

IS YOUR
CLOSED SITE
REALLY
CLO\$ED?

What is a Closed site?



- Massachusetts Department of Environmental Protection allows for Risk based closures.
- Specifically, a Level of No Significant Risk of harm to health, safety, public welfare and the environment has been achieved.

How is Risk determined?

- Two approaches
- A chemical-specific approach, which compares site concentrations to standards in soil and groundwater.
- A cumulative risk approach which compares site-specific information to a Cumulative Cancer Risk Limit of an Excess Lifetime Cancer Risk of one-in-one hundred thousand, a Cumulative Noncancer Risk Limit which is a Hazard Index equal to one, promulgated health, safety, public welfare and environmental standards, and site-specific conditions.

Three Methods



- Method 1 – Uses existing standards
- Method 2 – adjusts the existing standards for site specific conditions
- Method 3 – Clean up Requirements to be based on a site -specific risk assessment

UST Funded Closures



- Approximately 2100 since 1992
- Method 1 – 47%
- Method 2 – 14%
- Method 3 – 39%

How is Massachusetts different?



- Licensed Site Professional
- Licensed Site Professionals (LSPs) are authorized by the Commonwealth to work on behalf of property owners, operators, and other responsible parties to oversee the assessment and cleanup of contamination that has been released into the environment

What does this mean?

