

Presentation of Environmental Testing Results

KILEY BARREL SITE, SOMERVILLE, MASSACHUSETTS
RTNS 3-2849, 3-28464, 3-28512



Selected Slides

June 8, 2009

Introduction

- INTRODUCTIONS
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- SITE HISTORY
- What we did/What we found/What it means/What we're doing
- RESULTS OF RECENT ASSESSMENT
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 - SURFACE SOIL
- RISK ASSESSMENT RESULTS
- FUTURE RESPONSE ACTIONS

Site Management and Primary Contacts



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Site History & Description

- Site is comprised of eight parcels located at the corner of Somerville Ave and Prospect Street.
- Kiley Barrel operated a drum storage and cleaning facility for approximately 60 years until 1989 on six of the eight parcels that comprise the site (20-22 Prospect Street, 9-10 Milk Place, and 8, 14, and 16-20 Bennet Street).
- Reportedly, up to 300,000 barrels were stored at the site at one time.

Site History & Description continued



- Drums were steam cleaned in a one-story wood and metal building that formerly occupied the majority of 14 Bennet Street and a portion of 16-20 Bennet Street. The building had a dirt floor, and a floor drain was located in the eastern-most portion of the building. Wastewater generated by steam cleaning barrels was washed into the floor drain, which discharged to the municipal sewer.

Site History & Description continued



- An office and trailer were formerly located on the 20-22 Prospect Street parcel. The barrel cleaning building was demolished in 1998, and the floor drain, several drums, and two 275-gallon underground storage tanks (USTs) were removed from the Site.
- Reportedly, no barrel cleaning was performed from 1984 to 1989 as the facility was only used as a distribution point. The business ceased operations in 1989 due to the death of Mr. James Kiley, the owner.

Site History & Description continued



- City and Somerville Redevelopment Authority purchased the majority of the Kiley Barrel Site parcels between mid to late 1990s for the purpose of redevelopment.
- In 2005, City's Office of Housing & Community Development prepared applications to receive funds to complete site assessment work – specifically, potential vapor intrusion from historic releases of volatile organic compounds (VOCs) into groundwater.

