



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Corrective Action Basics

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Historical Perspective

- Part 213 Regulated Leaking Underground Storage Tanks.
- September 20, 1995 Guidance Document for Risk-Based Corrective Action at Leaking Underground Storage Tanks. DEQ USTD.
- Following ASTM RBCA for Petroleum Release Sites E-1739-95

Historic Perspective Cont.

- Major shift from review and approve to an audit-based program providing a detailed document with the expectations laid out in ASTM RBCA framework with classification based on pathway evaluation of risks to human health and environment.

Historic Perspective Cont.

- Recognition of a clear step wise process to evaluate against statewide Risk Based Screening Levels (RBSLs).
- Consideration of Tier 2 or 3 Evaluations leading to Site Specific Screening Levels (SSTL)
- Detailed Table of Contents and checklists of IAR, FAR and Closure reports on specific timeframes.

Implementation Goals

- Department direction on program implementation easily accessible in writing
- Phase-in period for any reference material and/or changes
- Recognizing the partnership with the consulting community and owner/operators need to reassess and budget

Our Common Endpoint

- Manage risks while prioritizing actions based on pathway analysis using the ASTM RBCA standard as the guide.
- Completion at the least cost necessary to meet the protective objectives and timeframes of Part 213

Exposure Pathways

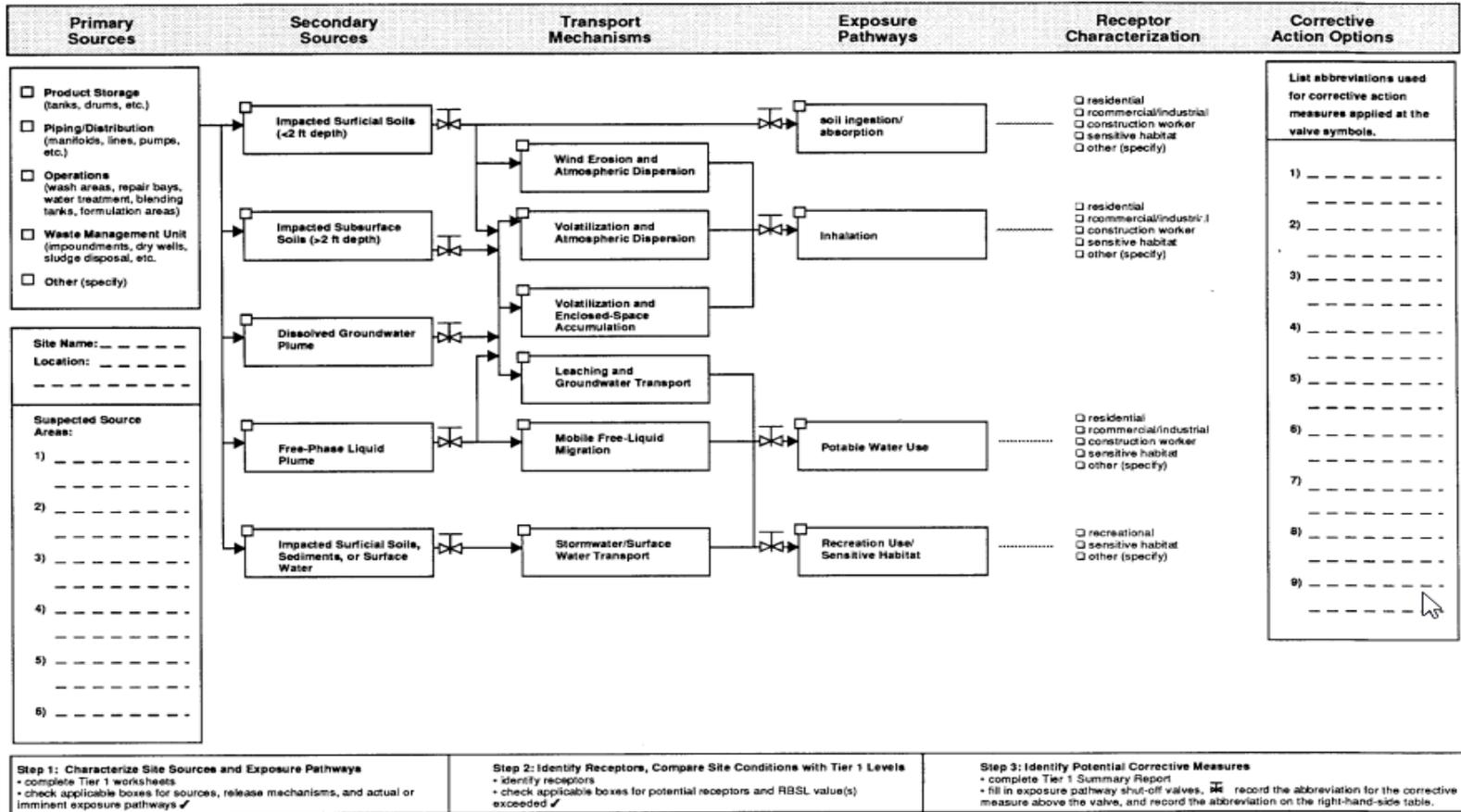
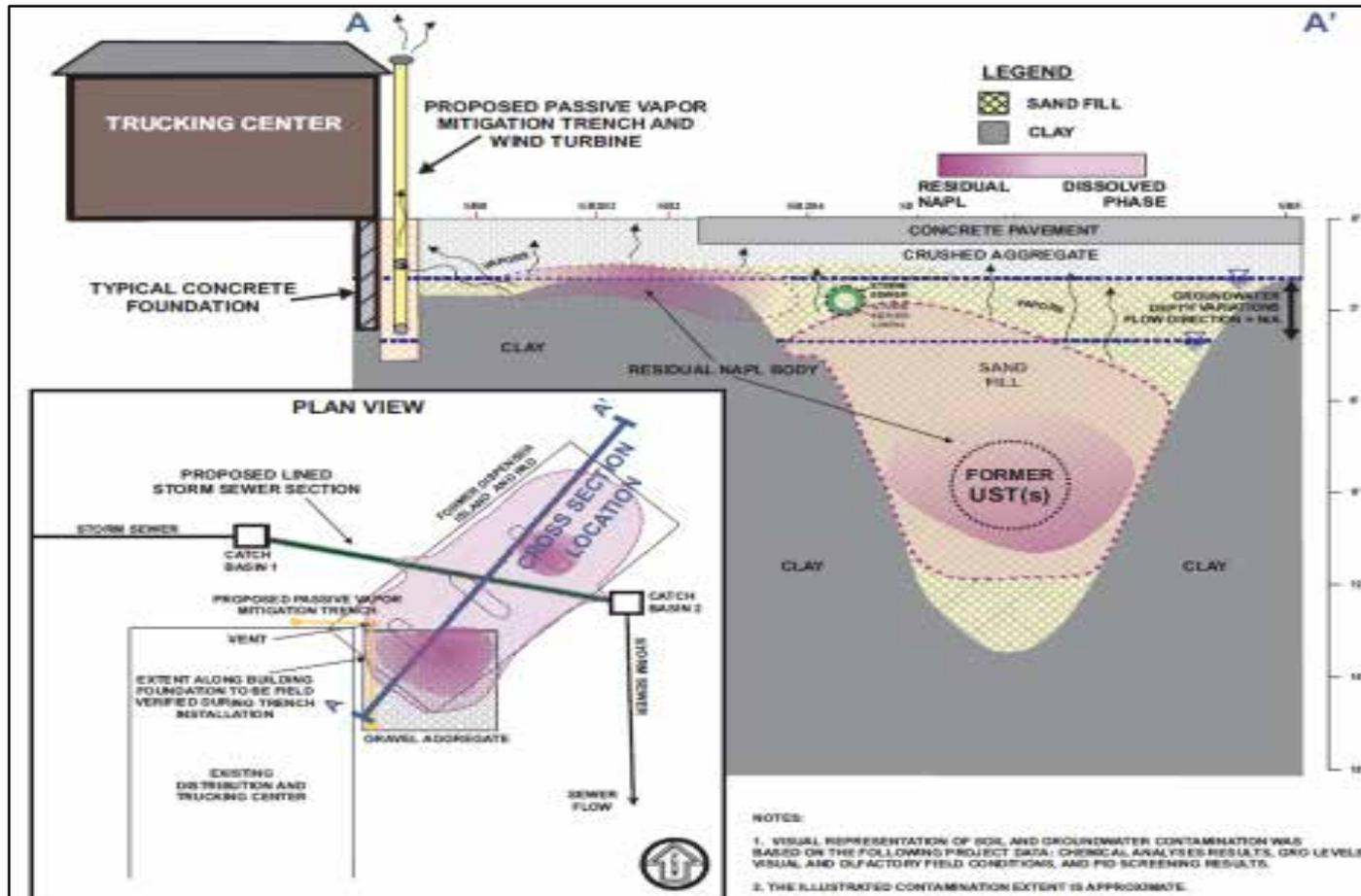