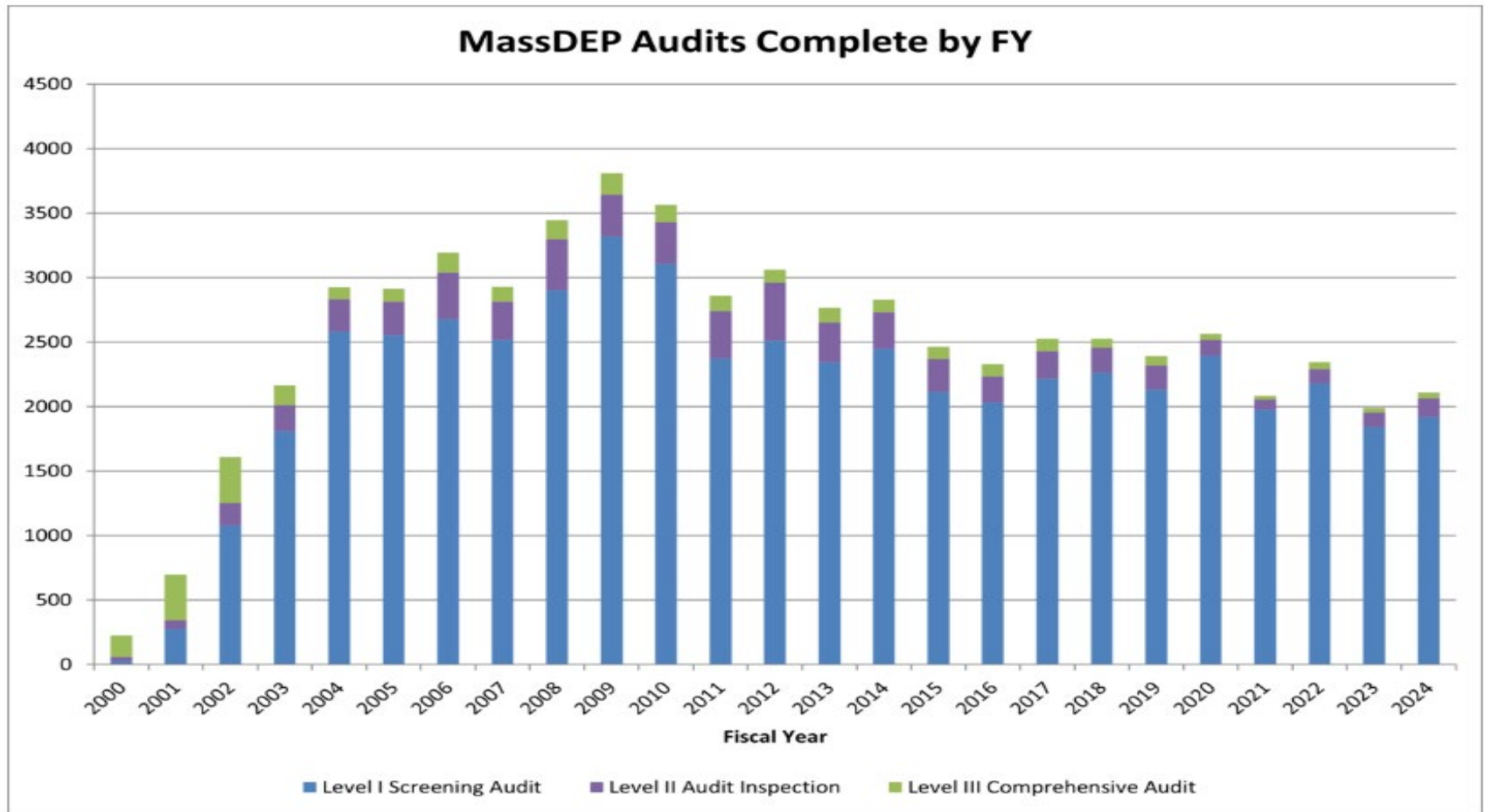


- MassDEP is only directly involved in Managing Tier 1 sites, very few petroleum sites are Tier 1.
- MassDEP is required by statute to audit 20% of the sites that submit a fee.
- MassDEP performs Level 1, Level 2 and level 3

Types of Audits

- Level 1 -a screening review of documentation using standardized technical screening form
- Level 2 -evaluate specific on-going assessment and remedial response actions at active or conditionally closed sites.
- Level 3 - may be based on: results from L1 or L2 audits and specific concerns about sensitive receptors, local conditions, potential risks or other flags.

Audits by Type



MassDEP FY 2024 summary



- A Permanent Solution with No Conditions has been achieved at 38,559 sites (or more than 89%), indicating that the site is suitable for unrestricted use
- But, any one of those statements can be “retracted”.
- Of the approx. 300 active Fund sites, 32 have had at least one permanent closure document retracted. 9 were the result of DEP review

Retraction example #1



- ❑ LSP A submitted a Permanent Solution September 1, 2020. MassDEP performed a Level 1 audit which led to a November 2020 Notice of Noncompliance.
- ❑ LSP A retracted existing and submitted a revised Permanent Solution March 2, 2021
- ❑ Revised Permanent Solution passed a MassDEP Level 1 audit on May 5, 2021.

Retraction examples

- LSP B, working for the new property owner retracted the revised Permanent Solution on October 26, 2023 stating “ Incremental assessment work has since confirmed that groundwater conditions are not consistent with those that served as the basis for MCP Method 3 Risk Characterization filed with the Department in 2021.”

