially underestimate the true mean of the concentration of oil or hazardous material at the Exposure Point. Such a demonstration should include, but need not be limited to, consideration of the observed distribution of the data, sampling strategy (including frequency, density, and potential biases), graphical representation of analytical results, and/or statistical analyses. This conservative estimate of the mean may be represented by either: i. the arithmetic average of data from the Exposure Point, provided that the arithmetic average is less than or equal to the applicable risk-based concentration limit, 75% of the data points used in the averaging procedure are equal to or less than the applicable standard or risk-based concentration limit, and no data point used in the averaging is ten times greater than the risk-based concentration limit; ii. a maximum concentration value, iii. an upper confidence limit on the mean, as follows: a. The 90th percentile Chebyshev non-parametric upper confidence limit on the mean may be used in any case; or b. The 95th percentile parametric upper confidence limit on the mean for a normal, lognormal, or gamma distribution may be used if a technical justification for the choice of upper confidence limit on the mean is provided.	MassDEP has revised the provision at 310 CMR 40.0926(9)(a)2. to be consistent with this comment and MassDEP's Indoor Air Guidance for calculating indoor air EPCs. The suggested text in i. through iii regarding determining the conservative estimate of the mean was not included, however.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926 - general	GZA	The significant change in the way EPCs are to be calculated for soil that has been proposed in the draft regulation revision package will have substantial consequences at most sites that have not been closed with a Permanent Solution. The use of arithmetic mean values (with appropriate documentation and justification) has been the standard approach to developing EPCs for soil at MCP sites since the privatized program began in 1993. These evaluations have been the basis of remedial strategies directed at achieving a Permanent Solution for numerous sites presently in Temporary Solution (TS) status. This major shift in the EPC calculation process will have widespread consequences for many sites that are already far along in the MCP process. The 90th or 95th percentile ucl approach almost always results in a value higher than the arithmetic mean value and can even yield concentrations higher than the maximum value actually reported for the disposal site, depending upon the nature of the data set. This will result in overstated average concentrations and consequently higher risk estimates, with resultant conclusions that active remediation is required at sites which would represent a condition of No Significant Risk (NSR) under the current regulations. It is GZA's opinion that the approach that is currently used frequently at MCP sites, which involves biased sampling focused on the areas of most significant COC impact and the use of arithmetic mean concentrations as EPCs, provides a sufficiently conservative estimate of the risks that receptors may experience, particularly in light of the conservative exposure assumptions used in the MCP risk characterizations. This risk characterization process already incorporates multiple layers of conservative assumptions, resulting in generally conservative conclusions. Introduction of yet another layer of conservatism does not appear to be appropriate. We also note that a ucl approach will be particularly difficult for certain data sets, including COCs with elevated reporting limits, small data sets, constituents detected at low frequencies, and for marginal COCs which cannot be eliminated from the risk characterization process (because they are present at concentrations exceeding background levels) but which do not contribute significantly to site risks. GZA believes that a radical shift to a ucl approach will introduce substantial uncertainty for those sites which have been closed out over the last 26 years of the MCP program based on the current regulations. Additionally, the entire assessment process may need to be revisited for sites presently in TS and working toward permanent closure. The change in the EPC evaluation process could effectively require repetition of the Phase II Comprehensive Site Assessment process at these properties, which could be especially troublesome at sites that have undergone redevelopment based in part on previous risk evaluation conclusions. With respect to EPCs for other media, GZA notes that the groundwater section (40.0926(7)) does not appear to account for groundwater EPCs under a Method 3 scenario for exposure pathways other than drinking water. We believe that the use of areal mean values in developing EPCs for these other pathways (e.g. groundwater exposures by construction or utility workers in trenches) should be acknowledged as an appropriate approach in many cases. For indoor air, GZA believes that the proposed approach (either a maximum value or a 95th percentile ucl on the mean) represents an overly conservative approach to developing EPCs. The use of an arithmetic mean value should be allowed with appropriate justification. We also question the use of the 95th percentile ucl versus the approach proposed for soil which allows for use of the 90th percentile.	MassDEP agrees with the statement that the Upper Confidence Limit (UCL), "almost always results in a value higher than the arithmetic mean value and can even yield concentrations higher than the maximum detected value" and views this as a point in favor of using UCLs to account for sampling error when estimating EPCs. However, MassDEP disagrees with the implication that the UCL is problematic because it "will result in overstated average concentrations." The size of the difference between the arithmetic mean and the UCL reflects the level of uncertainty about whether the arithmetic mean underestimates the actual mean concentration at the Exposure Point. If the EPC estimate were not above the arithmetic mean, it could not account for sampling error and would not be a conservative estimate of the concentration at the exposure point. MassDEP disagrees with the assertion that "biased sampling focused on the areas of most significant COC impact and the use of arithmetic mean concentrations as EPCs, provides a sufficiently conservative estimate of the risks . . . particularly in light of the conservative exposure assumptions used in the MCP risk characterizations" on two counts. First, judgmental sampling can underestimate the EPC where "areas of most significant impact" are incorrectly identified due to incomplete site history. It is conservative if and only if the investigator knows the source of contamination, the extent of the contamination and the location of the highest concentrations. (Note that in such cases, both the proposed and final regulation allow investigators to continue using the arithmetic mean of data sets obtained by judgmental sampling.) Second, the statement that the risk assessment already incorporates multiple layers of conservatism conflates uncertainty due to sampling error, which the new EPC provisions address, with human variability, which MassDEP's default exposure assumptions address. MassDEP's default exposure assumptions are deliberately aimed at protecting a physically typical person who chooses to make full use of a resource or a parcel of land. This level of protection is undermined if the EPC is under-estimated due to inadequate sampling practices. Regarding groundwater EPCs, the final regulation differentiates between drinking water and other exposures, allowing use of the arithmetic mean for non-drinking water exposures. Regarding indoor air, the provision has been revised to allow for the use of a maximum value or arithmetic mean, where appropriate, consistent with MassDEP's Vapor Intrusion Guidance.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926 - general	LSPA & NAIOP	Every medium seems to have a different approach to the development of the EPC; this is an inconsistent approach that does not make statistical sense. The goal of EPC development should be to have a statistically defensible, adequate, and representative EPC that is appropriate for the exposure point and receptor. There is no basis for the derivation of the EPC for wildlife differing from that used for a human, or for specifying that the average concentration is adequate for a sediment EPC but not for a soil EPC. For various circumstances the proposed regulations mandate the use of the maximum concentration, the upper confidence limit, and the average concentration; this approach will be confusing to practitioners and may not necessarily result in a conservative estimate of the EPC as required by the regulations. The entire discussion regarding adequate site characterization, sampling design, and size of the data set belongs not in this section, but rather in sections that describe investigation performance standards, e.g., section 40.0830, "Phase II - Comprehensive Site Assessment." These types of issues/information should be contemplated well in advance of the performance of the Risk Characterization, and the performance standards for defining the nature and extent of OHM, establishing the Site boundaries, and performing a REDUA analysis of the available data are also required as part of the investigations, such as the Phase II. This requirement should reinforce the need to have a risk assessor involved in designing the sampling program to ensure the adequacy of the final data set for establishing EPCs.	Every medium has a different approach because each one poses different sampling challenges. In the technical and scientific literature, a great deal has been published on soil heterogeneity, soil sampling theory and technically valid soil sampling practices, and MassDEP has relied on these resources for this MCP revision. Other media are not necessarily amenable to the application of those same sampling practices. For example, grid sampling or Incremental Sampling Methodology may not be practical for sediment and surface water in rivers and streams. Even though it has been widely recognized that sediment is also heterogeneous and surface water contaminant concentrations can vary significantly over both space and time, different sampling conventions (for example transect sampling) are often applied. Likewise, rigorous sampling has generally not been applied to groundwater exposure points. It is not clear what is meant by the statement that all EPC data should be statistically defensible for two reasons. First, while MassDEP encourages the use of larger data sets and Upper Confidence Limits (UCLs) wherever that can be achieved, sediment, surface water and groundwater sampling data sets are seldom large enough for statistical treatment. Second, judgmental sampling results cannot be treated statistically. Regarding wildlife, there is a clear basis for EPCs that differ from those used for people; wildlife exposure points are based on home ranges, which differ among species and almost always differ from human-scale exposure points. Wildlife that are of greatest concern at MCP sites have small home ranges that are often characterized by small data sets, resulting in a level of uncertainty about the Exposure Point Concentration that is unacceptable for human health risk assessment. Regarding the location/order of the sampling provisions within the MCP, MassDEP agrees that sampling provisions should be placed before 40.0926, not within it. In the final MCP regulation, the discussion of selecting a sampling approach (judgmental vs systematic) has been put in Sections 40.0903 and 40.0904, with a cross-reference in Section 40.0835(4)(g). MassDEP has opted not to move the sampling provisions to 40.0830 because the general nature of the text in that section is not consistent with the specificity of the new provisions. In the final regulation, the EPC calculation requirements in Section 40.0926 refer back to the sampling decisions discussed in Section 40.0904. Specifically, at exposure points where judgmental sampling is appropriate per Section 40.0904, Section 40.0926 allows an arithmetic mean to be used as the Exposure Point Concentration, while at exposure points where 40.0904 specifies systematic sampling, section 40.0926 specifies a UCL or a technically justified alternative to be used. Finally, MassDEP supports involving the risk assessor early in the site characterization project, and we agree that sampling projects should be planned with specific goals (e.g., nature and extent characterization or risk assessment).

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926 - general	National Grid	The use of arithmetic mean values (with appropriate documentation and justification) has been the standard approach to developing Exposure Point Concentrations (EPCs) for soil at MCP sites since 1993. As such, the use of arithmetic average concentrations in determining risk has been the basis of remedial strategies directed at achieving a Permanent Solution for numerous sites presently in Temporary Solution status. This major shift in the EPC estimation process will have widespread consequences for many sites that are in that process. The approach that is currently used at the majority of our MCP sites involves biased sampling focused on the areas of most significant impact and use of arithmetic mean concentrations as EPCs. We believe that this approach provides conservative estimates of risks that receptors may experience given the redundancy of conservatism throughout the risk assessment process. Furthermore, this approach would still be acceptable under the proposed changes for other media that can be just as heterogeneous as soil. We believe that the proposed 90th or 95th percentile upper confidence limit (ucl) approach will yield artificially elevated EPC estimates that will overstate risk estimates. MassDEP has even stated that the 90th or 95th percentile ucl approach almost always results in a value higher than the arithmetic mean value and can even yield concentrations higher than the maximum detected value, depending upon the nature of the data set. We believe that the introduction of yet another layer of conservatism is not warranted. In addition, a radical shift to a ucl approach will introduce substantial uncertainty for those sites which have been closed out over the last 26 years of the current MCP program based on the current regulations. Furthermore, the entire assessment process may need to be revisited for sites presently in Temporary Solution and working toward permanent closure. The change in the EPC evaluation process could effectively require repetition of the Phase II Comprehensive Site Assessment process at these sites, which could be especially troublesome at properties within these sites that have undergoneredevelopment based in part on previous risk evaluation conclusions. We believe, at a minimum, that sites already in the system that have achieved a Temporary Solution while working towards a Permanent Solution should be allowed to use the previous approach to define the risks at these sites. The proposed changes to 310 CMR 40.0926(12) will also lead to confusion. This section allows for the use of the average concentration within the Hot Spot for determining EPCs but refers back to previous paragraphs for soil where ucl evaluations would be required. The revised EPC language for Hot Spots (which would now categorically include MGP waste deposits leading to further confusion as indicated in previous comments above) also proposes that “the concentrations of oil and/or hazardous material within the waste shall be considered the concentration of the OHM in soil” for Hot Spots composed of waste material in whole or in part. This can potentially lead to a significant over estimation of risk depending upon how the Hot Spot is defined. For instance, if you have tar in the form of droplets of NAPL within a soil matrix that may consist of a minute amount of product, under the proposed changes, the Hot Spot would include the soil with the NAPL, but the EPC would be that of the NAPL itself. This will almost assuredly result in Hot Spot EPCs exceeding Upper Concentration Limits when the actual risk posed by this soil would be significantly less. In addition, the actual collection of NAPL for analysis would be problematic. We believe the current regulations adequately address MGP residuals and provide for sufficiently conservative site closures, provided that the MGP residuals are appropriately characterized in terms of nature, extent and potential exposures.	MassDEP agrees that the Upper Confidence Limit (UCL) “almost always results in a value higher than the arithmetic mean value and can even yield concentrations higher than the maximum detected value.” However, we disagree with the implication that the UCL is problematic because it “will yield artificially elevated EPC estimates that will overstate risk estimates.” The size of the difference between the arithmetic mean and the UCL reflects the level of uncertainty about whether the arithmetic mean underestimates the actual mean concentration at the Exposure Point. If the EPC estimate were not above the arithmetic mean, it would not account for sampling error and would not be a conservative estimate of the concentration at the exposure point. MassDEP does not agree that “biased sampling focused on the areas of most significant impact and use of arithmetic mean concentrations as EPCs . . . provides conservative estimates of risks . . . given the redundancy of conservatism throughout the risk assessment process,” on two counts. First, “biased” (judgmental) sampling can underestimate the EPC where “areas of most significant impact” are incorrectly identified. Biased sampling is conservative only if the investigator knows the source of contamination, the extent of the contamination and the location of the highest concentrations. In such cases, both the proposed and final regulation allow investigators to continue using the arithmetic mean of data sets obtained by judgmental sampling. Second, the assertion that “redundancy of conservatism throughout the risk assessment process” results in conservative estimates of risk conflates uncertainty due to sampling error, addressed by the sampling and EPC revisions, with human variability, addressed in MassDEP’s default exposure assumptions. MassDEP’s default exposure assumptions are deliberately aimed at protecting a physically typical person who chooses to make full use of a resource or a parcel of land. This level of protection is undermined if the actual mean at the exposure point is under-estimated. Regarding the comments on the proposed Hot Spot and UCL provisions, "areas of waste disposal," including coal tar deposits, are not included in the Hot Spot definition in the final regulation. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). This provision will allow a qualitative assessment of risk from exposure to coal tar, avoiding the need to chemically analyze and quantify the risks from coal tar. Finally, regarding the initial proposal to apply Method 3 Ceiling Limits (M3CLs) to waste, in the final regulation, coal tar is not included in the 310 CMR 40.0996. Instead MassDEP’s concerns about site management decisions at coal tar sites are addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).

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40.0926 - general	Vertex	The most common violation in risk characterization NOAFs is the use of non-conservative EPCs. The revision of this section to include ProUCL is an attempt to fix this recurring violation. But it is too prescriptive. Risk assessors and LSPs should be afforded professional judgment when it comes to developing exposure point concentrations.	In the final regulation, the language is regarding identifying the Upper Confidence Limit (UCL) is more general. The Chebyshev UCL is presented as the default method of estimating the mean that is always allowed where systematic sampling has been implemented (310 CMR 40.0926(8)(a)2.). That provision is followed by a provision allowing technical justification for a conservative estimate of the arithmetic mean as an alternative (310 CMR 40.0926(8)(a)2.a.). MassDEP envisions writing guidance that identifies the UCL suggested by ProUCL as a technically justified option. MassDEP also envisions allowing a very large data set size as a technical justification. Professional judgment should be based on factual considerations and logical decision processes that constitute a technical justification, and those considerations need to be documented.
40.0926(2)	Haley & Aldrich & Vertex	Typo at 40.0926(2) - "CNR" should be "CMR".	This edit was made.
40.0926(2)	LSPA	The discussion regarding adequate site characterization, sampling design and size belongs in section 40.0830, “Phase II - Comprehensive Site Assessment.” These types of issues/information should be contemplated well in advance of the performance of the Risk Characterization, and the performance standards for defining the N&E of OHM, Site boundaries, and performing an analysis of the available data are also required as part of the Phase II. This highlights the need to have the risk assessor involved in designing the sampling program to ensure adequacy for EPCs.	Estimation of EPCs calls for sampling approaches and data analysis procedures that differ from those required to determine the nature and extent of contamination. Therefore, MassDEP continues to believe that provisions related to EPCs are properly placed in 310 CMR 40.0900, which addresses risk assessment requirements. The Comprehensive Response Action provisions in 310 CMR 40.0800 do not have detailed requirements related to sampling and data analysis. MassDEP believes that the general nature of the text in that section is incompatible with the specificity of the new EPC-related provisions. Further, Comprehensive Response Actions are not conducted at all disposal sites prior to the achievement of a Permanent Solution. However, MassDEP agrees that sampling considerations should be placed prior to 40.0926 and not within it. In the final regulation, provisions related to sampling decisions have been added to 310 CMR 40.0903 and 40.0904 and the EPC calculation requirements in 310 CMR 40.0926 refer back that section. Specifically, 310 CMR 40.0926 allows use of the arithmetic mean of the data set at exposure points where judgmental sampling is allowed pursuant to 310 CMR 40.0904, while 310 CMR 40.0926 specifies a UCL or a justification for an alternative at exposure points where systematic sampling is conducted pursuant to 310 CMR 40.0904. MassDEP supports involving the risk assessor early in the site characterization project, and we agree that sampling projects should be planned with specific goals (e.g., nature and extent characterization or risk assessment).
40.0926(2)	LSPA	Please clarify what type of statistical (or otherwise) “justifications” for sample size adequacy, considering variability and distribution, should be provided?	310 CMR 40.0926(2) in the public hearing draft was meant to provide the context for the sampling provisions that followed. It was not intended as a new requirement. In any case, all sampling-related provisions have been moved to 310 CMR 40.0903 and 40.0904. In the final regulation, 310 CMR 40.0903 presents an expanded list of considerations for selecting the sampling approach (i.e., judgmental or systematic) and the sample collection procedures (i.e., discrete or incremental). These considerations are based on information that has been widely published and available for use in meeting the MCP performance standard.
40.0926(2)	NAIOP	Recommend deleting last sentence, ...*"The risk assessment documentation shall justify the size of the data set used to calculate the Exposure Point Concentration. Such documentation shall consider the distribution and variability of the contamination and the size of the area sampled."* This issue is already dealt with more specifically in 310 CMR 40.0924.	In the final regulation the requirement to justify the size of the data set is addressed in 310 CMR 40.0903, and as suggested by the comment, is not repeated in 310 CMR 40.0926.