Site History & Description continued

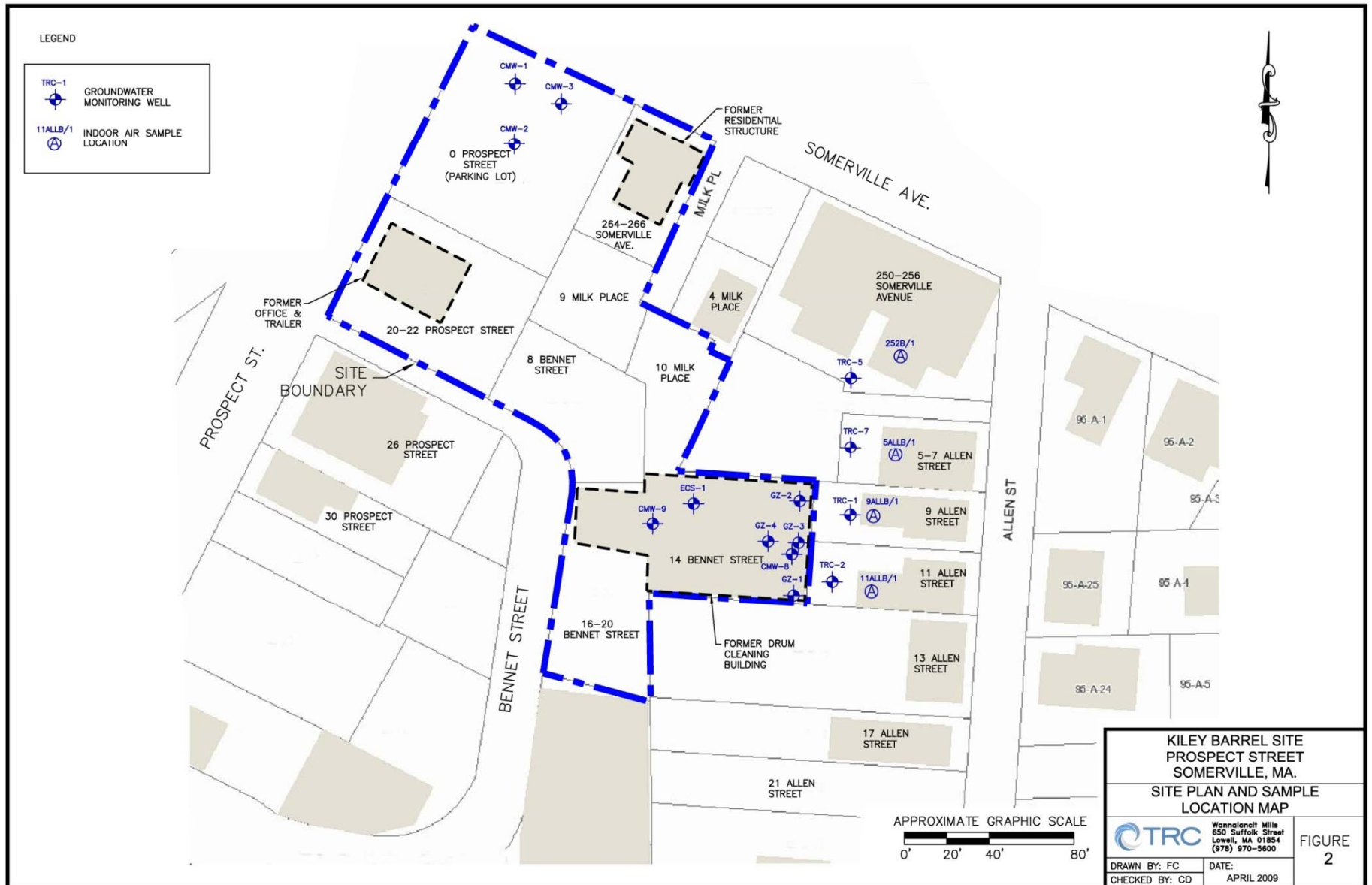


- In 2006, City granted EPA Brownfields funds to complete the investigation. Hired TRC to manage the Brownfields Program. A portion of these funds used to create the 30 Allen Street community garden.
- In 2008, City removed contaminated surface soil and installed crushed stone to minimize dust generation.
- In 2009, MassDEP requested that indoor air, groundwater, and soil testing be performed at adjacent properties.

What We Did: Groundwater & Indoor Air Testing

- Tested groundwater for volatile organic compounds (VOCs) from:
 - on-property monitoring wells
 - new off-property monitoring wells
- Tested indoor air for VOCs at off-property locations:
 - 5-7 Allen Street
 - 9 Allen Street
 - 11 Allen Street
 - 250 Somerville Avenue

Disposal Site Map: Groundwater & Indoor Air Sample Locations



What We Did: Soil Testing

- Tested surface soil for metals and polychlorinated biphenyls (PCBs) at off-property residential locations:
 - 4 Milk Place
 - 250-256 Somerville Avenue
 - 5-7 Allen Street
 - 9 Allen Street
 - 11 Allen Street
 - 13 Allen Street
 - Bennet Street.

What We Found: Groundwater

- On-Property: Three VOC compounds (1,2-dichloroethane, cis-1,2-dichloroethylene, and vinyl chloride) were detected at concentrations that exceed MCP Method 1 GW-2 standards.
- Off-Property: 1,2-dichloroethane and vinyl chloride were detected at concentrations that exceed MCP Method 1 GW-2 standards at 11 Allen Street.

What We Found: Indoor Air

- Several VOCs (1,2-dichloroethane, 1,4-dichlorobenzene, benzene, carbon tetrachloride, methylene chloride, and trichloroethene) were detected above “typical indoor air concentrations” in several indoor air samples.
- Many of these same compounds were detected in an ambient air sample collected outdoors.

What We Found: Soil

- Elevated levels of metals, primarily arsenic and lead, at all off-property location

Planned Response Actions

RTN 3-28464 – Vapor Intrusion

- Conduct three (3) additional rounds of indoor air sampling
- Conduct two (2) rounds of sub-slab soil gas monitoring
- Install additional monitoring wells to assess extent of elevated compounds
- Addresses:
 - 4 Milk Place
 - 5-7 Allen Street
 - 9 Allen Street
 - 11 Allen Street
 - 13 Allen Street
 - 250 Somerville Avenue

Planned Response Actions

RTN 3-28512 – Soil

- Discuss approach to address Imminent Hazard with property owners. Options include, but not limited to:
 - Removal and replacement of surface soil.
 - Asphalt paving.
 - Replacement of vegetable gardens with raised planting beds.
- **Addresses:**
 - 4 Milk Place
 - 250-256 Somerville Avenue
 - 5-7 Allen Street
 - 9 Allen Street
 - 11 Allen Street
 - 13 Allen Street
 - 17 Allen Street.

Closing Thoughts

- Vapor intrusion is not causing significant risk to occupants of residential properties
- Exposure to soil contamination can be controlled until remedy is conducted

Questions?