Retraction example #2



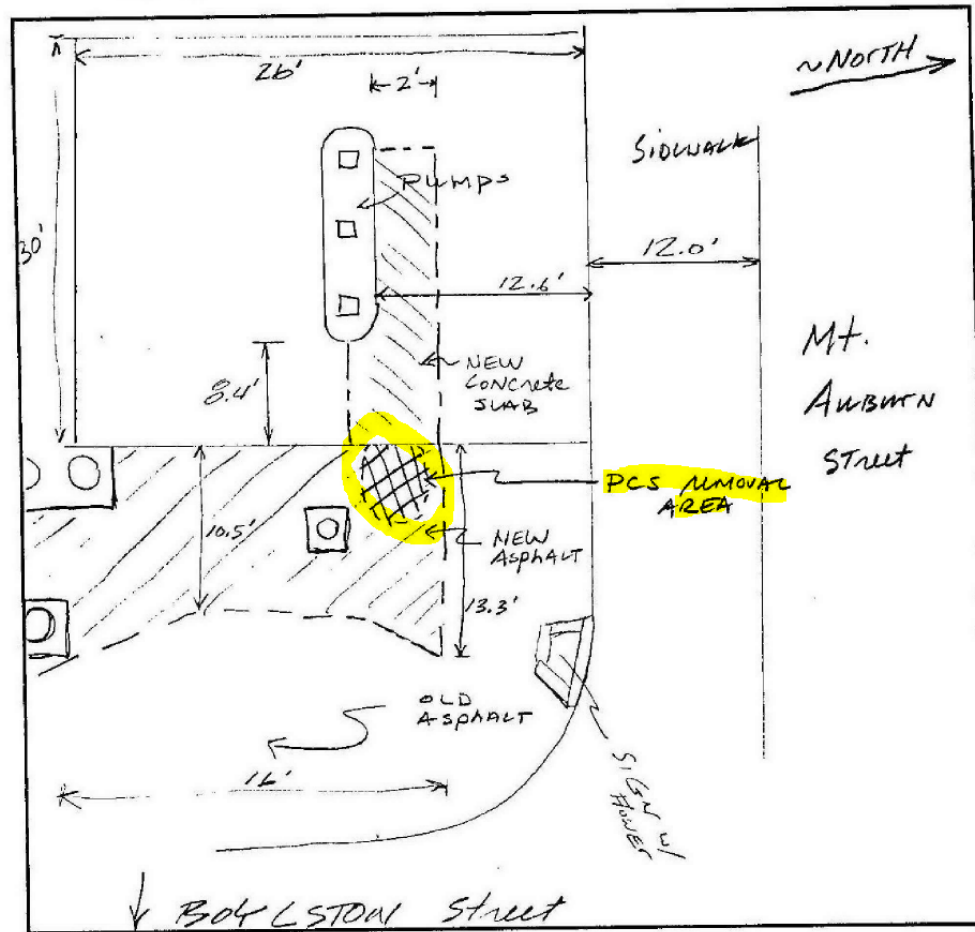
Retraction examples

- LSP A closed RTN 3-4700 with a Permanent Solution/ Method 2 in 1997. According to the report “Nearly five years after the RCF was submitted, **DEP** sent a letter dated July **9, 1997**, to Ms. Takvorian informing her of a Deadline for an Evaluation of a Location to **be** Investigated and recommending that she retain Licensed Site Professional ("**LSP**") to further evaluate the site, It is not clear when **DEP** assigned Release Tracking Number (RTN) 3-0004700 to the site.”

Retraction examples

- The Permanent Solution further stated “The release impacted soil in a small area near the pump islands (the "disposal site"). Apparently, self-serve customers spilled gasoline in this area while refueling their vehicles.”

