

Kentucky Air & Waste Management Association
Murray, KY
April 26, 2019



**KENTUCKY ENERGY &
ENVIRONMENT CABINET**

Anthony R. Hatton, Commissioner
Kentucky Department for Environmental Protection

Topics

1. Brownfields Redevelopment Program
 - KRS 224.1-415
 - 401 KAR 102
2. Proposed amendments to 401 KAR 100:030

Brownfields Redevelopment Program

- 415 was developed promote redevelopment through decreasing uncertainty.
 - How was liability accrued?
 - Causing or possessing and controlling.
 - The program addresses the possessing and controlling aspect.
 - Liability goes to zero for characterization or remediation—as long as the applicant maintains their Property Management Plan (PMP).

- For properties with environmental issues that are real or perceived.
 - Surpasses the Federal BFPP
 - Defined agreement on property use and what constitutes appropriate care and the Department concurs upfront.



Brownfield Redevelopment Program

- 415 Application Process
 - Purchaser Certification
 - Applicant certifies certain things (DEP Form 6056),
 - A \$2,500 one-time fee.
 - Addresses both known and unknown that may be identified later.
 - Does not address releases that might occur by applicant after property purchase.

- Performed All Appropriate Inquiry (before acquiring property).*
 - Presently: Phase I per ASTM standard (ASTM E1527-13),
 - Past: Phase I per ASTM standard at the time + a new Phase I, or
 - Past Pre-ASTM: General accepted practice at the time (pre-ASTM Phase I standard) + a new Phase I.

- A Professional Engineer/Geologist (PE/PG) develops & certifies a PMP based on environmental concerns identified in the AAI.



401 KAR 100:030

Remediation Requirements

- Establishes a process for characterization and remediation of releases pursuant to KRS 224.1-400, KRS 224.1-405 and other cleanup authorities related to the Voluntary Environmental Remediation Program.
- Establishes screening levels for cleanup.
- Cites to guidance for conducting risk assessments.
- Establishes cleanup requirements:
 - No further action,
 - Removal,
 - Management,
 - Removal/Management
- Provides guidance for conducting groundwater investigations.



Areas of Concentration

- Considering provisions for addressing anthropogenic and ubiquitous contaminants of concern (COCs)
- Devising a science based, protective approach to groundwater characterization and corrective action.
 - Considering both contaminant concentrations and contaminant mass in remedial decision making.
 - Setting the context through the use of a Conceptual Site Model.
 - Increasing certainty in the realm of groundwater remediation

Entry Into Superfund

- The entrance and exit through 100:030 is the same no matter what site specific conditions exist
 - Simple look-up chart comparing concentration data exceedances >/< residential RSLs,
 - If > residential RSLs they require corrective action,
 - The res. RSLs become de facto remedial goals.
- RSLs alone ignore site specifics & whether a COC is a regulated issue or not.
 - Anthropogenic background from ubiquitous legacy industrialization,
 - Natural geologic background,
 - Other unrelated anthropogenic activity background.
- Amended to give more use of:
 - Site specific data & information,
 - Other analytical and forensic methods,
 - Professional inference & judgement based on contextual data & information.

Groundwater Characterization & Remediation

- Original 100:030 has no groundwater direction concerning
 - Characterization, &
 - Corrective action.
 - Leaves GW endlessly open ended.
- To fix this & provide final end points drafted, drafted two regulatory layout structures in parallel with:
 - Section 6 Site Characterization Plan, &
 - Section 8 Corrective Action Plan.

Groundwater Characterization & Remediation.....continued

- Section 6 Site Characterization sets forth:
 - The “Conceptual Site Model” as the key deliverable for any groundwater characterization & corrective action, &
 - Outlines the minimum requirements for a CSM to assure the necessary information is gathered.

Corrective Action Plan Options

- Section 8 Corrective Action Plan sets forth in parallel with existing options A & B groundwater end points:
 - Option A No action necessary if/when
 - MCLS or background (naturally occurring) are met,
 - Demonstrates the COCs detected or suspect in groundwater are attributable to another source & not the release under consideration.

Corrective Action Plan Options

- Option B Management In Place — Long-Term Monitoring
 - Delineation complete,
 - Evaluate plume stability and strength
 - May require source mass removal or treatment to :
 - Address off-site contamination
 - Address Vapor Intrusion Issues

Corrective Action Plan Options

- Section 8 Corrective Action plan...:
- Option B Management In Place — No Long-Term Monitoring (Alternative Demonstration)
 - Delineation complete,
 - Source mass removed or sufficiently treated to reduce mass discharge by at least 1 magnitude,
 - Plume stable or decaying,
 - Mass discharge is < 0.001 gram/day, or
 - MD capture zone concentrations calculated at extraction points are $<$ MCLs or ambient background levels for the site's groundwater,
 - Plume is on-site only, &
 - No VI issues/applicable.

PE/PG Requirements

- Include requirement to better streamline deliverables and the cabinet review process.
 - Similar to KRS 224.1-415, & UST 401 KAR Chapter 42.
 - Defined PE & PG:
 - “Professional engineer” means a licensed engineer in accordance with KRS Chapter 322, &
 - “Professional geologist” means a registered geologist in accordance with KRS Chapter 322A.
- Standard requirement in key document/decision making places, e.g.:
 - A certification statement, signature, and stamp or seal by a professional engineer or professional geologist, that the Site Characterization Plan meets and complies with the requirements of this section and Section 7 of this administrative regulation, and has been designed and implemented to assess protection of human health and the environment.
- Adding requirement for responsible party to certify as to the veracity of information submitted to the cabinet.

Status/Questions?

- Working with stakeholders to refine the amendments to the regulation.
 - Industry groups and technical consultants.
- Will in the near future conduct a final stakeholder discussion prior to filing regulations.
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