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40.0926(6)	NAIOP	Recommend adding: (6) Maximum concentrations shall be used to estimate an Exposure Point Concentration under the following conditions: (a) evaluations of acute exposures; or (b) screening assessments that evaluate maximum exposure potential to streamline the assessment process; *or (c) when the 95% UCL exceeds the maximum concentration.*	The final regulation specifies that maximum concentrations be used to estimate EPCs in the evaluation of acute exposures, in screening assessments, and as provided for establishing indoor air Exposure Point Concentrations. When the 95% UCL exceeds the maximum measured concentration in a contaminated medium, it is indicative of either significant variability or inadequate sample size, or both. The use of the maximum value of a small/inadequate sample is not recommended – it is not necessarily a "conservative estimate."
40.0926(7)	Larry McTiernan	I've often wondered why the MCP does not clarify that the EPC for GW can be an average when, for example, construction worker exposure to GW is being evaluated in Method 3. Can such clarification be added?	The final regulation differentiates between drinking water and other exposures and allows averaging for non-drinking water exposures in Method 3.
40.0926(7)	LSPA	"3. demonstration that contaminant concentrations are not detected at or above analytical limits appropriate for a GW-1 area at the downgradient edge of the plume, at least 1,000 feet from the Public Water Supply well;" Please clarify what is meant by "analytical limits appropriate for a GW-1 area. Perhaps revise to "…not detected at or above analytical limits that are able to detect Method 1 GW-1 standards and/or drinking water standards…."	The phrase "analytical limits appropriate for a GW-1 area" is intended to mean that petroleum hydrocarbons in groundwater are not found to be present by sample analysis that has Reporting Limits capable of quantifying concentrations equal to and less than the GW-1 standards and drinking water MCLs. That is, the analysis achieved Reporting Limits appropriate for GW-1 samples (consistent with guidance for such analysis in MassDEP's Compendium of Analytical Methods).
40.0926(7)(a)	LSPA	(a)"Groundwater Exposure Point Concentrations shall be determined for each wellhead (including each monitoring well) and the nearest tap of a supply well screened within the horizontal and vertical distribution of the oil and/or hazardous material in groundwater (see (40.0924)" The LSPA observes that there appears to be a "blending" of groundwater EPC development for Method 1/2 and Method 3 risk characterizations, and we request more clarity/specificity. For example, the MCP is explicit [40.0924(2)(a)(1)] that for Method 1/2 risk characterizations, the groundwater exposure point shall be the resource itself, as measured at each wellhead. The 1995 Risk Guidance (WSC/ORS-95-141, Section 5.8.1) is also explicit that for Method 1, each well is considered an exposure point, and that averaging across wells is not acceptable for Method 1. In practice under Method 3, each wellhead is compared to drinking water standards in GW-1 areas, if applicable. Under Method 3 in non-drinking water areas, it is common to average across wells to develop a representative EPC for certain exposure scenarios, for example a construction worker where an excavation can encompass a broader area. The LSPA proposes the following revised language: 40.0926(7)(a): *"For Method 1 or Method 2 risk characterization, groundwater Exposure Point Concentrations shall be determined for each wellhead…..For Method 3 risk characterization, groundwater Exposure Point Concentrations shall be determined based on site-specific conditions, and potential current and future exposures."* Then 40.0926(7)(b), which is currently shown as another "(a)", can further provide detail on deriving a conservative groundwater EPC under Method 3.	The final regulation is consistent with this recommendation. The provisions of 310 CMR 40.0924(6) address the identification of groundwater exposure points for the different risk characterization methods and the provisions for determining groundwater exposure point concentrations at 310 CMR 40.0926(7)(a) refer back to 310 CMR 40.0924(6).

