



May 17, 2013

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup, 6th Floor
One Winter Street
Boston, Massachusetts 02108
Attn: Elizabeth Callahan

Subject: Comments on Public Hearing Draft
Proposed Amendments to the Massachusetts Contingency Plan

Dear Ms. Callahan

Please find attached comments on the Public Hearing Draft – Proposed Amendments to the Massachusetts Contingency Plan, 310 CMR 40.0000. AMEC appreciates the opportunity to provide comments on the proposed amendments. If you have any questions regarding any of the comments please do not hesitate to contact AMEC at (978) 692-9090.

Sincerely,

AMEC Environment & Infrastructure, Inc

AMEC Environment & Infrastructure, Inc.
2 Robbins Road
Westford, MA 01886
Tel +(978) 692-9090
Fax +(978) 692-6633

www.amec.com

Activity and Use Limitations

40.1075(5) Incorporation into Instruments of Transfer

Comment: What party is responsible for notifying the Department upon transfer of a property? The seller of the property?

MCP - "Also MassDEP is considering whether to amend the requirement to provide a metes and bounds description of the parcel as an exhibit to Form 1075 (currently Exhibit A), requiring either instead of, or in addition to such description, requiring either instead of, or in addition to such description, a certification as to the accuracy of the metes and bounds description in the deed."

Comment: How does this benefit the process? What will be the 'certification' requirements – "certified" by whom with what credentials? Keep the original provision for "provide a metes and bounds description of the parcel". The proposed language is not an improvement.

MCP – "Legal descriptions in deeds have been known to add or remove parcels of land not shown on survey plans earlier in the chain of title, and thus may not accurately reflect current lot boundaries"

Comment: Then those examples are mismanaged changes to deeds. The plan should display exactly what the legal description entails. This strikes me as a proposed change based on some bad examples of record keeping.

MCP – "reflects the requirement that emergency repair work be evaluated as a current site use and utility corridors be clean enough to support such repair without separate health and safety plans."

Comment: Is this referring to a Soil Management Plan (SMP)? Then it requires clarification.

Vapor Intrusion and Closure

40.0006 Terminology, Definitions and Acronyms

Comments:

- The proposed Conceptual Site Model definition is appropriate for inclusion into MCP
- The proposed Substantial Release Migration definition revisions are appropriate for inclusion into MCP
- The proposed Daycare or Child Care center definition is appropriate for inclusion into MCP
- The proposed Living or Working Space definition is appropriate as it would be applied to a Daycare or Child Care Center, School or Residential Dwelling. However, this definition appears to contradict some statements in the Interim Final VI Guidance. The VI Guidance indicates that for vapor intrusion, exposure points in a residence are "living or working spaces". The following statements in the Interim Final VI Guidance indicate that EPCs should be calculated for areas that do not necessarily meet the definition of "living or working space". It is recommended the VI Guidance be revised as indicated below.

The guidance includes the following bullets:

- For a residence, a separate EPC should be developed for the basement (if present) and the first floor;

- Any basement with at least seven feet of head room in an occupied residential dwelling should be considered a potential living or working space; and
- Basements of any height which show evidence of current activity should be considered living or working space. Crawlspace would not apply to this definition of living or working space.

It is recommended the VI Guidance be revised as indicated below.

- For a residence, a separate EPC should be developed for the basement (if it is a Living or Working Spaces defined in the MCP) and the first floor;
 - ~~○ Any basement with at least seven feet of head room in an occupied residential dwelling should be considered a potential living or working space; and~~
 - ~~○ Basements of any height which show evidence of current activity should be considered living or working space. Crawlspace would not apply to this definition of living or working space.~~
(Note: the presence of a washer/dryer is evidence of current activity but does not meet the definition of Living or Working Space)
- The proposed Residential Dwelling definition appears to be appropriate in the context of vapor intrusion and applicability of the Critical Exposure Pathway concept. However, it should be recognized that a dormitory is typically associated with a period of exposure for students of four years or less (secondary schools or colleges/universities). It should be recognized that Method 1 standards for soil and groundwater that are based on a residential scenario, are in most cases, more conservative than necessary to protect the health of students and family members living in a dormitory. –This definition of Residential Dwelling should not be used to require the use of a typical residential exposure scenario (30 year exposure) for evaluating health risks for dormitory residents in a Method 3 risk assessment.

40.0313 Releases Which Require Notification Within 72 Hours

Comments:

Item (f) 2. The inclusion of a dormitory in the definition of a Residential Dwelling means that the language of this subsection requires 72-hour notification for a scenario that typically does not involve “children” and typically involves a subchronic exposure (usually four years or less). The use of GW-2 standards (based on a long-term residential exposure scenario) is more stringent than necessary for evaluating the need for 72-hour notification with respect to a dormitory.

40.0427 Immediate Response Action Completion Reports

Comment: Proposed changes to (1)(c) are appropriate and important. Closing and IRA and addressing non-Imminent Hazard CEP, as necessary, with passive measures, feasibility study, or Phase IV Implementation Plan is appropriate.

40.0904 (2) (c)

Comment: The proposed revision concerning preferential pathway for vapors is appropriate.

40.0926 (6) - ...Exposure point concentrations shall be developed using analytical data gathered during the site investigation at the Exposure Point, as described in 310 CMR 40.0924.

(language referring to the use of fate and transport models generally accepted by the environmental modeling community has been deleted from that subsection).