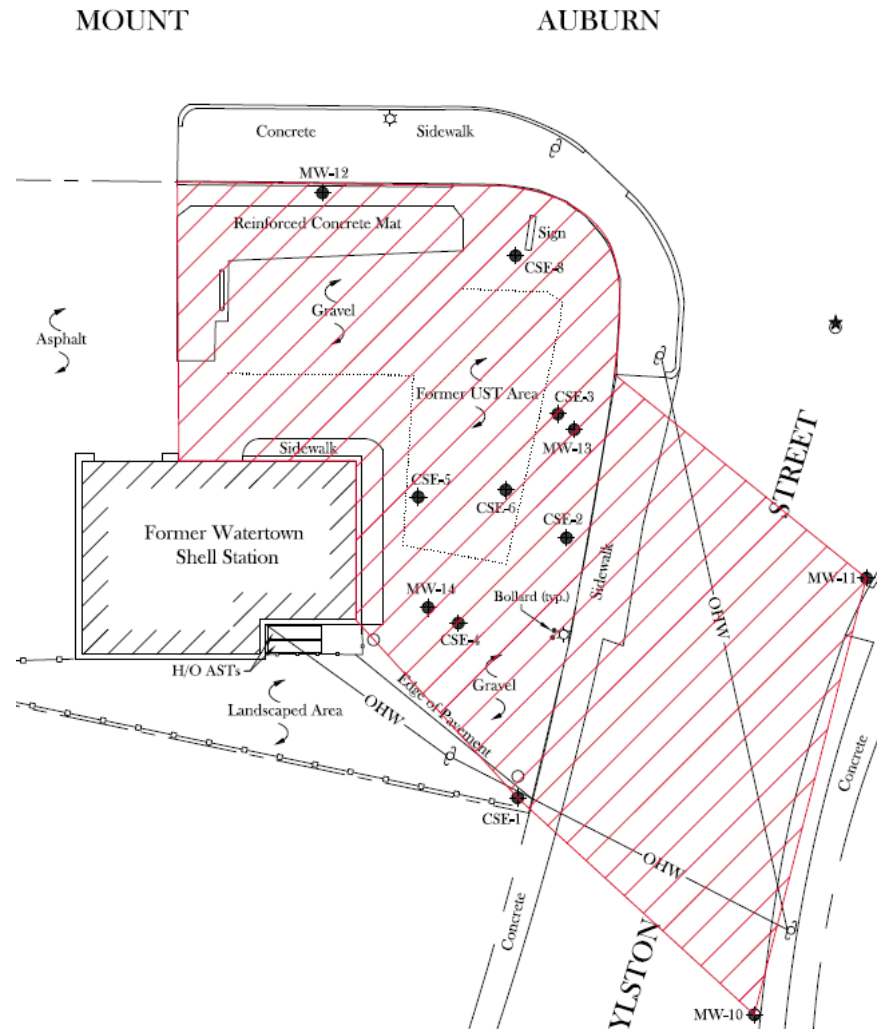
Retraction examples



Retraction examples

- LSP B closed RTN 3-29775 with a Permanent Solution Method 3 in 2015. RTN 3-29775 was assigned when PID readings exceeded 100 ppmv during UST removal in 2011. The Permanent Solution states “The source of OHM detected at this site is associated with the historical on-site storage and dispensing of gasoline or other petroleum products. No current contributing source of OHM impacts to site soil or groundwater are known to remain at the subject property.”