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40.0926(7)(c)	LSPA	Groundwater EPCs: If residual soil contamination can cause higher future groundwater concentrations than those present, then it is a source, and needs to be controlled/mitigated etc. regardless of EPC considerations.	MassDEP agrees that soil that could lead to higher groundwater concentrations in the future would be considered a source, but 310 CMR 40.0926(7)(c) addresses groundwater Exposure Points, not source control, which is addressed separately at 310 CMR 40.1003(5). The effect of leaching to groundwater on future Exposure Point Concentrations must be estimated for the risk assessment unless and until the potential source of contamination has already removed.
40.0926(7)(d)4.	NAIOP	Since the post-remedial monitoring will of necessity follow an extended period of assessment, remediation, and data collection, NAIOP believes that one additional year of such monitoring is adequately protective of the interests of the MCP. Recommend changing language to replace two years with "one year".	MassDEP did not make the suggested change. The requirements of this section, including the two years of monitoring, are intentionally conservative to ensure protection of an existing public water supply well.
40.0926(8)(a)	LSPA	Soil EPCs: See previous comments regarding requirements for justification of sampling approach as a part of RC versus as part of earlier sections or points in the process, such as defining nature and extent/investigation considerations. Also, the LSPA requests that further clarification be provided regarding what type of justification/documentation is necessary.	Estimation of EPCs calls for sampling approaches and data analysis procedures that differ from those required to determine the nature and extent of contamination. Therefore, MassDEP continues to believe that provisions related to EPCs are properly placed in 310 CMR 40.0900, which addresses risk assessment requirements. The Comprehensive Response Action provisions in 310 CMR 40.0800 do not have detailed requirements related to sampling and data analysis. MassDEP believes that the general nature of the text in that section is incompatible with the specificity of the new EPC-related provisions. Further, Comprehensive Response Actions are not conducted at all disposal sites prior to the achievement of a Permanent Solution. However, MassDEP agrees that sampling considerations should be placed prior to 310 CMR 40.0926 and not within it. In the final regulation, provisions related to sampling decisions have been added to 310 CMR 40.0903 and 40.0904 and the EPC calculation requirements in 310 CMR 40.0926 refer back to that section. Considerations for making sampling decisions and documenting those decisions are described in 310 CMR 40.0903 and 40.0904 in the final regulation.
40.0926(8)(a)1.	ECR	It is suggested that "the contamination" be changed to "the soil contamination" to make it clear that the 2,000-square-foot limit applies to the contaminated soil area and not downgradient plumes. Also "contamination most likely" should be changed to "contamination is most likely."	The 2,000 square foot criterion for identifying sites when the Upper Confidence Limit on the mean is warranted has been eliminated in the final regulation, and the sampling-related provisions have been moved to 310 CMR 40.0903 and 40.0904. 310 CMR 40.0904 provides a list of considerations for deciding where systematic sampling is required, and makes it clear that these apply to soil.
40.0926(8)(a)1.	LSPA	The LSPA believes that exposure point calculations should follow site assessment, and should be grounded in CSM principals (what was released, how, and what pathways are potentially affected) rather than an arbitrary cutoff for release size (i.e., 2,000 square feet). Fate and transport characteristics should govern the risk assessment, rather than a cut-and-dried standard.	MassDEP agrees that exposure point calculations should be grounded in the CSM. However, the sampling approach and calculations must yield results that can be justified and documented as conservative estimates of the mean. MassDEP has observed over time that this has not always been the case. The 2,000 square foot criterion has been eliminated in the final regulation.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(8)(a)1.	LSPA	1.“At disposal sites where the contamination originated from a discrete source and remains localized within an area less than 2,000 square feet, judgmental sampling of locations where OHM contamination most likely to be present shall be acceptable…” The word “soil” should be inserted as follows: “At disposal sites where the **soil** contamination originated from a discrete source…” This section is defining the derivation of soil EPCs. There can be cases where a localized release to soil results in localized soil contamination, but a larger area of low-level groundwater impacts. This proposed addition is to clarify that the area of groundwater impacts should not be used to screen against the 2,000 sq ft requirement for averaging of soil EPCs.	In the final regulation, the criteria for deciding whether systematic sampling is appropriate are provided in 310 CMR 40.0904, and that section clearly indicates that this decision applies to soil. The 2,000 square foot criterion has been eliminated in the final regulation.
40.0926(8)(a)1.	NAIOP	Insert: "...OHM contamination is most likely to be…"	The suggested edit was made.
40.0926(8)(a)1.	OHI Engineering, Inc.	Use of square footage does not necessarily represent the complexity of a site; a simply UST is likely to exceed this size; if MassDEP feels strongly about an area limit, should be increased to 1/4 or 1/2 acre.	MassDEP agrees that the square footage criterion proposed in the public hearing draft is not the best way to distinguish between simple and complex sites. In the final regulation, that criterion has been eliminated.
40.0926(8)(a)1.	OHI Engineering, Inc.	A discussion of "true mean" of the Exposure Point should include the "massive bias" already in the data set. For decades, environmental professionals have collected samples primarily focused on the most impacted areas. UCL calculation will likely result in: increasing EPCs at most sites significantly, increasing costs, stalling closure, decreasing feasbility of remediation and Permanent Solution, increasing needless relocation of soils off-site/to other states, and decreasing green remediation determinations to leave soil in place.	The assertion that focused (judgmental) sampling results in massive data set bias (which would produce EPC estimates well above the actual mean) seems to contradict the statement that systematic sampling and UCL calculations will significantly increase the EPCs. If the previous sampling is truly greatly biased, there should not be a large difference in the result. However, if the judgmental sampling that has been done at a site is based on incomplete or inaccurate information about the distribution of contaminants, it will underestimate actual exposures, and additional work prior to closure may be appropriate.
40.0926(8)(a)2.	CDM Smith	The revisions to 310 CMR 40.0926(8)(a)2 state that a systematic sampling approach shall be used to obtain a representative data set for accessible soils at sites larger than 2,000 square feet. Given the time and expense necessary to collect such data, the effective date for the MCP revisions should be set such that sites that have already completed sampling under a more judgmental approach can reasonably meet the obligations of the MCP prior to the effective date of the revisions.	The 2,000 square foot criterion has been eliminated in the final regulation. Instead, MassDEP has provided descriptive criteria for deciding whether systematic sampling is needed (310 CMR 40.0904). Regarding the suggestion that the effective date should be set so that sites where sampling has been done can still meet the requirements, the final regulations have revised the effective date for these provisions from two months (as proposed in the public hearing draft) to six months from the first publication of the final amendments in the Massachusetts Register.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(8)(a)2.	CDM Smith	The revisions (310 CMR 40.0926(8)(a)2) state that the 90th percentile Chebyshev non-parametric upper confidence limit on the mean may be used as an Exposure Point Concentration in any case, and separately that the 95th percentile parametric upper confidence limit on the mean for a lognormal or gamma distribution may be used if technical justification is provided for the selection of this approach. Provided that sufficient data are collected, and the data are distributed such that either approach may be justified, does MassDEP have a preferred approach, or would it be acceptable for the risk assessor to select either of the two approaches?	In the final regulation, the language regarding identifying an Upper Confidence Limit (UCL) is more general. The Chebyshev UCL is presented as the default method of estimating the mean that is always allowed where systematic sampling has been implemented (310 CMR 40.0926(8)(a)2.). That provision is followed by a provision allowing technical justification for a conservative estimate of the arithmetic mean as an alternative (310 CMR 40.0926(8)(a)2.a.). MassDEP envisions writing guidance that identifies the UCL suggested by ProUCL as a technically justified option. MassDEP also envisions allowing a very large data set size as a technical justification. Professional judgment is appropriate when it is based on factual and logical considerations that constitute a technical justification and those considerations are documented. As a general rule, soil contaminant concentrations are not normally distributed, so a UCL based on a normal distribution should not be used unless that option is suggested by EPA's ProUCL software.
40.0926(8)(a)2.	Haley & Aldrich	Implementation of 40.0926(8)(a)(2)) on sites in active redevelopment that have already notified, assessed, and conducted risk characterizations based on current regulations will be disruptive. By the time the new regulations go into effect, these sites could be in the middle of implementing Release Abatement Measures, cleanups and/or construction based on that risk characterization. Remedial goals established for these sites would have been based on risk characterizations performed under the current regulations; once construction begins, collecting additional data may be impossible. Without collecting more data, a no-conditions site closeout might no longer be possible for some of these sites, which would be very disruptive to development. We suggest that the use of the new risk characterization protocol be optional for sites that notify prior to the publication date. Also see NTR 2. Please clarify whether using the average concentration is acceptable for modeling purposes, i.e. using the average concentration of lead as the Exposure Point Concentration for modeling using the Integrated Exposure Uptake Biokinetic (IEUBK) model, consistent with EPA guidance.	The final regulation does not provide an option to rely on previously completed risk characterization for sites that have not yet reached a Permanent Solution. Doing so would exclude sites from the new requirements and would inconsistent with the intent of ensuring that appropriately conservative EPC estimates are used to support risk characterizations and site closure decisions. To provide for the transition to applying the new provisions, the effective date of the final regulation is six months from the first publication of the final amendments in the Massachusetts Register.
40.0926(8)(a)2.	LSPA	The term Upper Confidence Limit (UCL) has statistical precedent. By requiring UCLs be considered as EPCs, there will be confusion with the acronym since it is identical to the MCP Upper Concentration Limit (UCL). The LSPA urges MassDEP to consider revising the MCP UCL to some other term; perhaps Upper Bound Concentration (UBC) or Upper Contaminant Concentration (UCC)? The MCP "UCL" is not in the statute, so this could be addressed with the current round of MCP changes.	To avoid confusion, all references to Upper Concentration Limits in the regulation have been replaced with Method 3 Ceiling Limits or M3CLs.
40.0926(8)(a)2.	LSPA	Is the "systematic" approach now being considered the default (which will be interpreted as required) at all "complex" sites the same approach required for TSCA Sites? The nature of the sampling plan should be selected based on site-specific considerations, using defensible technical judgment.	The systematic approach should be applied at those sites consistent with the provisions specified at 310 CMR 40.0904(4)(b) in the final MCP revision, but this is not related to the TSCA program and is not limited to sites being managed under TSCA. MassDEP agrees that the nature of the sampling plan should be selected based on site-specific considerations, using defensible technical judgment.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(8)(a)2.	Larry McTiernan	It should be clarified whether “site conditions other than as provided at 310 CMR 40.0926(8)(a)1” includes sites where concentrations don’t meet the criteria at 40.0926(8)(a)1.a or simply means “sites where the contamination did not originate from a discrete source or does not remain localized to <2000 sf.”	The 2,000 square foot criterion for identifying sites where the Upper Confidence Limit on the mean is warranted has been eliminated in the final regulation. 310 CMR 40.0904 of the final regulation provides a list of considerations for deciding whether judgmental sampling is acceptable or systematic sampling is required.
40.0926(8)(a)2.	NAIOP	"2. For site conditions other than as provided at 310 CMR 40.0926(8)(a)1., one of the following two conditions must be met:"... This really only applies to a., doesn’t it? Seems out of place here. **OR** should it be three conditions? Also, suggested language change: b. notwithstanding the preceding section, *(strike "a valid justification for")* an alternative sampling method and/or approach *(strike "shall") may* be *used if valid justification is* provided. Such a justification shall be strongly supported by the site history information, the Conceptual Site Model, and information obtained from prior sampling efforts. *c.* For assessing....."	The Department agrees that the proposed section was unnecessarily complex, and in the final regulation, we have taken the suggested language into account. In the final regulation, if the 90th percentile Chebyshev nonparametric UCL is not used where systematic sampling has been implemented, a justification for the alternative is required, and the justification must demonstrate that the estimate is conservative.
40.0926(8)(a)2.a.ii	LSPA & Vertex	Clarify that the 95th percentile parametric upper confidence limit on the mean can also be used for normal distributions, not just lognormal or gamma.	In the final regulation, the language regarding identifying an Upper Confidence Limit (UCL) is more general. The Chebyshev UCL is presented as the default method of estimating the mean that is always allowed where systematic sampling has been implemented (310 CMR 40.0926(8)(a)2.). That provision is followed by a provision allowing technical justification for a conservative estimate of the arithmetic mean as an alternative (310 CMR 40.0926(8)(a)2.a.). MassDEP envisions writing guidance that identifies the UCL suggested by EPA’s ProUCL statistical software package as a technically justified option. MassDEP also envisions allowing a very large data set size as a technical justification. Professional judgment is appropriate when it is based on factual and logical considerations that constitute a technical justification and those considerations are documented. As a general rule, soil contaminant concentrations are not normally distributed, so a UCL based on a normal distribution should not be used unless it is the option suggested by the ProUCL output.
40.0926(8)(a)2.a.ii	LSPA & Vertex	Recommend/clarify that if both the 90th percentile Chebyshev and the 95th percentile parametric upper confidence limit exceed the maximum detected value, the maximum detected value should be used as the Exposure Point Concentration.	The maximum concentration is not statistically related to the mean, and it should not be used as a soil EPC estimate.
40.0926(8)(a)2.a.ii	LSPA	The maximum should be considered in cases where the 95% UCL is higher than the maximum.	The maximum value of a data set can underestimate the actual mean and is not necessarily a conservative estimate.
40.0926(8)(a)2.a.ii.	OHI Engineering, Inc.	This section should allow for judgment.	In the final regulation, the language regarding identifying an Upper Confidence Limit (UCL) is more general. The Chebyshev UCL is presented as the default method of estimating the mean that is always allowed where systematic sampling has been implemented (310 CMR 40.0926(8)(a)2.). That provision is followed by a provision allowing technical justification for a conservative estimate of the arithmetic mean as an alternative (310 CMR 40.0926(8)(a)2.a.). MassDEP envisions writing guidance that identifies the UCL suggested by EPA’s ProUCL statistical software package as a technically justified option. MassDEP also envisions allowing a very large data set size as a technical justification. Professional judgment is appropriate when it is based on factual and logical considerations that constitute a technical justification and those considerations are documented.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(8)(a)2.a.ii	Wood	Why is the normal distribution excluded from 310 CMR 40.0926(8)(a)2.a.ii? Based on the how ProUCL evaluates and calculates UCLs, there is no fundamental difference between the calculation of a normal UCL and a gamma or lognormal UCL. Suggested revision: ii. The 95th percentile parametric upper confidence limit on the mean for a normal, lognormal, or gamma distribution may be used if a technical justification for the choice of upper confidence limit on the mean is provided.	In the final regulation, the language regarding identifying an Upper Confidence Limit (UCL) is more general. The Chebyshev UCL is presented as the default method of estimating the mean that is always allowed where systematic sampling has been implemented (310 CMR 40.0926(8)(a)2.). That provision is followed by a provision allowing technical justification for a conservative estimate of the arithmetic mean as an alternative (310 CMR 40.0926(8)(a)2.a.). MassDEP envisions writing guidance that identifies the UCL suggested by EPA's ProUCL statistical software package as a technically justified option. The normal distribution-based UCL should only be used when it is recommended by ProUCL.
40.0926(8)(a)2.b.	OHI Engineering, Inc.	This section appears to indicate that a simple average is appropriate for EPCs for ecological receptors and no UCL calculations are required. The regulations should require use of the UCL to evaluate EPCs for ecological receptors where the UCL is used for human receptors.	Wildlife Exposure Point Concentrations (EPCs) should be based on consideration of home ranges, just like residential EPCs are based on lot size. Home ranges differ among species and usually differ from human-scale exposure points. Wildlife receptors of concern at waste sites can have small home ranges that are often characterized by small data sets, and higher levels of uncertainty about wildlife EPCs are accepted for practical reasons. Nevertheless, MassDEP would welcome more rigorous sampling and statistical EPCs for ecological risk assessment where that is practicable.
40.0926(8)(b)	Larry McTiernan	Is the "average" concentration the arithmetic average?	Yes. The provision was revised to read "arithmetic mean concentration of OHM within the Exposure Point…"
40.0926(9)(a)	ECR	The proposed revision is overly conservative in my opinion, and in particular will negatively impact homeowners. Unless many samples are taken, the 95% UCL will not typically be significantly lower than the maximum concentration. Coupled with the uncertainty associated with indoor sources of chemicals, and the potential for household chemicals to be included in APH fractions but not meet the standards for subtraction from those fractions, the proposed revision will likely result in a large number of sites where significantly more resources than necessary are spent to demonstrate that a Condition of No Significant Risk exists. The added inconvenience of additional sampling rounds to homeowners, and the anxiety produced during longer periods of uncertainty over whether their indoor air is safe, are additional negative impacts of this proposed revision.	This provision has been revised, based on comments, to be consistent with MassDEP's Vapor Intrusion Guidance, which allows for the use of a maximum concentration value or conservative estimate of the mean, where appropriate.
40.0926(9)(a)	Haley & Aldrich	The language at 40.0926(9)(a)(1) and (2) is unnecessary; MassDEP's Vapor Intrusion Guidance Document provides detailed information on performance standards for determining nature and extent of Vapor Intrusion as well as for developing Exposure Point Concentrations. We suggest deleting the language at (a)(1) and (2) and retaining only the language at (a).	This provision has been revised, based on comments, to be consistent with MassDEP's Vapor Intrusion Guidance, which allows for the use of a maximum concentration value or conservative estimate of the mean, where appropriate.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(9)(a)2.	LSPA & Vertex	This section contradicts the Vapor Intrusion Guidance: "EPCs that represent a long-term exposure should be based upon multiple rounds of indoor air sampling. Consistent with 310 CMR 40.0926 and MassDEP's Guidance for Disposal Site Risk Characterization, indoor air sample results from a given exposure point may be averaged (over time and location within the Exposure Point) provided there is sufficient data such that the average value is a "conservative estimate of the average concentration contacted by a receptor over the period of exposure." Multiple rounds of consistent and representative data are necessary to support the use of averaging for EPCs. When data is variable or limited, a maximum or 95th upper confidence limit on the mean should be used to develop an EPC as specified in 310 CMR 40.0926(3)(c)."	This provision has been revised, based on comments, to be consistent with MassDEP's Vapor Intrusion Guidance, which allows for the use of a maximum concentration value or conservative estimate of the mean, where appropriate.
40.0926(9)(a)2.	LSPA	2. "When sufficient data are available to characterize the spatial and temporal variability at the Exposure Point, a maximum concentration value or 95 percent upper confidence limit on the mean shall be used to develop Exposure Point Concentration" The LSPA recommends that this section be vetted against the 2016 Vapor Intrusion Guidance (#WSC-16-435), where averaging for indoor air EPCs is explicitly permitted (Sec. 2.3.3.1). Also, there will be many cases where sufficient data will not be generated (i.e., sufficient # of samples to run UCLs) in a timely manner to derive 95 percent UCLs on the mean, considering the need to sample over multiple seasons to fully characterize seasonal temporality. So this proposed regulation is essentially requiring maximum concentrations for the majority of sites.	This provision has been revised, based on comments, to be consistent with MassDEP's Vapor Intrusion Guidance, which allows for the use of a maximum concentration value or conservative estimate of the mean, where appropriate.
40.0926(9)(a)2.	Vertex	ProUCL only works with a sample size of 10 or more. That translates to 10 indoor air sampling rounds per exposure point. The Vapor Intrusion Guidance recommends multiple rounds of indoor air sampling across several seasons in order to address the considerable temporal variability associated with vapor intrusion, resulting, at most, 4 rounds of indoor air sampling prior to site closure. It seems highly unlikely ProUCL will ever be able to be used for indoor air EPCs unless multiple exposure points with similar user exposures can be lumped together.	This provision has been revised, based on comments, to be consistent with MassDEP's Vapor Intrusion Guidance, which allows for the use of a maximum concentration value or conservative estimate of the mean, where appropriate.
40.0926(9)(b)	LSPA	(b) "A robust sub-slab soil vapor dataset and/or conditions may be used to…." The LSPA recommends removing the word "robust", since it is subjective and a bit nebulous. MassDEP VI guidance (#WSC-16-435, Section 2.2.2, Page 20) already specifies MassDEP recommendations for sub-slab soil vapor data set.	The suggested edit was made.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(9)(b)	LSPA	Suggested text: “(b) A robust sub-slab soil vapor dataset and/or conditions may be used to: 1. estimate or aid in the estimation of Exposure Point Concentrations in the event that it is not possible to distinguish disposal site-related contamination at the Exposure Point from interior sources ~~at ongoing commercial and/or industrial operations~~ or interior building materials ~~contaminated by past commercial or industrial operations~~;” There may be situations where indoor air in residences is impacted by building materials or other interior sources that are not disposal site-related or by past operations such as former mill buildings which have been converted to residences. In these situations sub-slab soil vapor data may be more representative for EPC calculation; therefore, this provision should not be limited to commercial and industrial buildings.	The suggested edit was not made. MassDEP believes the clause "or interior building materials contaminated by past commerical or industrial operations" covers the scenario of a former mill building converted to residential use.
40.0926(10)(b)	Larry McTiernan	What is a spatial arithmetic average? Is that just another way of saying the arithmetic average within the exposure point?	Yes, the term "spatial arithmetic average" was intended to have the same meaning as arithmetic average within the exposure point. To clarify, the final regulation reads, "...the arithmetic mean concentration within each Exposure Point."
40.0926(12)	LSPA	The LSPA requests clarification as there are some “wastes” that will not be treated as a solid when analyzed, and therefore will not be quantified for comparison to the concentration units appropriate for soil. Is MassDEP suggesting that all concentrations be quantified on a mass per unit mass basis for this determination? Clarify please. The wastes of concern could include MGP waste tar in the form of LNAPLs and DNAPLs, waste oils, possibly some forms of plating waste sludges and, depending on the definition of “waste,” released petroleum LNAPLs. All of these have a specific gravity different from 1.0 g/cc. It is also very likely that if the quantification is done for a waste that could be appropriately quantified as a soil, one component of that waste will have a conservative average concentration exceeding a UCL for soil, for example naphthalene.	To address exposures to waste, the final regulation focuses only on coal tar, the waste type that is MassDEP's main concern. The final regulation no longer includes (as proposed in the public hearing draft) “areas of waste disposal" in either the Hot Spot definition or Hot Spot EPC provision at 310 40.0926(12). Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively. The provision at 310 CMR 40.0926(8)(a)3. provides for a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar.
40.0926(12)	Wes Stimpson	I do not believe this will work. There are some “wastes” that will not be treated as a solid when analyzed, and therefor will not be quantified for comparison to the concentration units appropriate for soil. Are you suggesting that all concentrations be quantified on a mass per unit mass basis for this determination? Clarify please. The wastes of concern could include MGP waste tar in the form of LNAPLs and DNAPLs, waste oils, possibly some forms of plating waste sludges and, depending on the definition of “waste”, released petroleum LNAPLs. All of this have a specific gravity different from 1.0 g/cc. It is also very likely that if the quantification is done a waste that could be appropriately quantified as a soil, one component of that waste will have a conservative average concentration exceeding a UCL for soil, for example Naphthalene.	To address exposures to waste, the final regulation focuses only on coal tar, the waste type that is MassDEP's main concern. The final regulation no longer includes (as proposed in the public hearing draft) “areas of waste disposal" in either the Hot Spot definition or Hot Spot EPC provision at 310 40.0926(12). Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively. The provision at 310 CMR 40.0926(8)(a)3. provides for a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar.
40.0926(12)(a)	Haley & Aldrich	Please provide a note to reviewer regarding the intent of this addition. This will assist Licensed Site Professionals in remaining in compliance.	The intent of the proposed and final text is to ensure that the assessment adequately characterizes the boundaries of area that comprises a Hot Spot or potential Hot Spot to be addressed as a separate Exposure Point.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0926(12)(b)	LSPA	(b) “Where a Hot Spot is comprised in whole or in part of waste material, including Manufactured Gas Plant Waste, the concentrations of oil and/or hazardous material within the waste shall be considered the concentration of the OHM in soil.” The end of this regulation should be changed from “in soil” to “in waste material.” The perceived intent of this proposed language is to make sure OHM within waste material is being characterized via analytical sampling, separate from soil sampling, because the waste material exists as a discrete deposit from the soil matrix. Characterizing OHM in soil has a well-established process, and characterizing OHM in soil should be based on soil sampling, just as characterizing OHM in waste material should be based on waste material sampling. Also see proposed language in 40.0996(2), where it is clearer that concentrations in waste material are meant to characterize waste material, not soil. Proposed language: (b) “Where a Hot Spot is comprised in whole or in part of waste material, including Manufactured Gas Plant Waste, the concentrations of oil and/or hazardous material within the waste shall be considered the concentration of the OHM in waste material.”	The provision at 310 CMR 40.0926(b) no refers only to Hot Spots. The definition of "Hot Spot" no longer includes "areas of waste disposal," including Manufactured Gas Plant Waste.
40.0926(12)(b)	OHI Engineering, Inc.	See comments on MGP Waste. Including this specific language in the presented manner will create confusion as to what is or is not waste, where the "waste" begins and ends, and, for instance, when NAPL guidance applies.	To address exposures to waste, the final regulation focuses only on coal tar, the waste type that is MassDEP's main concern. The final regulation no longer includes (as proposed in the public hearing draft) “areas of waste disposal" in either the Hot Spot definition or Hot Spot EPC provision at 310 40.0926(12). Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively. The provision at 310 CMR 40.0926(8)(a)3. provides for a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar.
40.0926(12)(c)	LSPA	We support allowing averaging within a Hot Spot if less than 2,000 square feet, since often Hot Spots are more localized and may not warrant enough data to generate Upper Confidence Limit.	The final regulation allows for use of an arithmetic mean concentration within the Hot Spot area.
40.0926(12)(c)	NAIOP	Delete "...based on a robust data set or composite or incremental samples, as described for soil in 310 CMR 40.0926(8) and sediment at 310 CMR 40.0926(10)." This requirement has already been addressed.	The suggested revision was made.
40.0932(4): Identification of Applicable Groundwater Categories	OHI Engineering, Inc.	We request that MassDEP review its regulations regarding Potential Drinking Water Source Areas relative to including areas more that 500 feet from a public water distribution main. Currently all areas that meet this criteria are included, even when other factors preclude installation of a public water supply well. The current regulation unfairly penalizes rural, minimally developed areas.	MassDEP believes it is appropriate to consider areas distant from public water supply distribution lines as areas that rely upon private wells. In the event that future development results in the extension of public water supply distribution lines into such an area, the groundwater would no longer be categorized as a Potential Drinking Water Source Area on the basis of that criterion.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0955(2)	GZA	ELIMINATION OF ROUNDING FOR IMMINENT HAZARD EVALUATIONS The change to 310 CMR 40.0955(2) effectively rules out the established practice of rounding estimates of Imminent Hazard risk for comparison to Hazard Indices (HIs) and Excess Lifetime Cancer Risks (ELCRs) to one significant figure. Currently, a calculated ELCR of 1.1 would be considered equal to the criterion (for a significant group of compounds which MassDEP categorizes as having the "potential to cause serious effects") and would not constitute an IH. GZA believes that rounding to one significant digit is an appropriate method given the uncertainty inherent in risk estimates and the multiple layers of conservative assumptions that are incorporated into the risk assessment process. Under the proposed changes a calculated HI of 1.0 would represent an IH for the relevant group of compounds. In our opinion, this represents an overly conservative approach.	The proposed regulation does not change MassDEP's approach to rounding calculated Exposure Point Concentrations to an appropriate number of significant figures. The Department has published a Technical Update on this topic (https://www.mass.gov/doc/technical-update-expressing-the-precision-of-exposure-point-concentrations-and-risk-estimates/download). MassDEP agrees that there are numerous factors that contribute to uncertainty in the estimated Exposure Point Concentration used to evaluate Imminent Hazards. However, this uncertainty should not be justification for inaction and rounding in consideration of such uncertainty should not eliminate the need for an Immediate Response Action. The opposite is true: if site conditions potentially pose an Imminent Hazard but a definitive answer is not currently possible because of uncertainty, then immediate action is warranted to either reduce that uncertainty or eliminate/mitigate the exposure of concern. The MCP requires that site cleanup decisions be made in a manner that is protective of public health and the environment. The proposed revision eliminates a bias towards inaction that is not health protective. The final regulations implement the change, as proposed.
40.0955(2)	National Grid	We believe that rounding to one significant digit is an appropriate method given the uncertainty inherent in risk estimates and the multiple layers of conservative assumptions that are incorporated into the risk assessment process. Under the proposed changes a calculated Hazard Index of 1.0 would represent an Imminent Hazard for the relevant group of compounds. In our opinion, this represents an overly conservative approach. As case in point, an indoor air evaluation performed at a residence adjacent to a portion of an MGP site yielded Hazard Indices of approximately 1.0 to 1.3. Rounding these values to a single significant figure indicated that an Imminent Hazard was not present at this residence. Under the proposed revisions, the indoor air data would have led to a conclusion that an Imminent Hazard was present, which would have substantially complicated the response actions and needlessly alarmed the residents. Based on further assessment and forensic studies, we concluded that the indoor air concentrations were not related to the MGP site and did not pose a significant risk to the residents. With this information, we were able to close the IRA for this portion of the site. If the initial evaluation had concluded an Imminent Hazard was present (consistent with the proposed revisions), this would have been a more complex and lengthy process and closure may not have been possible. We understand that conservatism is important when dealing with potential Imminent Hazard conditions, but this change provides more conservatism that warranted and may lead to further complications with property owners.	The proposed regulation does not change MassDEP's approach to rounding calculated Exposure Point Concentrations to an appropriate number of significant figures. The Department has published guidance on this topic (https://www.mass.gov/doc/technical-update-expressing-the-precision-of-exposure-point-concentrations-and-risk-estimates/download). MassDEP agrees that there are numerous factors that contribute to uncertainty in the estimated Exposure Point Concentration used to evaluate Imminent Hazards. However, this uncertainty should not be justification for inaction and rounding in consideration of such uncertainty should not eliminate the need for an Immediate Response Action. The opposite is true: if site conditions potentially pose an Imminent Hazard but a definitive answer is not currently possible because of uncertainty, then immediate action is warranted to either reduce that uncertainty or eliminate/mitigate the exposure of concern. The MCP requires that site cleanup decisions be made in a manner that is protective of public health and the environment. The proposed revision eliminates a bias towards inaction that is not health protective. The final regulations implement the change, as proposed.
40.0955(2)(b)&(c)	NAIOP	Delete "…equal to or…|" in both.	The MCP requires that site cleanup decisions be made in a manner that is protective of public health and the environment. The proposed revision eliminates a bias towards inaction that is not health protective. The final regulations implement the change, as proposed.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0955(2)(b)&(c)	Wood	Per the Note to Reviewers, the motivation behind this change is understood; however, I would note that it sets a precedent which is inconsistent with how the MCP has been used for more than 25 years, which is that calculated risks and hazards have been evaluated using one significant figure. As such, the cancer risk limit and the non-cancer hazard index limit in 40.0955(2)(c)1 would be more conservative than the risk limits that are applied for all other risk calculations in the MCP. For example, using the current iteration of the Residential Soil Imminent Hazard Shortform, this change would mean that the lead concentration that would pose a potential imminent hazard would decrease from 315 mg/kg to 210 mg/kg, which is scarcely more than the Method 1 Standards that are intended to be protective of any exposure scenario and any soil depth. Does the Department wish to suggest that there are only two alternatives for lead in surface soil at a residence – acceptable or potentially immediately dangerous?	Guidance on Imminent Hazards for lead in soil is in progress. MassDEP anticipates inserting the Imminent Hazard concentration for lead in soil into the Shortform, in which case the calculated IH value would not apply.
40.0955(2)(b)&(c)	Wood	It should also be noted that in practice, 310 CMR 40.0955(2)(c) is used generally to apply to lead and cyanide and is not used for other chemicals. To make this section more effective, it would be better to list the exact OHM that should be considered rather than rely on MCP practitioners to make their own determinations as to what constitutes a “serious effect…following short-term exposures.”	This suggested change to 310 CMR 40.0955(2)(c) is outside the scope of the proposed changes in the public hearing draft. Guidance on Imminent Hazards for lead in soil is in progress. MassDEP anticipates inserting the Imminent Hazard concentration for lead in soil into the Shortform, in which case the calculated IH value would not apply.

