

Overseeing the “Little” Dig- Construction at Contaminated Sites

David A. Slowick, Section Chief
MassDEP Emergency Response
Western Region

David.Slowick@state.ma.us

Presentation Summary

- Regulatory Discussion
 - reportable releases/disposal sites
- Technical Recommendations
 - applicable to all constructions sites

Regulatory Jurisdiction

- The MCP defines Remedial Action as “containment or removal”broadly defined as the cleanup of oil and hazardous materials (OHM) released to the environment.
- Remediation Waste: Soil and groundwater containing OHM at concentrations equal to or greater than the applicable reportable concentration

Construction Activities

MassDEP has maintained the consistent position that construction activities at “active” Disposal Site constitute a Remedial Action, and as such must be conducted under one of the five remedial alternatives set forth in the MCP.

The MCP five regulatory vehicles to undertake remedial actions

- Limited Removal Action (LRA)
- Immediate Response Action (IRA)
- Release Abatement Measure (RAM)
- Utility-Related Abatement Measure (URAM)
- Comprehensive Response Action (e.g. Phase IV)

Applicable to Disposal sites where:

- Notification is required pursuant to 310 CMR 40.0300
- Closure has not yet been attained in accordance with 310 CMR 40.0600 or 310 CMR 40.1000- no permanent or temporary solution reached
- Construction activities include disturbance and management of Remediation Waste

Limited Removal Action

- “Limited” means “Limited”!
- Extent of Contamination- knowledge
- Expectation that the cleanup can be completed within allowable limits

Construction Activities Under an IRA?

- Only in limited cases (e.g. abandoned Underground Storage Tank encountered during excavation)
- Limit actions to what is necessary to abate IRA condition
- Perform follow-up construction activities as a RAM

Most Common- RAM

- Improvements and modifications to RAM process (e.g. elimination of the MassDEP 21-day presumptive approval requirement) were largely based upon experiences with construction activities.

Sites with IRA Conditions (reminder)

A Release Abatement Measure may not be conducted at a Disposal Site or portions of a Disposal Site where an IRA is required without written approval from MassDEP, unless:

- On-going or proposed RAM is on a portion of the Disposal Site not subject to the IRA;
- IRA Condition(s) is first encountered during performance of the RAM

Hints for Successful RAMs

- Propose a range of soil volume with a “not to exceed” volume
- Remember financial assurance certification for large amounts of soil
- Include clear discussion on disposition of all soil, including soil to be re-used on-site

- Always discuss approach to dewatering to handle groundwater as well as stormwater accumulation
- Provide plan to manage new discoveries (e.g. new contaminants, buried USTs or drums)
- Provide Health and Safety Plan
- Discuss Environmental Monitoring

RAM- Significant Modifications

Submit modified RAM Plan if:

- new contaminants(s) or unexpected conditions are discovered
- “significant” change in soil volume
- change in soil management option
- major modification of remedial system or treatment technology

Utility-Related Abatement Measures

- Written confirmation due within 7 days of oral notification
- Utility work only- no foundations!
- Develop health and safety plan
- Make sure follow-up paperwork including URAM completion statement is submitted
- Discuss known releases in vicinity
- Possible MassDEP follow-up

Constructing a Building within the Disposal Site footprint

Major Regulatory Concerns:

- Risk to construction workers and nearby residents
- Risk to future building occupants
- Preclusion of future remedial options

Building Construction Considerations

- Focused site characterization within and adjacent to the footprint of the proposed building
- Focused risk assessment for construction activities
- Focused remedial action for footprint area
- Focused feasibility study

Constructing a Building as a Cap?

- A building is not considered a cap if it is erected for the primary purpose of providing a needed structure
- A formal Phase III is required for Disposal Sites where the proposed building structure will be a component of an engineered barrier (310 CMR 40.0996(4))

So, now that the RAO has
been filed.....

Construction at Disposal Sites
for which a Response Action
Outcome Statement has been
filed

310 CMR 40.1067

What if it's a potential new release condition?

- Handle conservatively- notify
- Retraction option within 60 days if LSP can opine that contamination is consistent with RAO filed.

Sites with Valid A-1, A-2 or B-1 RAOs

- Remediation Waste Management and “Anti-Degradation” provisions of 310 CMR 40.0030 ONLY
- Permit, TC or extension not required
- No documentation- can voluntarily submit
- Public involvement not required

Anti-Degradation Provisions

- On-property or off-property re-use: locations with same or similar levels of contamination
- Sampling should be performed

Sites with Valid A-3 or B-2 RAOs- Activity and Use Limitations

- Dependent on planned work.....

“Limited” Soil Excavation

- Soil limits are analogous to Limited Removal Action provisions
- Excavation cannot be prohibited by the active AUL
- Follow Remediation Waste provisions

Beyond “Limited”?

- Shall be conducted as a RAM: all provisions at 310 CMR 40.0440 apply
- No permit, tier classification or extension required
- Public involvement required
- If remedial actions are being conducted to allow change in site use or activities, requirements of 310 CMR 40.1080 must be met

Beyond Scope of RAM?

- Conduct as Phase IV Comprehensive Response Action
- Valid Permit, Tier Classification or Extension Necessary
- Public Involvement Required
- If remedial actions are being conducted to allow change in site use or activities, requirements of 310 CMR 40.1080 must be met

Revised RAO necessary?

