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 to 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 > residual 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.
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.
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.
• 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.
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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