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40.0955(2)(b)&(c)	Wood	Another stated goal in their note to reviewers is the intent is to “eliminate the regulatory ambiguity created by the use of information with limited precision (1 significant figure).” However, this section (nor the MCP in general) does not state that risks should be evaluated using one significant figure, so in practice this is primarily a convention. As such, it may still be unclear to a practitioner what “equal to or greater than” means in the application of the revised sections 40.0955(2)(b) and (c). It appears that the Department intends to state that anything up to an HI of 0.99999 etc. or 9.9999 etc. would not be considered a potential Imminent Hazard. But, if a single significant figure is used, then in practice this would mean the limits would actually be 0.94999 etc. or 9.4999 etc. To further clarify this section, I make the following suggestions: 1. 310 CMR 40.0955(2)(c)1 be amended to specifically reference the chemicals and routes of exposure that merit a comparison to the Hazard Index limit of 1. 2. The word “unrounded” be added to sections (b) and (c), as follows: (b) The conditions at the disposal site pose an Imminent Hazard based upon the potential for carcinogenic health effects if, for the oil and/or hazardous material evaluated and for each receptor, the unrounded estimated Excess Lifetime Cancer Risk is equal to or greater than a cancer risk limit which is an Excess Lifetime Cancer Risk equal to one-in-100,000. (c) The conditions at the disposal site pose an Imminent Hazard based upon the potential for non-cancer health effects if, for the oil and/or hazardous material evaluated and for each receptor, the unrounded non-cancer risk calculated is equal to or greater than a non-cancer risk limit of: 1. an unrounded Hazard Index (or equivalent ratio of exposure) equal to one for oil or hazardous materials that have the potential to cause serious effects (including but not limited to lethal, developmental, or neurological effects) following short-term exposures, for example lead or cyanide; and 2. an unrounded Hazard Index equal to ten for all other oil or hazardous materials.	Inserting the word "unrounded" would require the use of unrounded EPCs. MassDEP has received significant comments on this public hearing draft and previously on the issue of rounding values to one significant figure. The Department has published guidance on this topic (https://www.mass.gov/doc/technical-update-expressing-the-precision-of-exposure-point-concentrations-and-risk-estimates/download) that clearly allows for the use of unrounded values.
40.0974: Identification of Applicable Groundwater Standards in Method 1	OHI Engineering, Inc.	With respect to PFAS and emerging contaminants in general, additional guidance from MassDEP in the form of guidance documents and technical updates would be helpful directing the regulated community toward when to look for these compounds.	MassDEP agrees that such guidance on when to sample is important and has published guidance on when to look for PFAS which may be found here: https://www.mass.gov/doc/interim-guidance-on-sampling-and-analysis-for-pfas-at-disposal-sites-regulated-under-the/download .
40.0974	Vertex	Note to Reviewer references EPA's Exposure Factors Handbook 2011 being the most up-to-date. The latest edition of the Exposure Factors Handbook was released in 2011, but since October 2017, EPA has begun to release chapter updates individually. This new process allows risk assessors to get the latest information as new data becomes available. Chapter 3: Ingestion of Water and Other Select Liquids was updated in February 2019. Chapter 5: Soil and Dust Ingestion was updated in October 2017. Chapter 9: Intake of Fruits and Vegetables was updated in August 2018.	Skin surface area and the body weight are the only exposure factors routinely used in MCP risk assessments that are based on the Exposure Factors Handbook (EFH). Those factors are not published in the EFH as ready-to-use, age-specific, yearly average values. As a consequence, MassDEP does not envision a major role for EFH chapter updates in MCP risk assessments.
40.0975: Method 1 Soil Standards	NEH	We agree with MassDEP in raising the Vanadium Method 1 & 2 Soil standards based on background levels and toxicity inputs.	MassDEP appreciates this support.

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Note to Reviewers #65	LSPA	This references EPA's Exposure Factors Handbook 2011 as being the most up-to-date. We recommend that MassDEP recognize that LSPs may choose to use EPA's chapter updates that allow risk assessors to have the latest information as new data becomes available. For example, Chapter 3: Ingestion of Water and Other Select Liquids was updated in February 2019. Chapter 5: Soil and Dust Ingestion was updated in October 2017. Chapter 9: Intake of Fruits and Vegetables was updated in August 2018.	Skin surface area and the body weight are the only exposure factors routinely used in MCP risk assessments that are based on the Exposure Factors Handbook (EFH). Those factors are not published in the EFH as ready-to-use, age-specific, yearly average values. As a consequence, MassDEP does not envision a major role for EFH chapter updates in MCP risk assessments.
40.0974(2)	Weston & Sampson	How will revised standards be interpreted for closed sites? Will there be retroactive reopening of closed sites? Will there be a streamlined process to close sites where the new standards are less stringent?	The MCP standards have been revised several times since the new (1993) MCP was published. Consistent with past practice, when MassDEP becomes aware of changes in toxicity or exposure that indicate the potential for Imminent Hazards at sites where Permanent Solution Statements have been submitted, it acts to review those conditions.
Incremental Sampling Methodology	Weston & Sampson	I would like to see some guidance on the Incremental Sampling Methodology process. What is MassDEP's expectation for its application at sites?	MassDEP intends to publish guidance on sampling for risk assessment purposes in a section of the revised risk assessment guidance, including guidance on ISM sampling plans.
40.0995(3)(b)1.c.	NAIOP	The readily apparent harm definition does not need to be expanded to specify "MGP Waste." MGP Wastes include materials such as clinker and carbon black that are relatively inert and have relatively low contaminant concentrations. The current definition of readily apparent harm already appropriately identifies the wastes common to MGP sites, tar and oil, that may pose readily apparent harm to ecological receptors. Delete "Manufactured Gas Plant Waste" from 40.0955(3)(b)1.c.	The final regulation focuses on coal tar rather than MGP waste; the existing Stage I Environmental Screening provisions already identify the visible presence of "tar" as a condition of readily apparent harm, which is sufficient to address coal tar in this context.

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40.0995(3)(b)	National Grid	The addition of MGP waste to the readily apparent harm definition is unwarranted. As indicated previously, the MGP Waste definition is very broad and includes materials, such as ash and clinker, that are relatively inert and have relatively low contaminant concentrations and would not warrant a condition that is “readily apparent”. The current definition of readily apparent harm already appropriately identifies the wastes common to MGP sites, oil and tar, that may pose harm to ecological receptors. The other MGP by-product that frequently exhibits elevated contaminants of concern at MGP sites is purifier wastes. These purifier wastes typically include tars and cyanide compounds. However, the tar present in these types of wastes are already included in the readily apparent harm definition. Furthermore, the visible presence of cyanide compounds (i.e., the blue-staining typically associated with these wastes) is not an accurate estimation of the toxicity of these compounds. The blue staining on soil and rocks occurs as a result of photooxidation of ferric-ferro-cyanide complexes, which are chemically stable forms of cyanide and is not a source of significant human health or ecological risk. In fact, these compounds are used in various cosmetics. The Department acknowledged the difference in toxicity of various cyanide compounds when it specified physiologically available cyanide (PAC) as the appropriate test for evaluating potential human health risk. Somewhat similarly, free cyanide is the appropriate test for potential ecological exposure to cyanide in surface water and groundwater. As a result, it is our opinion that analytical testing for cyanide compounds is the appropriate method for evaluating potential ecological risks and relying on the visible presence (i.e., blue-staining) of cyanide complexes is not an accurate indicator of toxicity to ecological receptors.	The final regulation focuses on coal tar rather than MGP waste; the existing Stage I Environmental Screening provisions already identify the visible presence of "tar" as a condition of readily apparent harm, which is sufficient to address coal tar in this context.
40.0995(3)(b)1.c. Stage I Environmental Screening	OHI Engineering, Inc.	Note "Manufacture" should be "Manufactured"	No edit was necessary since the final regulation focuses on coal tar rather than MGP waste; the existing Stage I Environmental Screening provisions already identify the visible presence of "tar" as a condition of readily apparent harm, which is sufficient to address coal tar in this context.
40.0996	LSPA & Wes Stimpson	It is very likely that the average concentration for some component of the waste will exceed a listed UCL, if the proposed approach is used. Based on the solutions employed for response actions at MGP waste sites to date, it is very unlikely that a technology, other than complete removal of all wastes or in-situ stabilization, will result in removal of UCL exceedances, and thus eliminate the future risk to Public Welfare and the Environment. Often it is not economically or logistically possible to implement these solutions. Given the very difficult and costly requirements to employ an Engineered Barrier for a Permanent Solution where UCLs are exceeded, this solution is also generally not feasible. This means that the proposed approach could result in very complex sites being forced into Temporary Solutions - not an ideal outcome.	The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially, so a definition of "waste" is no longer needed. In the final regulation, "areas of waste disposal", including coal tar deposits, are not included in the Hot Spot definition. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)(3). This provision would allow a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risks from coal tar. In the final regulation, coal tar is not included in the Method 3 Ceiling Limit section at 310 CMR 40.0996. Instead it is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).
40.0996(2): Method 3 Upper Concentration Limits	Haley & Aldrich	A new term is needed for "Upper Concentration Limit" to avoid confusion with “Upper Confidence Level”. We offer the following replacements for your consideration: “Concentration Limitation”, “Concentration Limit”, and “Concentration Limit Exceedance.”	To avoid acronym confusion between "upper confidence limit on the mean" and "Upper Concentration Limit," the final amendments replace "Upper Concentration Limit" and "UCL" with "Method 3 Ceiling Limits" and "M3CL," respectively throughout the MCP.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0996(2)	LSPA	Suggest deleting the highlighted language for clarity: Characterization of risk of harm to public welfare and the environment shall in all cases include, but not necessarily be limited to, comparison of concentrations of oil and/or hazardous material in soil and groundwater at the disposal site with Upper Concentration Limits, which are listed in 310 CMR 40.0996(8) or identified pursuant to 310 CMR 40.0996(9). ***Concentrations oil and/or hazardous material listed*** *as* Soil Upper Concentration Limits at 310 CMR 40.0996(8) shall be considered applicable Upper Concentration Limits for concentrations of oil and/or hazardous material detected within waste material, including Manufactured Gas Plant Waste, itself.	The suggested deletion was made.
40.0996(2)	LSPA & Vertex	Is petroleum released to the environment considered "waste material deposited at a disposal site, including Manufactured Gas Plant Wastes"? If these petroleum releases need to be compared to UCLs separately, concentrations will likely exceed the UCL.	The final regulation does not retain this text. It was not MassDEP's original intent with the proposed language to have it apply to petroleum product/NAPL.
40.0996(2)	NAIOP	Suggest deletion of: *"Concentrations of oil and/or hazardous material listed as Soil Upper Concentration Limits at 310 CMR 40.0996(8) shall be considered applicable Upper Concentration Limits for concentrations of oil and/or hazardous material detected within waste material, including Manufactured Gas Plant Waste, itself."* Formatting edits also necessary in this section (indentation, justification and numbering).	The suggested deletion and formatting changes were made.