- Yes, if terms and conditions of AUL are changed
- Revised RAO can be limited to the Disposal Site area where the Response Actions were conducted.

Sites with Class A-4 or B-3 RAOs

Treated the same as A-3 or B-2 RAOs as described on previous slides unless an engineered barrier is present.

Engineered Barrier Present?

If an engineered barrier is present and will be affected by construction activity

- Must be conducted as a Phase IV CRA
- Public involvement required
- Valid permit, tier classification or extension required

Sites with Valid Class C-1 RAO

- Actions conducted in accordance with Remedial Action Plan
- May conduct a RAM

Sites with Class C-2 RAO

- Shall conduct response actions under valid permit or tier classification (or extension)
- May conduct RAM as long as permit, TC or extension is valid
- Shall submit revised RAO if achieved

Future Buildings- Indoor Air Considerations

MassDEP currently working on guidance-opportunity for LSP input

The MCP has two mechanisms currently that address the potential for vapor intrusion at disposal sites that achieve closure prior to the construction of a future building.

- Activity and Use Limitation
- Re-Notification

Activity and Use Limitation

- Sets construction specifications for building (e.g. vapor barrier, subslab depressurization system); or
- Limits construction to areas of disposal site where VOC contamination of groundwater is not present or at low levels

Re-Notification

- In cases where previously submitted RAO did not take into account the potential for future buildings;
- Exemption at 40.0317(17) would not be valid if groundwater concentrations indicate the potential for vapor intrusion (>GW-2)

A note about modeling:

MassDEP's position- Modeling can be used as one line of evidence, but is not sufficiently predictive of indoor air concentrations to be relied upon as the sole determinant of potential exposure.

MassDEP Proposed Approach

Takes into account:

- concentration of contaminant
- proactive installation of active subslab depressurization systems and vapor barriers as part of construction
- Willingness to test indoor air upon completion of building

Category A Site- “Low”

A-2 or B-1 RAO, no AUL, gw < gw-2

Future Building Construction

- Unrestricted use
- No further MCP requirements
- No sampling of indoor air required

Category B Site- “Elevated”

A-3 or B-2 RAO with AUL

A-2 or B-1 (with potential future notification obligation- change of use)

groundwater < X times greater than gw-2

- Vapor barrier and active subslab depressurization system installed & meeting performance standards
- No sampling of indoor air to be required

Category C Site- “High”

A-3 or B-2 RAO with AUL

A-2 or B-1 (with potential future notification obligation- change of use)

groundwater > X times greater than gw-2

- Vapor barrier and active subslab depressurization system installed and meeting performance standards
- 2 years of indoor air sampling required

Previous Slides Notwithstanding,

To achieve the greatest certainty about exposure in future buildings:

- Perform effective source elimination- soil and gw
- Utilize building design with open air at ground level (e.g. garage under)

Releases not subject to MCP

Examples include sites impacted by coal ash and sites where pesticides were applied in accordance with labeling

- Exempt releases pursuant to 310 CMR 40.0317

Handle cautiously:

310 CMR 40.0370- Response actions shall be undertaken for releases of oil and/or hazardous material that do not require notification under 310 CMR 40.0300 if the releases or threats of release pose a significant risk to health, safety, public welfare, or the environment, as described in 310 CMR 40.0900.

Managing Exempt Releases:

- No submittal requirements
- No fees (and no audit potential)
- Develop and implement HASP
- Manage contaminated soil and groundwater in accordance with applicable requirements (e.g. Material Shipping Record)
- Use same standard of care

Part II- Technical Guidance

- No one set of guidance for addressing issue
- Available resources on MassDEP website
 - Construction Policy: WSC-00-425
 - Rail Trail Redevelopment BMP
 - Air Monitoring Guidance (dust)

Large Project?

Encourage your client to utilize an environmental monitor

- Confirm permitting/approvals
- Verify Training and HASP implementation
- Monitor all excavation activities
- Monitor all removed soil
- Ensure soil re-use and or transportation off-site in appropriate manner

Work Considerations- keep “it” on the site

- Perimeter Air and Dust Monitoring
- Dust Control
- Odor Control
- Anti-Track Truck Pads/Truck Decontamination
- Stormwater Control
- Monitor for and cleanup incidental spills

Soil Management

- Plan ahead- appropriate containment
- Separate storage areas- “clean”/re-use/dispose
- Secure storage- snow fencing, haybales
- Locate away from property line and residences (if possible)
- Consider direct load for soil to be recycled or disposed of off-site

Stormwater Management Provisions

Implement a program to address stormwater **regardless** of proximity to receptors

Health and Safety

- Prepare a plan for activities regardless of MCP status- construction worker and visitor protection

Dewatering- potentially contaminated groundwater

Options detailed in 40.0040

- On-Site Discharge (with BWSC approval)
- Off-Site Disposal
- Treat and Discharge to WWTP- local approval
- Discharge to Surface Water- federal approval necessary

In conclusion:

Additional questions?- call or e-mail:

David.Slowick@state.ma.us/413-755-2246

A big thanks to Cathy Wanat and Gail Eckert for helping me get this presentation together.

Thanks and happy holidays!!