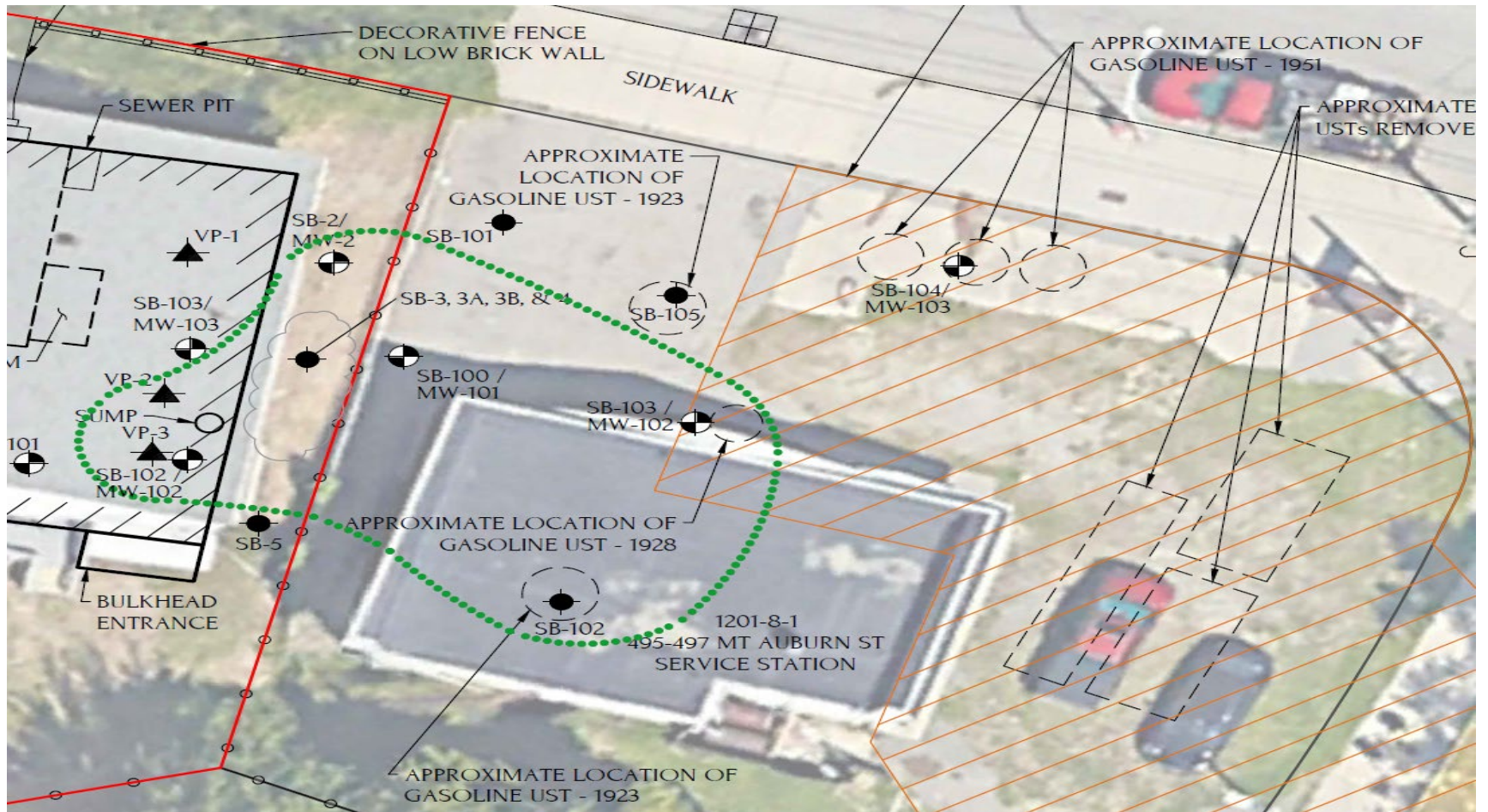
Retraction Examples



Retraction examples

- LSP B retracted his own Permanent Solution on May 17, 2024 after LSP C, working for the 489 Mount Auburn street property owner, reported vapor intrusion in sub slab samples, and identified the 495 Mount Auburn Street property as the source.

Retraction examples



MCP Phase II Requirements



- Massachusetts Contingency Plan
- Phase II –Comprehensive Site Assessment
- Nature and Extent of Contamination, including any and all source(s).

Multiple Release Facilities

- Only sites where Multiple Applications for Eligibility have been submitted (over 300 sites)
- Excluding all sites where a “new” release source was identified, i.e. Threat of Release, documented overfill, accidental damage of UST system.
- 167 facilities where a second release was reported after a Permanent Solution statement was submitted.

Multiple Release Facilities

- Most common “new” release condition is UST system upgrade
- Some (less than 10%) LSP’s argue that new release condition is related to original release and no response actions required.
- Based upon multiple lines of evidence, it was CEC’s opinion that a new release did not occur. CEC submitted Support of a Release Retraction for RTN 2-20394 to MassDEP. MassDEP rejected the retraction and issued a Notice of Noncompliance (NON) submitted to the Owner dated March 26, 2018. This required that a modified Release Notification Form (RNF) describing the release condition as a new release, and IRA Plan be submitted to MassDEP by April 4, 2018.

Source identification



- it was concluded that the soil and ground water concentrations identified in 2001 were attributable to the release previously identified in 1995
- Because of the absence of an obvious current source of gasoline release, it was concluded that the contamination originated from one of the gasoline USTs removed from the site in 1988

Response actions taken



- 130/167 had soil removal as part (or all) of response actions
- 1 - 7004 tons, average 789 tons.
- Majority of Sites are closed

In Closing



- Permanent Solutions aren't necessarily Permanent
- The Cost of a clean up for a “release” is open to interpretation.
- LSP's are not infallible