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40.0996(2) Note 69	NAIOP	The last sentence of the proposed 40.0996(2) specifies that “Concentrations of oil and/or hazardous material listed as Soil Upper Concentration Limits at 310 CMR 40.0996(8) shall be considered applicable Upper Concentration Limits for concentrations of oil and/or hazardous material detected within waste material, including Manufactured Gas Plant Waste, itself.” NAIOP recommends that this language be removed from the amendments because unintended consequences may result from this change. The UCLs are specified in the MCP as concentrations of OHM in soil and groundwater samples. The proposed new language appears to say that samples of all waste material must be compared to UCLs, and response actions taken accordingly. As written, this would imply that samples should be collected of oil, gasoline, and solid wastes that may be present in the subsurface and the results compared to UCLs. Based on this definition, NAPL would appear to be considered a “waste material” with the same exposure potential as a seep of tar in an excavation. This is inconsistent with previous amendments to the MCP that have established criteria for sites containing NAPL with microscale mobility to be able to achieve a Permanent Solution with Conditions and AUL. However, a site with NAPL microscale mobility could still produce a seep in the sidewall of a test pit or excavation; based on the proposed change, the NAPL would need to be tested and the results compared to UCLs. If the sample results exceed UCLs, then complete removal of NAPL or construction of an engineered barrier would be required, which is not consistent with the recently established criteria for achieving closure at NAPL sites. This proposed language would also be inconsistent with established closure practices for disposal sites containing other waste materials such as chrome-plated auto parts or leaded ceramic or glass. For example, if the glass and ceramic were to be sampled and submitted to an analytical laboratory, they would very likely exceed UCLs for lead. Removal of all ceramic and glass (which is impractical) or construction of an engineered barrier would be required, even if a condition of No Significant Risk had been established for soil and groundwater at the site. This proposed change also affects the language of the MCP regarding readily apparent harm. The current definition of readily apparent harm includes: “Visible presence of oil, tar, or other non-aqueous phase hazardous material in soil within three feet of the ground surface over an area equal to or greater than two acres, or over an area equal to or greater than 1,000 square feet in sediment within one foot of the sediment surface.” If the new changes to the UCL language are made, this condition will no longer be applicable, since any visible oil or tar, if sampled, would likely exceed UCLs and require remedy regardless of depth or extent. To address potential exposures to MGP wastes that may not necessarily be evaluated as part of typical soil and groundwater sampling (e.g., solid and semi-solid tar not incorporated into the soil matrix), we recommend that the definition of readily apparent harm be modified in the MCP for environmental risk characterization, and that a similar condition be added to 40.0993 for Method 3 human health risk characterization. This approach is appropriate because: a. The condition of readily apparent harm is currently written to address oil or tar, so the modification of the language will be simpler; b. Remedies to address a readily apparent harm condition may include removal of the material or the construction of a direct contact barrier, which is more appropriate than an engineered barrier; c. The change can be focused on tar rather than on the unnecessarily broad and poorly-defined term “MGP Waste,” which includes many materials that are often inert and have relatively low contaminant concentrations.	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar. The text in the public hearing draft referring to “areas of waste disposal" in the Hot Spot definition, and the Hot Spot EPC provision related to waste material at 310 40.0926(12) have been deleted. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). In the final regulation, the Method 3 Ceiling Limits at 310 CMR 40.0996 would not apply to coal tar. Instead coal tar is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions for achieving No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).

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40.0996(2)	National Grid	The proposed new language appears to say that samples of all waste material must be compared to UCLs, and response actions taken accordingly. As written, this would imply that samples should be collected of any waste including oil, gasoline, solid wastes, etc. that may be present in the subsurface and the results compared to UCLs. We assume that any NAPL would also be considered a “waste material” under this proposed change and need to be compared to UCLs. If this wording is correct, all recent changes to the MCP regarding NAPL would be moot since all NAPLs would likely exceed UCLs requiring all sites with any NAPLs to be remediated so that no NAPLs are present in the subsurface or sites would not reach a Permanent Solution. This would seem to reverse the significant progress that the Department made in identifying a path to regulatory closure using an AUL for sites with NAPL. Another example would be a disposal site that contained ceramic or glass. These materials historically contained lead and other metals at very high concentrations. If the glass and ceramic were to be sampled and submitted to an analytical laboratory, they would very likely exceed UCLs for lead. As written, the proposed change to 40.0996 would require that a sample of the waste (in this case the ceramic or glass) be collected, submitted for laboratory analysis, and compared to UCLs. Other examples of waste that may exceed UCLs include rubber tires, painted wood or other painted materials, chrome-plated auto parts, plastics, and stainless steel. We believe that the wording should be clarified. If the Department’s intent is that concentrations of discrete areas or layers of waste materials where a separate exposure point is derived be compared to UCLs derived for soil, why not require any solid media exposure points be compared to the soil UCLs?	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar, as that type of waste was MassDEP's main concern initially, so a definition of "waste" is no longer needed. However, it was never MassDEP's intention to include petroleum NAPLs in the proposed waste provisions. Regarding Upper Concentration Limits and waste, Upper Concentration Limits would not apply to coal tar in the final regulation (310 CMR 40.0996). Instead coal tar is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions under which a condition of No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).
40.0996(2)	OHI Engineering, Inc.	The inclusion of waste material in the definition leaves too much to interpretation. This concern exists even with the addition of the MGP Waste definition. The soil around former MGP plants has been reworked to scatter impacts and "EPCs accounting for this disparity are more appropriate." The existing language of the Hot Spot definition, "such as the presences of discoloration, odors or a defined source area" already provides MassDEP with the opportunity to require these areas be treated as hot spots. "The MCP should be based on Risk and not loosely defined terminology."	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar. The text in the public hearing draft referring to “areas of waste disposal" in the Hot Spot definition, and the Hot Spot EPC provision related to waste material at 310 40.0926(12) have been deleted. Instead, to ensure that exposures to visible coal tar are assessed, coal tar deposits are now designated as Exposure Points that may be assessed qualitatively (310 CMR 40.0926(8)(a)3.). This provision allows a qualitative assessment of risk where visible coal tar is present, avoiding the need to chemically analyze and quantify the risk from coal tar.

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40.0996 & 40.1003(7)	Jack Jemsek	Within the proposed MCP revision, it would be helpful to clarify that application of Upper Concentration Limits (UCL) restrictions in instances where the UCLs in soil or groundwater are a result of the presence of NAPL with Micro-scale Mobility. LNAPL that has Micro-scale Mobility or is residual LNAPL can easily exceed the default 5,000 to 20,000 parts per million UCL for VPH and EPH fractions in soil and 100,000 parts per billion UCL in groundwater. Previously, the 2014 MCP eliminated the ½-inch UCL for NAPL, but the MCP would benefit from clarification of UCLs in soil or groundwater versus NAPL that meets the provisions cited in 40.1003(7). This may be handled by including *"or is associated with NAPL that meets the requirements of 40.1003(7)"* in 40.0996(4)(d). Also adding *"or is associated with NAPL that meets the requirements of 40.1003(7)"* in paragraphs 40.1040(2)(b) and 40.1041(2)(b), where "or soil is greater than 15 feet" and "or soil beneath an engineered barrier" are referenced. In discussions with MassDEP representatives, it is understood that the NAPL provisions make certain UCL restrictions moot, but the above changes would document that NAPL with Micro-scale Mobility is exempt from certain UCL conditions such as requiring an engineered barrier, which would be inconsistent with the intent of the NAPL provisions within the 2014 MCP and the LNAPL Guidance (WSC-16-450).	Neither the 2014 MCP amendments nor the 2016 LNAPL Guidance exempt NAPL sites from UCLs (now M3CLs) requirements. The NAPL criteria were designed to address concerns over the bulk movement of NAPL, leaving in place all other site cleanup requirements, including M3CLs and source elimination or control. M3CLs address long-term risks to public welfare and the environment.
40.0996(4)	MassDOT	40.0996 Method 3 Upper Concentration Limits "(4) Except as provided in 310 CMR 40.0996(6), a level of No Significant Risk of harm to public welfare and to the environment does not exist for future conditions if the concentrations of one or more oil and/or hazardous material exceeds an applicable Upper Concentration Limit, as described at 310 CMR 40.0996(3)..." Should this also reference 40.0996(5), which discusses UCLs for petroleum hydrocarbons? Suggest adding reference to 40.0996(5) or clarifying why it is not necessary.	The suggested edit was made for greater clarity. It was arguably not necessary since paragraph (5) addresses a scenario where TPH is ultimately determined to not exceed the M3CL.
40.0996(4) & 40.0006(12) Hot Spot	Weston & Sampson	The inclusion of waste in the definition a hot spot and which is subject to UCLs is a little vague. How is the waste defined? Would a layer of ash, or coal, or spent carbon products, count? What about discontinuous pockets in a layered system (very common in historic/urban fill)?	MassDEP agrees that "waste" and "areas of waste disposal" were not clearly defined in the public hearing draft. The final regulation focuses only on coal tar. The text in the public hearing draft referring to "areas of waste disposal" in the Hot Spot definition, and the Hot Spot EPC provision related to waste material at 310 40.0926(12) have been deleted. However, it was never MassDEP's intention to include petroleum NAPLs in the proposed waste provisions. Regarding the Method 3 Ceiling Limits (M3CLs) and waste, in the final regulation the M3CLs at 310 CMR 40.0996 would not apply to coal tar. Instead coal tar is addressed in a new section (310 CMR 40.0997), which focuses solely on coal tar as a risk of harm to public welfare and to the environment, and clarifies conditions under which a condition of No Significant Risk for current conditions (basis for a Temporary Solution) or both current and future conditions (basis for a Permanent Solution).
40.0996(7)(a)3.	NEH	We recommend that climate change impacts be considered in use/maintenance of an Engineered Barrier that could be negatively impacted by climate change. Recommend adding in (7) (a) An Engineered Barrier shall: (3)"…migration of contaminants, including consideration of the foreseeable future impacts of climate change."	MassDEP did not make this suggested change. At this point in time we believe more detail on implementing climate change provisions should be left to guidance. We recognize that climate change impacts may be of particular concern at some disposal sites with Engineered Barriers. There are, however, existing MCP requirements in place to maintain No Significant Risk and maintain the integrity of the Engineered Barrier as an obligations and conditions of the required AUL.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0996(7)(a)7. & 40.0996(7)(c)	Worcester Reg Transit Auth (WRTA)	The WRTA urges MassDEP to expand the proposed allowance of alternative financial assurance mechanisms (for Engineered Barriers) to include regional entities, as well as municipalities, and not limit such allowance to "any state agency or state authority" as currently proposed. Regional entities and municipalities are similarly situated as state agencies and authorities, as they are both supported through state and federal funding, and both have the same difficulties in the implementation of the types of financial assurance mechanisms available in the private sector. The distinction between state agencies and authorities and regional or municipal entities through the limitation in this allowance creates an unnecessary burden upon regional and municipal entities without any apparent basis.	The Department considers regional transit authorities created pursuant to the provisions of M.G.L. .c. 161B to be "state authorities" for the purposes of 310 CMR 40.0996(7)(c)(1), and therefore entitled to the benefits of that provision regarding the use of alternate agreements between such authorities and the Department as financial assurance mechanisms. Additionally, the provision was revised to allow for the use of agreements executed with the Department with municipalities, in addition to state agencies and authorities.
40.0996(7)(c)	GZA	ENGINEERED BARRIER FINANCIAL ASSURANCE MECHANISMS The proposed regulation revision at 310 CMR 40.0996(7)(c) (formerly 40.0996(5)) allows for alternate financial assurance mechanisms for Engineered Barriers (EBs) for state agencies and authorities. The alternate approach could consist of an agreement executed between MassDEP and the agency/authority that documents a maintenance commitment. We believe that this alternate arrangement should be expanded to other entities in certain circumstances in place of the rigorous approach outlined in 310 CMR 30.0996. Depending upon actual site conditions, the design details of the EB, and the nature of the PRP, the maintenance agreement could be adequate to address the intent of the EB financial assurance requirements. In GZA's opinion, EBs do not necessarily warrant surety bonds or insurance products to guarantee appropriate monitoring and maintenance.	The provision was amended to allow for the use of agreements executed with the Department with municipalities, in addition to state agencies and authorities. The funding mechanisms available to state agencies, state authorities and municipalities make such agreements with the Department workable and practical. FAM options for other entities include those listed in 310 CMR 30.906; in addition to surety bonds and insurance products, post-closure letters of credit or trusts are among the FAM options.
40.0996(7)(d)	LSPA	References are missing 0's: Pursuant to 310 CMR 40.0414(7), 310 CMR 40.**0**442(4), and 310 CMR 40.**0**859(4).	The edits were made.
40.1005: Defining "Foreseeable Period of Time" for Purposes of a Permanent Solution	Haley & Aldrich	Please further define "foreseeable future"; provide timeline and/or policy.	MassDEP is working on developing guidance on this issue. Additionally, the LSPA is developing a toolkit related to the climate change provisions.
40.1005: Defining "Foreseeable Period of Time" for Purposes of a Permanent Solution	LSPA	The LSPA agrees that the impacts of climate change will increasingly need to be taken into account, especially regarding remedial alternatives. Site impacts as a result of climate change will vary depending on a variety of factors. The proposed language is sufficiently general to be interpreted in a variety of ways. The LSPA encourages MassDEP to engage in workgroup discussions with stakeholders to develop guidance on this topic. This might include which MA state studies and websites to rely on, how differences in characteristics of compounds might be taken into account, and approaches for demonstrating that appropriate levels of consideration have been achieved.	MassDEP is working on developing guidance on this issue and supports the LSPA's efforts in developing a toolkit related to the climate change provisions that includes case studies and other materials.