Comments: For hypothetical future indoor air Exposure Points associated with vapor intrusion, the proposed language seems to make it impossible to evaluate exposures and risks for a future building using a Method 3 risk assessment. If a Method 3 approach were not available, a Method 1 risk assessment would not properly evaluate vapor intrusion for future non-residential buildings. It is important to have the option to utilize vapor intrusion modeling to assess potential exposures and risks associated with potential future buildings, because it is impossible to measure indoor air concentrations in indoor air for a building that has not yet been constructed. This seems to suggest that only Method 1 or Method 2 may be used to evaluate vapor intrusion exposures and risks for future buildings.

MassDEP has relied on vapor intrusion modeling (that estimates hypothetical indoor air concentrations associated with vapor intrusion) to derive and promulgate Method 1 GW-2 standards. While MassDEP may have issues with the use of site-specific vapor intrusion modeling for current buildings, it should be possible to use the same modeling used in deriving Method 1 GW-2 standards to estimate hypothetical future indoor air concentrations for future buildings in conjunction with land-use specific exposure parameters to evaluate exposures and risks for future buildings. A Method 3 risk assessment can conservatively evaluate exposures and risks for hypothetical future or planned future non-residential buildings using the Method 1 GW-2 modeling defaults with non-residential receptor exposure parameters (daily duration of exposure, frequency of exposure, etc.).

40.0974(2) Table 1 - Revisions to GW-2 Standards

Comments: Revisions based on updated toxicity information are generally appropriate. It is strongly recommended that the USEPA inhalation Unit Risk for tetrachloroethene (2.6×10^{-7} per $\mu\text{g}/\text{m}^3$) published in USEPA's Integrated Risk Information System (IRIS) in 2012 be incorporated into the derivation of the GW-2 standard for that compound. That Unit Risk is a peer-reviewed value and is used nationally to evaluate inhalation exposures for CERCLA and RCRA sites and for sites subject to regulatory programs in numerous states. The USEPA source document for the 2012 Unit Risk value was provided for review to EPA scientists, interagency reviewers from other federal agencies and White House offices, and the public, and has been peer reviewed by independent scientists external to EPA. A summary and EPA's disposition of the comments received from the independent external peer reviewers and from the public is included in Appendix A of the *Toxicological Review of Tetrachloroethylene (Perchloroethylene)* (U.S. EPA, 2012).

It is suggested that MassDEP develop and promulgate GW-2 standards for non-residential buildings (industrial/commercial land use). While there is certainly a great deal of uncertainty associated with model input parameters that would cover a wide range of non-residential buildings, a very conservative approach could be incorporated into derivation of GW-2 non residential standards: utilize the same site configuration parameters that were utilized for the derivation of the current GW-2 standards, but utilize non-residential (industrial/commercial) receptor exposure parameters. The resulting GW-2 non-residential standards would be very conservative, but would still provide an alternative to a residential standard for evaluating a non-residential land use in a Method 1 risk assessment, in evaluating the need for notifications with respect to vapor intrusion, in evaluating the presence of a Condition of Substantial Release Migration, and in evaluating, during site investigation activities, the vapor intrusion pathway per the VI guidance. While such GW-2

non-residential standards might not be optimal, they would provide benefit to the regulated community.

SUBPART G: Requirements for Active Exposure Pathway Elimination Measures

Comment: It is beneficial to be able to achieve a Permanent Solution with Conditions with an active system in place.

Risk Assessment and MCP Standards

40.0993(5)(b)

Comment: If toxicity values from IRIS are more current than toxicity values identified by the Department, the more recent scientific toxicity data should be utilized in risk calculations.

Non-Aqueous Phase Liquid and Source Control

40.0006 - Nonaqueous Phase Liquid

Comment:

Revised definition: Nonaqueous Phase Liquid and NAPL each means oil and/or hazardous material that is present at a sufficient saturation level in the environment to be expressed as a separate phase liquid. The existence of NAPL at a sufficient saturation level in subsurface strata is indicated by NAPL presence in a well, excavation or any other subsurface depression.

Definition sound more like definitions of "mobile NAPL". If NAPL expresses itself in well or other opening, it must be mobile to some degree. If present below the residual saturation level, it would not express itself in well or opening, would it?

40.0006 - Non-Stable NAPL

Comment:

Revised definition: Non-Stable NAPL means a NAPL present at a sufficient saturation level and gradient, such that it is: (a) migrating along or within a preferred flow path; (b) discharging or periodically discharging to a subsurface structure, utility or surface water body; or (c) spreading or expanding laterally or vertically as a bulk fluid through or from subsurface strata.

Is intent to describe 1) expanding or moving body/mass (#3) and significant internal NAPL movement (#1 & 2)?

Is a monitoring well considered a subsurface structure? If so, is there an intent to distinguish periodic appearance in wells due to GW elevation changes only, from more significant or mobile LNAPL?

Should there be an effort to distinguish between localized NAPL movement (e.g., due to GW elev changes only) and NAPL body movement (i.e., expanding footprints)? The latter is generally more significant than the former.

40.0006 – Stable NAPL

Comment:

Revised definition: Stable NAPL means NAPL that is present at a saturation level that limits mobility and does not express any of the features of Non-Stable NAPL.

40.0924(2)(b)3a. - Contamination is limited to Oil

Comment: Does this refer to free phase petroleum hydrocarbon?

Miscellaneous and Cross-Referencing

40.0191(3)(e).

Comment: Does 21E have the statutory authority to regulate green house gas emissions?