FIG. 2 Exposure Scenario Evaluation Flowchart

Conceptual Site Model



Prioritization Based on Risk

- Classification of risks 1-4
 - Focusing on those highest risk sites and addressing the least risky Class 4 sites to close them out
- Often include Institutional controls
 - Acknowledging that contamination can remain thus limiting land/resource uses to address unacceptable risks

Exceptions to Self Implementation

- SSTLs
- In-situ Injections
- GSI Mixing Zone requests

NAPL

- LNAPL (formerly Free Product) evaluations changed in 2012 amendments to Part 213
 - No longer limited to the presence of an 1/8 inch product
 - Evaluation needs to meet ASTM LNAPL CSM standard E-2531-06 related to recoverability, stability, risk posed and long-term cost effectiveness.
- EGLE Resource Material signed June 2014 which is currently under review.

Source Material Removal

- Most cost effectively dealt with at time of initial tank upgrade via excavation.
- That extra bucket or dump truck full can make it significantly easier to complete a CSM and lead to Closure.

Delineation

- Definition of the extent of contamination. Subjective at times.
- Document should lead from data to CSM to conclusions
- Corrective Actions should include plan to verify the effectiveness of the remedy. 21309a2(c)(ix)
- District Peer Review Meetings - Available to present case study and address questions prior to audit completion.

Chemicals of Concern

- Recommended parameter list to sample. Chemicals of Concern based on Fuel type. Appendix B, republished March 10, 2016 (currently being evaluated)
- 21302g Definition of Contamination
 - “a regulated substance in soil, surface water , or groundwater or air that has been released from an UST system...”

Other Challenges

- Access to adjacent properties to define extent of contamination.
 - Important to document all attempts at access if problematic. Seek EGLE assistance.
 - Statute provides O/O authority to seek court ordered access.
- Divisibility of Harm
 - 21323d(1) addresses a contribution division if multiple releases are comingled
- Closure Verification Sampling sufficiently recent (Site Specific)
 - Factors RC included, Res Wells vs Municipal Water

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