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40.1005	OHI Engineering, Inc.	Given the wide variation in anticipated impacts associate with climate change, we recommend against the proposed change.	The references that were proposed in the public hearing draft and included in the final regulations to guidance reference currrent forecasts/resources vetted by the Executive Office of Energy and Environmental Affairs and use of up-to-date models at 310 CMR 40.0191 (2)(a) and (b), respectively.
40.1005(1)	NAIOP	Add proposed language: "...including anticipated impacts associated with climate change, considering existing site conditions and reasonably foreseeable future changes in site conditions, including anticipated impacts associated with climate change as identified by the Commonwealth of Massachusetts at that time.	MassDEP agrees that assessments of potential climate impacts should be based on the current forecasts/resources vetted by the Commonwealth. That is the reason for the references that were proposed in the public hearing draft and included in the final regulations to guidance developed by the Executive Office of Energy and Environmental Affairs and use of up-to-date models at 310 CMR 40.0191 (2)(a) and (b), respectively.
40.1005(1)	NEH	Concur with LSPA that MassDEP should consider forming a Workgroup to write guidance around Climate Change impact evaluations, approaches, resilience, methods, etc.	MassDEP is working on developing guidance on this issue and supports the LSPA's efforts in developing a toolkit related to the climate change provisions that includes case studies and other materials.
40.1005, Note to Reviewers	NEH	We again applaud DEP on adding that climate change impacts are to be considered in the achievement and maintenance of No Significant Risk for the Permanent Solution. Since the science of climate change impacts is evolving and models of impacts are being updated frequently, we think it would be helpful to have a timeframe for the required evaluation of climate change impacts for Permanent Solutions – since they can't be considered for "an unlimited period of time" - which is the definition under (2)(a). We recommend the following changes – flexible on timeframe but recommend 20-30 years and take us to ~2050 for climate modeling. Alternately, we could leave it to the LSP but they would need to justify their choice of timeframe for consideration of climate change impacts. (1) "…considering existing site conditions and reasonably foreseeable future changes in site conditions, including anticipated impacts associated with climate change based on current science/models and a 30-year climate timeframe" Or "…and a climate timeframe commensurate with the solution to be justified based on current science/models."	MassDEP agrees that identifying timeframes is necessary to implement these provisions, but believes they should, at this point in time, be put in guidance.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.0996 & 40.1003(7)	Jack Jemsek	Within the proposed MCP revision, it would be helpful to clarify that application of Upper Concentration Limits (UCL) restrictions in instances where the UCLs in soil or groundwater are a result of the presence of NAPL with Micro-scale Mobility. LNAPL that has Micro-scale Mobility or is residual LNAPL can easily exceed the default 5,000 to 20,000 parts per million UCL for VPH and EPH fractions in soil and 100,000 parts per billion UCL in groundwater. Previously, the 2014 MCP eliminated the ½-inch UCL for NAPL, but the MCP would benefit from clarification of UCLs in soil or groundwater versus NAPL that meets the provisions cited in 40.1003(7). This may be handled by including "or is associated with NAPL that meets the requirements of 40.1003(7)" in 40.0996(4)(d). Also adding "or is associated with NAPL that meets the requirements of 40.1003(7)" in paragraphs 40.1040(2)(b) and 40.1041(2)(b), where "or soil is greater than 15 feet" and "or soil beneath an engineered barrier" are referenced. In discussions with MassDEP representatives, it is understood that the NAPL provisions make certain UCL restrictions moot, but the above changes would document that NAPL with Micro-scale Mobility is exempt from certain UCL conditions such as requiring an engineered barrier, which would be inconsistent with the intent of the NAPL provisions within the 2014 MCP and the LNAPL Guidance (WSC-16-450).	Neither the 2014 MCP amendments nor 2016 LNAPL Guidance to exempt NAPL sites from UCLs (now M3CLs) requirements. The NAPL criteria were designed to address concerns over the bulk movement of NAPL, leaving in place all other site cleanup requirements, including M3CLs and source elimination or control. M3CLs address long-term risks to public welfare and the environment.
40.1012(2)(d)	Wes Stimpson	I believe the Department made a mistake when it implemented this exemption in the LNAPL Guidance. Having LNAPL at thickness up to 0.5 inches on the groundwater surface in an excavation results in a condition that requires all of the actions the Department suggests being included in an AUL, if the 0.5 inch criteria is exceeded. I suggest that rather than codify this Guidance error, that the Department consider adding another Condition category to Section 40.1013 when NAPL with micro-scale mobility is present and the thickness is predicted to be less than 0.5 inches. This category would require that the Permanent Solution have a condition section that addresses health and safely and soil management requirements for site where NAPL is present and there is a potential for future intrusive activities that may result in exposure and the need to manage the NAPL and NAPL contaminated soil.	MassDEP did not make the changes suggested by this comment. Setting the limit for when an AUL is required for residual NAPL to greater than 0.5 inch thickness of visible NAPL reflects a policy decision to focus the requirement on levels of residual NAPL that a likely to warrant the notice and implementation of NAPL management/contingency plans provided by an AUL. While MassDEP acknowledges that the lesser NAPL thicknesses could require management under some future conditions (e.g., construction activities), the suggestion to flag them as a category of "Permanent Solution with Conditions with No AUL" raises additional challenges of setting a lower bound for visible NAPL. The observance of a sheen is visible NAPL, however, visible NAPL less than 1/8" is insufficient, on its own, to trigger notification. More consideration as to whether a Permanent Solution with Condition category to NAPL observations that would not trigger notification is appropriate appears to be warranted. Further, in many cases where lower thickness of visible NAPL remain, residual soil concentrations will separately warrant an AUL. The future management of excavated soils or NAPL must adhere to the Remediation Waste management provisions regardless of the Permanent Solution category.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1012(2)(d)	NECSEMA	In section 1012(2)(d), NECSEMA appreciates the efforts of the MassDEP to draw a distinction for not requiring an AUL at sites that have non-aqueous phase liquid (NAPL) present where the thickness does not and is unlikely to exceed one-half (1/2") inch in an excavation, boring or monitoring well. The Permanent Solution for the site; however, would determine that there is No Significant Risk form the presence of the NAPL at whatever thickness or potential thickness. Therefore, the one-half (1/2") inch delineation appears arbitrary and has caused confusion among LSPs on what the requirements or obligations of the AUL should be. NECSEMA recommends that NAPL thickness alone should not be the determining factor of Site risk, and that instead of requiring an AUL for Sites with the presence of less than one-half (1/2") inch of NAPL should be limited to Permanent Solutions with Conditions without the requirement for an AUL, unless specific Site conditions warrant an AUL to manage risk.	MassDEP questions whether the likelihood that residual NAPL will warrant management can be consistently and reliably predicted for future scenarios, such as construction. Setting the limit for when an AUL is required for residual NAPL to greater than 0.5 inch thickness of visible NAPL reflects a policy decision to focus the requirement on levels of residual NAPL that are more likely to warrant the notice and implementation of NAPL management/contingency plans provided by an AUL.
40.1012(2)(e) AUL/Radiation	Haley & Aldrich	Support the amendment to require an AUL where a Permanent Solution is achieved and Radioactive Material emitting Radiation above background level is present.	The final regulation requires an AUL for both Permanent *and* Temporary Solutions where Radioactive Material emitting Radiation above background level is present. The addition of Temporary Solutions to 310 CMR 40.1012(2)(d) is consistent with the corresponding provision in 310 CMR 40.0115(2)(c).
40.1012(3)(h) & 40.1012(7)	NECSEMA	NECSEMA is in agreement with the clarification documenting AULs are applicable to sites in Remedy Operation Status and clarification that Permanent Solutions that rely on the implementation of an AUL or limitations on site uses is a Permanent Solution with Conditions pursuant to 310 CMR 40.1041(2).	The final regulation retains these provisions as they were proposed in the public hearing draft.
40.1013(1)	LSPA	See comments in Subpart H, regarding the addition of another condition category to address the treatment of NAPL with micro-scale mobility anticipated to be present at less than 0.5 in thickness. The LSPA requests that 40.1013 include additional language indicating that there should be a section in the Permanent Solution Statement that provides the reader/user the details as to what the condition requirements are that need to be followed. These management requirements are often not provided in the PS with Conditions Statements.	As stated in a prior response, MassDEP did not create an additional Permanent Solution with Conditions/No AUL category for NAPL less than 1/2" inch. MassDEP has added text as suggested to 310 CMR 40.1013 to reference the requirements in 310 CMR 40.1056(1) and (2) to document the conditions relative to maintaining the Permanent Solution in the Permanent Solution Statement. For parallel structure, a similar cross reference was added to the Application of Activity and Use Limitations provisions at 310 CMR 40.1012.
40.1013(1)	Wes Stimpson	Consistent with comment regarding 40.1012(2)(d), consider the addition of another condition category to address the treatment of NAPL with micro-scale mobility anticipated to be present at less than 0.5 in thickness. I also suggest that you clarify the meaning of the word “solely” in (1) which says the Permanent Solution “is based solely upon……..”. Does this mean that you can’t file with a Condition if there were other response actions needed to obtain the Permanent Solution? Words should also be added to 40.1013 to clarify that there should be a section in the Permanent Solution Statement that provides the reader/user the details as to what the condition requirements are that need to be followed. These management requirements are often not provided in the PSwC Statements I have seen.	As stated in a prior response, MassDEP did not create an additional Permanent Solutions with Conditions/No AUL category for NAPL less than 1/2" inch. Regarding the use of the term "solely" in 310 CMR 40.1013(1), it is intended to rule out the application of 310 CMR 40.1013 to those disposal sites where an AUL is otherwise required. To clarify this intent, the provision has been revised. It now reads, "An Activity and Use Limitation shall not be required if the Permanent Solution is based upon one or more of the following limitations, assumptions or conditions on Site Activities and Uses and an Activity and Use Limitation is not otherwise required pursuant to 310 CMR 40.1012(2)..." Additionally, a paragraph has been added to 310 CMR 40.1012(3) to clarify that an AUL may optionally be used to address the limitations in 310 CMR 40.1013. MassDEP has added text as suggested to 310 CMR 40.1013 to reference the requirements in 310 CMR 40.1056(1) and (2) to document the conditions relative to maintaining the Permanent Solution in the Permanent Solution Statement. For parallel structure, a similar cross reference was added to the Application of Activity and Use Limitations provisions at 310 CMR 40.1012.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1025 & 40.1026	ECR	The Department's need for more detailed operating information from vapor-pathway AEPMMs should be weighed against the increased costs and complexity that will result. The proposed addition of continuous remote monitoring of vacuum levels at each vapor extraction point significantly increases cost and complexity by replacing simple manometers with (at least) electronic vacuum monitors and transmitters. Failures of these components will undoubtedly increase maintenance costs and produce numerous false alarms. The use of simple sub-slab systems has allowed homeowners to reliably and inexpensively control vapor migration of OHM and radon for decades, and the adoption of the proposed regulation would act as a disincentive to their future use. At a minimum, an exemption to these requirements should be made for homeowner fuel oil spills (if agreed to by the homeowner). A less expensive and simpler alternative to requiring real-time vacuum monitoring would be to require each system to report its status (on or off) once each 24 hours using technology currently employed for vapor-pathway AEPMMs.	Use of remote monitoring systems that continously monitor and continuously transmit key operational data is an approach the Department is encouraging and incentivizing (by not requiring RMRs for AEPMMS operating prior to a Permanent Solution with such telemetry systems). The use of such systems is not required, however, except in the case where the AEPMM relies on maintaining a positive pressure field within the building. The Department has used these systems and has not experienced the false alarms or increased maintenance costs. On the contrary, the information stream provided by these systems allows the user to more readily and remotely diagnose conditions, such as temperature fluctuations and wind, that are affecting the system.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1025 & 40.1026	GZA	The establishment of the Active Exposure Pathway Mitigation Measure (AEPMM) concept to allow for the achievement of Permanent Solutions at sites with the ongoing operation of sub-slab depressurization systems (SSDS) was an important and valuable addition to the MCP in 2014. However, the steady migration toward more extensive and onerous monitoring requirements for such systems has eroded some of the benefits of the AEPMM approach. GZA believes that the newly proposed requirement to continuously monitor vacuum levels at every soil gas extraction point that is part of an AEPMM is excessive and unnecessary in many cases. GZA is aware of many SSDSs that employ multiple extraction points (in some cases more than 10) connected to a single fan or blower. At some of these sites, the extraction points are spread across a wide area within large active industrial structures. The disruption and expense associated with retrofitting such SSDSs with continuous vacuum monitoring telemetry for each extraction point would be substantial. For these types of systems, GZA typically has extensive monitoring data relating vacuum at the blower/fan to values at the individual extraction points; these data generally indicate consistent and predictable relationships. Under these circumstances, monitoring of vacuums at the fan or blower provides adequate demonstration of the systems' effectiveness. Establishing this as a standard of care should remove the need for the proposed level of continuous monitoring at non-residential sites. If added assurance is needed it could be addressed by including a limited number of representative vacuum monitoring locations below the floor. GZA notes that many AEPMMs are in place at commercial/industrial sites that remain in long-term Temporary Solution status. In many cases, regular (monthly or even more frequent) site visits are a component of the long-term operation, maintenance and monitoring (OMM) program. (Note that such sites frequently have other types of remediation systems operating.) For these types of sites, particularly, the proposed additional monitoring/telemetry requirements are excessive and unnecessary. While we acknowledge the benefit of continuous vacuum monitoring in certain situations (e.g. Permanent Solution sites with residential settings and significant potential vapor intrusion exposures), we recommend that this wording be revised to accommodate judgment and flexibility on the part of the LSP. One option would be to maintain the proposed wording for residential sites with Permanent Solution AEPMMs (continuous vacuum monitoring at each extraction point) with an option for establishment of an alternate approach (continuous monitoring at the fans/blowers, supplemented by a limited number of sub-slab points) at other sites with appropriate documentation provided by the LSP.	The provision has been clarified to address the concerns addressed by the comment. The final regulations require establishing the acceptable vacuum range to maintain an appropriate negative pressure field for each area or zone of soil gas extraction serviced by a discrete fan or blower and to continuously monitor the vacuum level at each area or zone serviced by a discrete fan or blower.
40.1025(3) & 40.1026(3)	OHI Engineering, Inc.	We see little value in adding vacuum measurements to telemetry system requirements while substantially increasing costs for installation and maintenance. The amount of data that would be generated under this revision is substantial and not likely to significantly improve health and safety. Shutdown and restart for existing systems should be grandfathered, whether or not a Permanent Solution has been achieved.	The final regulations clarify that the acceptable vacuum range measurements apply to each area or zone of soil gas extraction serviced by a discrete fan or blower. This is not an increase in the number of points monitored under the current telemetry protocol that sends notifications based on system shutdown and restart. MassDEP believes continuous monitoring and continuous telemetry transmission is the optimal approach because it provides confirmation that both the AEPMM and the telemetry are operating. In the final regulation, use of continuous telemetry transmission for SSD systems remains (as was proposed) an option, not a requirement. The final regulations do, however, require continuous telemetry transmission in the case of positive pressure systems.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1025(3)(d)1.	LSPA	“Point of soil gas extraction” could be interpreted as the location coming out of the slab or for horizontal pipes the entire length of the slotted pipe. These are very unlikely to be accessible especially to connection to a telemetry system. Suggest the following wording change: "establish the acceptable vacuum range to maintain an appropriate negative pressure field beneath a building for each soil gas extraction system or individual suction fan”	The provision has been clarified consistent with the suggestion in this comment. The final amendments require establishing the acceptable vacuum range to maintain an appropriate negative pressure field for each area or zone of soil gas extraction serviced by a discrete fan or blower and to continuously monitor the vacuum level at each area or zone serviced by a discrete fan or blower.
40.1025(3)(d)1.&3.	NAIOP	The system may go off immediately, but unless the owner/operator has his beeper/laptop with him/her at all times there may not be “immediate” notification. Proposed language: (a) The operating regimen for an Active Exposure Pathway Mitigation Measure installed after the effective date of these regulations to prevent the migration of subsurface OHM vapors into a building shall: 1. (Delete "establish the acceptable vacuum range to") maintain an appropriate negative pressure field beneath a building for each point of soil gas extraction;...3. employ remote monitoring technology that will immediately forward an alert to the owner and operator of the building protected by the Active Exposure Pathway Mitigation Measure and the Department (delete "immediately") when the vacuum level is outside the acceptable range or the system is shut down and when the vacuum level returns within the acceptable range or the system restarts;	The provision was edited as suggested so that it reads, "3. employ remote monitoring technology that will immediately send an alert to the owner and operator…" The suggested edit to insert the effective date of the regulations into the requirement to monitor and trigger notifications based on vacuum ranges and allow systems supporting Permanent Solutions implemented prior to the effective date to continue to monitor system shutdown and restart was addressed in a separate provision at 310 CMR 40.1025(3)6.
40.1025(3)(d)3.	NAIOP	MassDEP should make it clear as a policy matter that failures of third-party service providers to ensure that the required notices are sent by the installed system, and failures of internet service providers which prevent or delay the delivery of such notices, are not to be laid at the doorstep of the owner or PRP with respect to enforcement.	The comment is noted.
40.1025(4) and 40.1026(4)	Haley & Aldrich	What is timeframe for MassDEP written response?	The Department will establish specifications for websites that display the continuous transmission of operational data from AEPMM systems and are accessible for monitoring. Once these specifications are available, the Department will make every effort to approve systems that meet such specifications in writing in a timeframe and using a process that is similar to the current two step telemetry registration process which is done by email.
40.1025(4) & 40.1026(4)	LSPA	“(4) Upon written approval by the Department, a remote monitoring system which continuously transmits key operational data of the Active Exposure Pathway Mitigation Measure installed to eliminate or mitigate the migration of OHM vapors into a building to a website hosted by the Department would satisfy the requirement of 310 CMR 40.1025(3)(d) and (9).” The LSPA suggests that MassDEP consider a presumptive approval period in this situation.	The Department does not agree with the suggestion to make this a presumptive approval process as each case will require confirmation that the information is being transmitted as required. The Department will establish specifications for websites that display the continuous transmission of operational data from AEPMM systems and are accessible for monitoring. Once these specifications are available, the Department will make every effort to confirm the satisfactory registration of systems that meet such specifications in using a process that is similar to the current two step telemetry registration process which is done by email.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1025(4)	LSPA	"(4) Upon written approval by the Department, a remote monitoring system which continuously transmits key operational data of the Active Exposure Pathway Mitigation Measure installed to eliminate or mitigate the migration of OHM vapors into a building to a website hosted by the Department would satisfy the requirement of 310 CMR 40.1025(3)(d) and (9)." Why is 310 CMR 40.1025(3)(d) included here, as it specifies the operating regimen for an AEPMM? Wouldn't an operating regimen still be required whether or not the remote monitoring system transmits continuously? Wouldn't one still need to register the system and still have it notify MassDEP when the vacuum is outside of the acceptable range?	The reference to 310 CMR 40.1025(3)(d) was intended to mean that the written approval process in 310 CMR 40.1025(4)--for systems that continuously transmit to a website--would satisfy the requirements in the registration process covered in (3)(d). The comment highlights, however, that as drafted, the reference to 310 CMR 40.1025(3)(d) is too broad and unclear. To clarify, 310 CMR 40.1025(4) has been revised to delete the reference to 310 CMR 40.1025(3)(d). By doing so, it should be clear that the registration process steps and the requirement for the remote monitoring system to send notifications when the system is operating outside of and returns to the acceptable vacuum range apply regardless of whether the system continuously transmits operational data to a website.
40.1026(4)	LSPA	"(4) Upon written approval by the Department, a remote monitoring system which continuously transmits key operational data of the Active Exposure Pathway Mitigation Measure installed to eliminate or mitigate the migration of OHM vapors into a building to a website hosted by the Department would satisfy the requirement of 310 CMR 40.1025(3)(d)." Should this reference 310 CMR 40.1026(3)(d)? 310 CMR 40.1025(3)(d) is for Permanent Solutions, while 310 CMR 40.1026 is for Temporary Solutions and Remedy Operation Status. If this should be 310 CMR 40.1026(3)(d), 310 CMR 40.1026(3)(d) specifies the operating regimen for an AEPMM. Wouldn't an operating regimen still be required whether or not the remote monitoring system transmits continuously? Wouldn't one still need to register the system and still have it notify MassDEP when the vacuum is outside of the acceptable range?	The reference to 310 CMR 40.1026(3)(d) was intended to mean that the written approval process in 310 CMR 40.1026(4)--for systems that continuously transmit to a website--would satisfy the requirements in the registration process covered in 310 CMR 40.1026(3)(d). The comment highlights, however, that as drafted, the reference to 310 CMR 40.1026(3)(d) is too broad and unclear. To clarify, 310 CMR 40.1026(4) has been revised to delete the reference to 310 CMR 40.1026(3)(d). By doing so, it should be clear that the registration process steps and the requirement for the remote monitoring system to send notifications when the system is operating outside of and returns to the acceptable vacuum range apply regardless of whether the system continuously transmits operational data to a website. Additionally, text has been added to state that AEPMMs with remote monitoring systems with written confirmation of a completed registration pursuant to 310 CMR 40.1026(4) do not require submission of Remedial Monitoring Reports.
40.1026(4)	NAIOP	Change "continuously" to "continually"	This change was not made. In the context of this provision, the Department considers "continuously" to be the better word for describing the ongoing real time monitoring and transmission of operational data to a website. While the operation data is posted at regular time intervals (i.e., continually), the vacuum monitoring of the system (i.e., the activity that produces of the operational data) is being done "continuously." "Continuously" seems the better word to describe the stream of information that is being transmitted.
40.1026(6)	LSPA	"4. notifies the appropriate persons in accordance with 310 CMR 40.1026(4), if the shutdown lasts 30 or more consecutive days." 310 CMR 40.1026(4) should be changed to 310 CMR 40.1026(5).	The correction was made.
40.1026(7)	Haley & Aldrich & NAIOP	typo...either "shall require Remedial Monitoring Reports" or "shall require a Remedial Monitoring Report."	The suggested edit was made.
40.1040(2)(d)	LSPA	"(2) Permanent Solutions shall not apply to: (d) any disposal site or portion of a disposal site where Hazardous Waste or Remediation Waste requires management or disposal pursuant to 310 CMR 40.0030." This language implies that a Permanent Solution would have to be terminated if any additional excavation of soil above applicable RCs is required after the Permanent Solution has been filed. This conflicts with 40.1067, which specifically allows post-Permanent Solution activities.	The provision was revised based on the comment to make it specific to "stockpiled/stored Remediation Waste requiring management or disposal pursuant to 310 CMR 40.0030" remaining at the site, disposal site or portion of a disposal site. The revised text is consistent with existing provisions in the IRA and RAM Completion Statements requirements. It is not intended to affect the ability to maintain a Permanent Solution at disposal sites where Post-Permanent Solution remedial actions are conducted and where Remediation Waste generated during such work is properly managed.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1040(2)(d)	Haley & Aldrich	Needs refining - as written would eliminate from qualifying for Permanent Solution any site where contaminated Granulated Activated Carbon is generated. Need to allow for management of post-Permanent Solution waste and Active Exposure Pathway Mitigation Measures.	The provision was revised based on the comment to make it specific to "stockpiled/stored Remediation Waste requiring management or disposal pursuant to 310 CMR 40.0030" remaining at the site, disposal site or portion of a disposal site. The revised text is consistent with existing provisions in the IRA and RAM Completion Statements requirements. It is not intended to affect the ability to maintain a Permanent Solution at disposal sites where GAC is used to treat private drinking water supplies as an AEPMM where those materials are properly managed.
40.1040(2)(d)	LSPA	MassDEP has indicated that the intention of this addition is to prevent site closures with soil stockpiles remaining on site. As written, this would prevent sites with AEPMMs that generate hazardous waste (i.e., GAC with detectable F-listed solvents) from achieving a Permanent Solution, would delay sites in achieving a Permanent Solution where decommissioning of remedial systems would generate hazardous waste (decommissioning is typically disruptive and can be scheduled months after the Permanent Solution is filed), and would cause confusion/contradict the provisions in 310 CMR 40.1067 (Remedial Actions after a Permanent Solution Statement has been Submitted to the Department). The LSPA suggests removing this addition; however, if necessary, suggested wording change: "any disposal site or portion of a disposal site where excavated and stockpiled Contaminated Soil requiring management or disposal pursuant to 310 CMR 40.0030 remains, unless the Contaminated Soil is being managed pursuant to 310 CMR 40.1067."	The provision was revised based on the comment to make it specific to "stockpiled/stored Remediation Waste requiring management or disposal pursuant to 310 CMR 40.0030" remaining at the site, disposal site or portion of a disposal site. The revised text is consistent with existing provisions in the IRA and RAM Completion Statements requirements. It is not intended to affect the ability to maintain a Permanent Solution at disposal sites where Post-Permanent Solution remedial actions are conducted and where Remediation Waste generated during such work is properly managed.
40.1040(2)(d) and 40.1056(1)(l): Stockpiles	NAIOP	The intention of these additions is to prevent site closures with soil stockpiles remaining on site. As written, however, this would also prevent sites with AEPMMs that generate hazardous waste (i.e., GAC with detectable F-listed solvents) from achieving a Permanent Solution, would delay sites in achieving a Permanent Solution where decommissioning of remedial systems would generate hazardous waste (decommissioning is typically disruptive and can be scheduled months after the Permanent Solution is filed), and would cause confusion/contradict the provisions in 310 CMR 40.1067 (Remedial Actions after a Permanent Solution Statement has been Submitted to the Department). NAIOP recommends removing these additions. If that is not possible, we suggest that these provisions be modified as indicated: (d) any disposal site or portion of a disposal site where *(delete Hazardous Waste or Remediation Waste requires management or disposal pursuant to 310 CMR 40.0030) "* excavated and stockpiled Contaminated Soil requiring management or disposal pursuant to 310 CMR 40.0030 remains, unless the Contaminated Soil is being managed pursuant to 310 CMR 40.1067."	The provision was revised based on the comment to make it specific to "stockpiled/stored Remediation Waste requiring management or disposal pursuant to 310 CMR 40.0030" remaining at the site, disposal site or portion of a disposal site. The revised text is consistent with existing provisions in the IRA and RAM Completion Statements requirements. It is not intended to affect the ability to maintain a Permanent Solution at disposal sites where Post-Permanent Solution remedial actions are conducted and where Remediation Waste generated during such work is properly managed.
40.1050(4)(b)4.	NAIOP	Add language: 4. the feasibility of implementing one or more Permanent Solutions for the disposal site or portion(s) of the pursuant to 310 CMR 40.0860 at the time of the Periodic Review, and if a Permanent Solution is feasible, the projected schedule "for achieving it;"	The suggested edit was made.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1050(4)(b)4.	LSPA	"4. the feasibility of implementing one or more Permanent Solutions for the disposal site or portion(s) of the pursuant to 310 CMR 40.0860 at the time of the Periodic Review, and if a Permanent Solution is feasible, the projected schedule;" Add "site" or "disposal site" after "…or portion(s) of the…"	The suggested edit was made.
40.1050(4)&(5)	NEH	We believe that Temporary Solutions should also consider climate change impacts - especially because for some sites "temporary" may span years. We recommend adding similar climate change impact language as for Permanent Solution but constraining it to the timeframe of the Temporary Solution.	The climate change-related amendments to the Conceptual Site Model definition and RAPS (which includes consideration of "response actions that incorporate climate change resilience to the extent practicable") apply to Temporary Solutions.
40.1050(4)&(5)	LSPA	"(4) For all Temporary Solutions where achievement of a Permanent Solution is not currently feasible as described at 310 CMR 40.1050(1)(e)1., except those achieved after a Downgradient Property Status Submittal has been provided to the Department in accordance with 310 CMR 40.0180:" "(5) For all Temporary Solutions where achievement of a Permanent Solution is feasible and response actions toward a Permanent Solution are continuing as described in 310 CMR 40.1050(1)(e)2.:" What is the intent of excluding sites for which DPS has been achieved from 40.1050(4) but not from 40.1050(5)? A DPS site would not have a valid Tier Extension, which would conflict with 40.1050(5)(b).	In response to this comment, the exception language for DPS was also added to 310 CMR 40.1050(5). In the case of DPS, additional response actions toward either a Temporary or Permanent Solution would not be required, so arguably the exception language is not necessary in either case, but (4) and (5) should be consistent with regard to referencing DPS.
40.1050(4)(b)2.	Larry McTiernan	Why would confirmation that a condition of No Substantial Hazard has been maintained be required every 5 years for Temporary Solution sites when confirmation that a condition of No Significant Risk still exists is not required for Permanent Solution sites? I can see requiring confirmation for TS sites with active O&M of a remedial system, but it seems unnecessary for TS sites with stable conditions. And what about TS sites where a PS is infeasible because the source is at an unidentified upgradient site? Seems unfair to require additional monitoring every 5 years (at a minimum) in such cases if conditions are stable.	There are sites that have achieved a Permanent Solution that require additional monitoring (e.g., sites with Engineered Barriers, sites with AEPMMs where there is the ongoing operation and monitoring of an SSD system, sites with AULs where there is monitoring that caps remain intact). Monitoring at a Temporary Solution site is necessary to measure whether progress is being made toward a Permanent Solution as well as ensuring that a condition of No Substantial Hazard is maintained. The frequency of the monitoring should reflect the site conditions, such as stability and potential risks to nearby receptors.
40.1050(4)(c) TS Per Review	Haley & Aldrich	Thank you for clarifying.	MassDEP appreciates this support.
40.1050(4)(c)	MassDOT	Does 40.1050(4)(c) preclude a RP, PRP, or Other Person from conducting a RAM per 310 CMR 40.0440 for a construction project following a Temporary Solution but before a Permanent Solution is reached? Please clarify.	This provision is not intended to preclude RAMs. Pursuant to 310 CMR 40.0441(1), RAMs may be implemented at any time prior to a Permanent Solution, including in conjunction with Comprehensive Remedial Actions. To clarify, the provision was revised to say "Further Comprehensive Response Actions shall be conducted in accordance with 310 CMR 40.0800." Additionally, a provision was added at 310 CMR 40.1050(6) to state that RAMS "may be conducted at disposal sites where a Temporary Solution has been achieved."

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1050(5)(b)	LSPA	The LSPA suggests adding the following cross reference: (b) a valid Tier Classification or Extension thereof shall be in effect at the time the Temporary Solution Statement is submitted to the Department and until the time a Permanent Solution Statement is submitted to the Department. *The submittal of Post-temporary Solution Status Reports shall have the effect of maintaining a Tier Classification Extension pursuant to 310 CMR 40.0898(1)(e).* Further response actions shall be conducted in accordance with 310 CMR 40.0800.	The suggested cross-reference was added.
40.1056(1)(l)	LSPA	MassDEP has indicated that the intention of this addition is to prevent site closures with soil stockpiles remaining on site. As written, this would prevent sites with AEPMMs that generate hazardous waste (i.e., GAC with detectable F-listed solvents) from achieving a Permanent Solution, would delay sites in achieving a Permanent Solution where decommissioning of remedial systems would generate hazardous waste (decommissioning is typically disruptive and can be scheduled months after the Permanent Solution is filed), and would cause confusion/contradict the provisions in 310 CMR 40.1067 (Remedial Actions after a Permanent Solution Statement as been Submitted to the Department). The LSPA suggests removing this addition; however, if necessary see wording change below: *Confirmation that no excavated and stockpiled Contaminated Soil requiring management or disposal remains at the site, disposal site or portion of a disposal site for which the Permanent Solution Statement applies.*	The provision was revised based on the comment to make it specific to "stockpiled/stored Remediation Waste requiring management or disposal" remaining at the site, disposal site or portion of a disposal site.
40.1056(1)(l)	Haley & Aldrich	Except as generated as part of post-Permanent Solution activities such as Active Exposure Pathway Mitigation Measures. See also NTR 79 re: 40.1040(2)(d).	The provision was revised based on the comment to make it specific to "stockpiled/stored Remediation Waste requiring management or disposal" remaining at the site, disposal site or portion of a disposal site.
40.1056(1)(l)	NAIOP	Proposed language: (l) ~~confirmation that no Hazardous Waste or Remediation Waste requiring management or disposal remains at the site, disposal site or portion of a disposal site for which the Permanent Solution Statement applies.~~ confirmation that no excavated and stockpiled Contaminated Soil requiring management or disposal remains at the disposal site or portion of a disposal site for which the Permanent Solution Statement applies.	The provision was revised based on the comment to make it specific to "stockpiled/stored Remediation Waste requiring management or disposal" remaining at the site, disposal site or portion of a disposal site.
40.1056(2)(l) & 40.1056(4)(3)	NAIOP	Punctuation/wording: (2)(l) "…Permanent Solution is based including, when~~re~~ the Permanent Solution is based upon the effective operation of one or more Active Exposure Pathway Mitigation. For (4)(3), add "the" before URL. Check citation numbering for 1056(4)(3).	The suggested edits were made.
40.1056(4)3 & 40.1057(3)3	Larry McTiernan	Is DEP asking for a URL to the site file on DEP's website (after it is confirmed that all cited info is there), or submittal-specific URLs? The latter seems over-burdensome and impractical.	The intent of the provision is that, in cases where the Permanent Solution documentation references rather than incorporates data and other information from previous submittals in support of the Permanent Solution, those references be clear, and can be readily identified and accessed by both the public and MassDEP. The appropriate URL or URLs will depend on the referencing in the Permanent Solution Statement.

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40.1056(4)(3)	Haley & Aldrich	What is the intent of this proposed revision? Is the expectation that LSPs would reference links to eDEP?	The intent of the provision is that, in cases where the Permanent Solution documentation references rather than incorporates data and other information from previous submittals in support of the Permanent Solution, those references be clear, and can be readily identified and accessed by both the public and MassDEP.
40.1067(3)(a)	MassDOT	Doesn't this conflict with 40.0501(7) which states...As specified in 310 CMR 40.1067(4)(c) , 5(c), and (6), an RP, PRP, or Other Person shall have a valid Tier Classification or Extension thereof to conduct remedial actions at disposal sites where a Permanent Solution Statement has been previously submitted"? Suggest clarifying 40.0501(7) to include "Permanent Solution Statement with Conditions" rather than just "Permanent Solution Statement" to eliminate the apparent conflict.	The requirement for a valid Tier Classification or Extension only applies to the disposal sites that meet the description at the cited provisions in 310 CMR 40.1067. Because that does not include all Permanent Solutions with Conditions, the suggested edit was not made.
40.1067(4)&(6)	NECSEMA	NECSEMA agrees with the proposed revisions since these improve the clarity for the expectations of conducting post Permanent Solution (PS) response actions. The following changes are suggested to remove unnecessary administrative effort and better reflect what NECSEMA believes to be the intent of the MassDEP. Section 40.1067(4)(d) states, "...appears to prohibit conducting soil or groundwater removal from within the disposal site boundary after submittal of a Permanent Solution without first retracting the Permanent Solution." NECSEMA recommends adding the following clarifying language: *"except as permitted under 310 CMR 40.1067."* Sections 40.1067(4) and 1067(6)(b) apply to remedial actions conducted within an area subject to an AUL; however, remedial actions could also occur outside of the area covered by the AUL and not affect the integrity of the Engineered Barrier or the area covered by the AUL. For instance, the AUL could be limited to the area of the Engineered Barrier. Therefore, it is recommended that 40.1067(6)(d) be revised as follows: *"...shall be conducted pursuant to the procedures at 310 CMR 40.1067(4) or 310 CMR 1067(5), whichever is applicable."*	310 CMR 40.1067 has been modified to cover the management of Remediation Waste and Remediation Wastewater in one provision, 310 CMR 40.1067(3). This provision states that Remediation Waste and Remediation Wastewater that requires management as part of Post-Permanent Solution remedial actions shall be properly managed according to the provisions of 310 CMR 40.0030 and 40.0040, respectively. 310 CMR 40.1067 was also modified to cover the situation raised in the comment "where such remedial actions are being conducted outside an area subject to an Activity and Use Limitation and will not potentially affect the area subject to an Activity and Use Limitation." The suggested edit was made to the provision related to Engineered Barriers, referred to by the commenter as 310 CMR 40.1067(6)(d), but in the final regulations is now 310 CMR 40.1067(7)(b).
40.1067(5)(b)	Haley & Aldrich	As written, for a site that has a Permanent Solution with a soil-only condition (historic fill or gardening), a building with an underdrain (as is common in Boston), would have to remain in the MCP conducting a Release Abatement Measure forever.	310 CMR 40.1067 has been modified to cover the management of Remediation Waste and Remediation Wastewater in one provision, 310 CMR 40.1067(3). This provision states that Remediation Waste and Remediation Wastewater that requires management as part of Post-Permanent Solution remedial actions shall be properly managed according to the provisions of 310 CMR 40.0030 and 40.0040, respectively.
40.1067(3) or (5)	LSPA	(3) For remedial actions conducted after the submittal of a Permanent Solution with No Conditions the following requirements shall apply:" "(5) For remedial actions conducted after a Permanent Solution with Conditions Statement has been submitted to the Department where an Activity and Use Limitation is not required pursuant to 310 CMR 40.1013, the following requirements shall apply:" Please consider rewording one of these to include remedial actions outside of the area subject to an AUL on a site with an AUL. 310 CMR 40.1067(4) is for remedial actions conducted within an area subject to an AUL; areas outside of the AUL portion of a Site are currently not included within 310 CMR 40.1067.	In response to the comment, the provision at 310 CMR 40.1067(6) was modified to cover both Permanent Solutions with Conditions where an Activity and Use Limitation is not required pursuant to 310 CMR 40.1013 and Permanent Solutions with Conditions "where such remedial actions are being conducted outside an area subject to an Activity and Use Limitation and will not potentially affect the area subject to an Activity and Use Limitation."

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40.1067(6)(b)	LSPA	"(6) At disposal sites where an Engineered Barrier has been implemented as part of a Permanent Solution with Conditions, remedial actions conducted after a Permanent Solution with Conditions Statement has been submitted to the Department (b) where such remedial actions are outside of and do not affect the integrity of the Engineered Barrier or the area where an Engineered Barrier is located, shall be conducted pursuant to the procedures at 310 CMR 40.1067(4)." 310 CMR 40.1067(4) applies to remedial actions conducted within an area subject to an Activity and Use Limitation; however, one could also have remedial actions outside of and not affecting the integrity of the Engineered Barrier or the area where an Engineered Barrier is located which are not within an area subject to an AUL. (The AUL could be limited to the area of the Engineered Barrier.) Therefore, we propose that 40.1067(6)(b) read "shall be conducted pursuant to the procedures at 310 CMR 40.1067(4) *or 310 CMR 40.1067(5), whichever is applicable."*	The suggested edit was made.
40.1067(8)	Haley & Aldrich	We suggest retaining the original language for clarity and consistency with Subpart J format – or move the language to a new section 40.1068.	The content of that provision is addressed in 310 CMR 40.1050(4) through (6). 310 CMR 40.1050(6) has added to the final regulation; it states that RAMs may be conducted at sites where a Temporary Solution has been achieved (which had been covered by the provision deleted from 310 CMR 40.1067).
40.1067(8)	NAIOP	Add: *"... for which a Permanent Solution with Conditions has been submitted to the Department , and which are consistent with the scope…"*	The suggested edit was made.
40.1074(2)(a)5. AUL AEPMM details	Haley & Aldrich	Missing words "...features such as any Engineered Barriers..." "Relevant features" is vague. For an Active Exposure Pathway Mitigation Measure, does this mean location of wiring, piping, stacks, programmable logic controller (PLC)? Including such details in an Activity and Use Limitation (AUL) sketch plan could unnecessarily constrain future repairs to the system. Moving the PLC or stack would require an AUL modification.	This provision was revised to read, "...the location of any Engineered Barriers, permanent caps, Active Exposure Pathway Mitigation Measures or other barriers or systems that are subject to the Obligations and Conditions and other provisions of the Notice of Activity and Use Limitation." In response to comment that Information about the details/relevant features of these systems could be modified over time as the result of maintenance or repair activities, the reference to including "relevant features" of the barriers or systems was removed.
40.1074(2)(a)5.	LSPA	Recommend changing the language to "...the location of Active Exposure Pathway Mitigation Measures or other systems…..". The LSPA assumes the intent is to allow a MassDEP staff to accurately evaluate the AUL conditions in the field to ensure that any exposure mitigation elements are in place and effective. Details on sketch plans such as exact location of piping or other elements that don't materially impact the effectiveness of the AEPMM, and might be modified during system maintenance, should not be scrutinized on a sketch plan.	This provision was revised to read, "...the location of any Engineered Barriers, permanent caps, Active Exposure Pathway Mitigation Measures or other barriers or systems that are subject to the Obligations and Conditions and other provisions of the Notice of Activity and Use Limitation." In response to comment that information about the details/relevant features of these systems could be modified over time as the result of maintenance or repair activities, the reference to including "relevant features" of the barriers or systems was removed.

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Note 88	NAIOP	NAIOP's limited, but important, change to the wording of this section is based on the following considerations: a. It would be impractical to try to draw all of the "relevant features" of an AEPMM (e.g., fan, piping from bottom to top, and vent) or Engineered Barrier (e.g., defining layer, cap, and other RCRA-defined requirements) on an 8 ½ by 11-inch site plan. At best, the location of the operating portion of an AEPMM relative to the outline of the building in which it was installed may be depicted on the "sketch." b. MassDEP has added detailed requirements for describing the operating regimen for any AEPMM in both the Permanent Solution Statement and the AUL itself (see 40.1025(3); Form 1075). Putting "relevant features" on the sketch is unnecessary. c. Minor changes may be made to the AEPMM system over time which would not rise to the level of requiring an AUL amendment. If details are required to be depicted on the sketch plan, however, the AUL may have to be amended several times to reflect even minor changes made to the system. Note that the operating regimen may change over time as well, which is why operating requirements should not be set in stone, either.	This provision was revised to read, "...the location of any Engineered Barriers, permanent caps, Active Exposure Pathway Mitigation Measures or other barriers or systems that are subject to the Obligations and Conditions and other provisions of the Notice of Activity and Use Limitation." In response to comment that information about the details/relevant features of these systems could be modified over time as the result of maintenance or repair activities, the reference to including "relevant features" of the barriers or systems was removed.
40.1074(2)(a)5.	NAIOP	Proposed deletions "...established and the location ~~and depiction of relevant features~~ any Engineered Barriers, permanent caps, Active Exposure Pathway Mitigation Measures…"	This provision was revised to read, "...the location of any Engineered Barriers, permanent caps, Active Exposure Pathway Mitigation Measures or other barriers or systems that are subject to the Obligations and Conditions and other provisions of the Notice of Activity and Use Limitation." In response to comment that information about the details/relevant features of these systems could be modified over time as the result of maintenance or repair activities, the reference to including "relevant features" of the barriers or systems was removed.
40.1099 Form 1075	LSPA	Under the Obligations and Conditions in AULs for AEPMMs for a Permanent Solution, please make the language consistent with the revised language in 40.1025(3)(d).	The language was checked for consistency between the 310 CMR 40.1025 provisions and the AUL Obligation and Conditions.
40.1075-AUL Form	NAIOP	NAIOP notes that the notarization blocks for the various AUL forms have been changed to require an 'Exhibit D' "describing" the partnership, corporation, agency relationship, or other entity for whom the AUL signatory has signed the instrument. It would be wholly inappropriate to require partnership agreements, operating agreements, corporate organization or governance documentation or agency documentation to be placed on the real estate records. The Department should clarify and ask for further public comment on what it intends to require to be placed in the new Exhibit D.	"Exhibit D" in the notary block of the public hearing draft was intended to refer to documentation of signatory authority, an existing required AUL exhibit which states, "if a person(s) signing the Notice of Activity and Use Limitation is not an individual signing on his/her own behalf, but rather on behalf of an entity (LLC, LLP, limited partnership, etc.), or as trustee, executor, or attorney in fact, documentation consistent with conveyancing standards and practices verifying that the person(s) signing the Notice of Activity and Use Limitation has the authority to sign such document shall be attached as an exhibit..." In the final regulation, the reference to this exhibit was removed from the notary block and instead, an optional "Whereas" clause which references the signatory authority exhibit, where applicable, was added to the AUL forms.
40.1403(2)(a)3.	ECR	The requirement to obtain written approval from municipalities before e-mail transmission of notices is allowed effectively neutralizes the efficiency benefits that were originally intended by the proposed revision. Requiring each consultant to obtain a written statement from each municipality places an undue burden on both parties. E-mail has been a widely accepted, convenient, and rapid means of communication for many years, and its use for notification of municipalities should not be discouraged by instituting additional paperwork requirements.	MassDEP agrees that the written agreement is too burdensome given the wide usage of email notifications and the preference of many local officials to receive written notices electronically. The provision at 310 CMR 40.1403(2)(a) has been amended to read "written notices shall be made either by hand-delivery, first-class mail, or, upon agreement by the intended recipient of such notice, by electronic mail..." MassDEP understands that agreement may be established by checking with the municipality (e.g., by telephone or email) to confirm that it is agreeable to receiving the notices via email.

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40.1403(2)	GZA	MassDEP is proposing a revision to the public notification regulations that would allow for email notifications for public notices upon written agreement from the intended recipient. The email notifications are a welcome change from the mailing or hand delivery of written notices (which generally require delivery receipts for verification); however, the details of this process need to be further refined. GZA also recommends correction of a long-standing discrepancy in the public notice provisions regarding the transmittal of property owner notices and data transmittals to MassDEP. Currently, 310 CMR40.1403(2)(c)(1) conflicts with 1403(10)(c). The addition of language such as “except as provided in 310 CMR 1403(10)c or elsewhere in 310 CMR 1400 et seq” to 310 CMR40.1403(2)(c)(1) would address this issue.	The suggested edit to address the conflicting provisions has been made.
40.1403(2)(a)3.	Haley & Aldrich	We support this revision. The intended recipients of such written notices should be able to issue a one-time blanket approval if they so desire, with the existence of such blanket approval made known to those conducting response actions.	The provision at 310 CMR 40.1403(2)(a) has been amended to read "written notices shall be made either by hand-delivery, first-class mail, or, upon agreement by the intended recipient of such notice, by electronic mail..." MassDEP understands that agreement may be established by checking with the municipality (e.g., by telephone or email) to confirm that it is agreeable to receiving the notices via email. Further, once agreement is confirmed, MassDEP agrees that it may be assumed that it applies to subsequent written notices.
40.1403(2)(a)3.	LSPA	“3. upon written agreement given to the RP, PRP or Other Person conducting response actions by the intended recipient of a written notice required pursuant to 310 CMR 40.1400, such written notice may be provided by electronic mail and the date of receipt shall be the date that such electronic mail message was sent and successfully delivered;” The LSPA thinks it is unnecessarily burdensome to allow for email notice only when the RP, PRP or OP have received a written agreement from each individual potential recipient. It is more appropriate for the municipality or other stakeholder group as a whole, including all appropriate departments, individuals, and entities, to grant written permission to allow email notices. It will then be the responsibility of the RP, PRP, or OPs (or LSPs) to ensure the email addresses they use are up to date. Tracking down written notices from each individual is unwieldy. Ideally, MassDEP or another entity might create a master list of those municipalities willing to accept electronic notices under 310 CMR 40.1400. Such a master list would minimize duplicative efforts by consultants and streamline the notification process.	The provision at 310 CMR 40.1403(2)(a) has been amended to read "written notices shall be made either by hand-delivery, first-class mail, or, upon agreement by the intended recipient of such notice, by electronic mail..." MassDEP understands that agreement may be established by checking with the municipality (e.g., by telephone or email) to confirm that it is agreeable to receiving the notices via email. Further, once agreement is confirmed, MassDEP agrees that it may be assumed that it applies to subsequent written notices. MassDEP agrees with the suggestion to create and post a master list of municipalities that are willing to accept written notices via email.
40.1403(2)(a)3.	NAIOP	NAIOP fully supports this amendment.	MassDEP appreciates this support. The provision at 310 CMR 40.1403(2)(a)has been amended to read "written notices shall be made either by hand-delivery, first-class mail, or, upon agreement by the intended recipient of such notice, by electronic mail..." MassDEP understands that agreement may be established by checking with the municipality (e.g., by telephone or email) to confirm that it is agreeable to receiving the notices via email. Further, once agreement is confirmed, MassDEP agrees that it may be assumed that it applies to subsequent written notices. MassDEP agrees with the suggestion to create and post a master list of municipalities that are willing to accept written notices via email.

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40.1403(6)(b)2.	LSPA	"1. a copy of the public notice; 2. a copy of the disposal site map included in the Phase I Report pursuant to 310 CMR 40.0483(1)(b);" The LSPA suggests adding: *"or, in the case of reclassification, an updated copy of the disposal site map."* As written, the requirement is for a copy of the Phase I site map to be included with a Tier Classification or Reclassification. The suggested edit is intended to allow for use of an updated map that reflects site conditions at the time of reclassification.	MassDEP incorporated the suggestion as "2. a copy of the disposal site map included in the Phase I Report pursuant to 310 CMR 40.0483(1)(b) or as updated, where applicable, upon reclassification."
40.1403(11)	Haley & Aldrich	Form BWSC124 "Informational Notice About Immediate Response Actions" is not lay-person friendly for risk communication purposes. We request that MassDEP develop two separate fact sheets in layman's terms, to be filled in by the LSP or PRP with site-specific details, for the purposes of communicating information about, respectively, Imminent Hazard conditions and Critical Exposure Pathways.	MassDEP will consider this suggestion and also consider any changes that may be helpful to the BWSC124 form. MassDEP recognizes that communication related to Imminent Hazards and Critical Exposure Pathways can be challenging and would like to facilitate more effective communication through helpful changes to the form and by providing fact sheets that their intended audience finds accessible.
40.1403(11)	NAIOP	Suggest three business days instead of 72 hours after confirmation an Imminent Hazard or Critical Exposure Pathway exists.	The suggested change was made.

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40.1403(11)(d)	NAIOP	The Department is expanding the extent of the notice required so that notice is provided not only with respect to remedial actions but also with respect to assessment activities performed in response to an identified Imminent Hazard or Critical Exposure Pathway. We agree that this expansion of the scope of the required notice makes sense in this situation, largely for the reasons given by the Department in Note 94. However, the proposed language goes on in 40.1403(11)(d) to also require that a building owner or operator post a notice in a visible location for the duration of the relevant IRA in cases where the relevant response actions are being performed at a multi-unit or industrial or commercial building to inform building occupants of the relevant IRA activities. This proposal pushes the balance too far, and is well beyond what is reasonable to require under the relevant circumstances. The primary problem with this approach is that it would require that notice of IRA activities be given to a broad range of building occupants and users, the majority of whom are not likely to be Affected Individuals. Effective risk communication is open and direct, and proportionate to the relevant risk. Providing the relevant notification to Affected Individuals in these building settings makes sense. However, the proposal would effectively require notification to essentially all of the occupants of the building, even if they have no connection with the portion of the building at which the IRA activities are being performed. For example, at a large commercial shopping center with an IRA activity at one end of the property, the proposed Section 40.1403(11)(d)) would require notice to be posted in such a manner that occupants throughout the entire shopping center who are there on a regular basis are notified. NAIOP does not see the point of that provision; on the contrary, the potential for creating exaggerated and overblown levels of concern greatly outweighs the value of spreading this information far and wide. Similarly, if a 30-story office building has a spill of oil or hazardous material that results in an Imminent Hazard or a Critical Exposure Pathway in the lower reaches of the building (such as at a loading dock or in a retail space at ground level, or even in the boiler room in the basement), then why should a notice need to be posted on each of the other 29 floors of the building? Again, this requirement seems to be disproportionate to any legitimate risk communication objectives associated with the relevant response actions. In short, NAIOP fully supports the notification of real Affected Individuals, but objects to the much broader and disproportionate proposed requirements of Section 40.1403(11).	In response to the comment, the provision was modified to target the posting of the notice in multi-unit, commercial and industrial buildings to "location(s) proximate to the area where the potential for exposure to OHM is most likely and where it will be visible to individuals who are routinely present in such location(s)..." The Department will modify the BWSC124 form to highlight this provision for the posting, so the person conducting response actions can point the building owner (the person to whom they are providing the form) to the requirement to post the notice in a visible location.
40.1403(11)(f)	LSPA	"(f) A copy of all the written notices required by:… 2. required by 310 CMR 40.1403(11)(e) shall be submitted to the Department with the Immediate Response Action Completion Statement." Please delete "required by" following "2."	The suggested edit was made.

MCP Public Hearing Draft Citation	Commenter(s)	Summary of Comment	MassDEP's Response to Comment
40.1403(11)(f)1.	LSPA	Replace “the” with “that” in 310 CMR 40.1403(11)(f)1. "...unless an Immediate Response Action Completion Statement is submitted prior to the date **that** such Status Report is due, in which case, the notice shall be submitted with the Immediate Response Action Completion Statement;”	The suggested edit was made.
40.1404(2)(d)	LSPA	Please replace “Consultant of Record No Further Action Statement” with “Consultant-of-Record…” (with hyphens)	The suggested edit was made. Note, that the corresponding Consultant-of-Record definition was deleted. *See* "MassDEP's Response to Comment" in response to the LSPA's comment on the Consultant-of-Record definition at 40.0006(12) above.
40.1450: Technical Assistance Grants	Linda Segal	As a citizen I have participated in several waste site cleanups since 1993 thanks to the Public Involvement Program. The public would not have had a credible seat at the table for all those years were it not for DEP’s financial assistance and professional support. Thanks to four consecutive DEP TAG grants and other fundraising, we were able to hire outstanding Licensed Site Professionals whose commitment and expertise were essential in achieving the successful outcome for that Tier 1A site. Such cleanups are based on science, and most residents in a neighborhood who discover they have a problem in their backyard do not have that complex level of expertise. Also critically important to lay citizens were the DEP professional staff who provided essential guidance for all those years... The learning curve for citizens working to be part of the solutions is challenging....It is my understanding that DEP Technical Assistance Grants have not been awarded in more than a decade, so I simply wish to convey my sincere hope that resuming fully funding those grants be a very high priority for the DEP going forward.	MassDEP appreciates hearing about the value of the TAG program from the perspective of a grant recipient. MassDEP has renewed the TAG program.