80-90 Bridge Street Site (Newton) Public Meeting

The meeting will begin shortly.

Please mute your line and turn off video.

Please be patient while others join.

Project Update and Request for Comments

80-90 Bridge Street Site
Newton, MA

Meeting Date: February 25, 2021

Meeting Procedures

1. Please mute your line.
2. Please turn off video.
3. Please hold questions until the end as they may be answered.
4. At the end of the presentation, questions can be submitted in writing via the chat feature.
5. Callers will also be able to ask questions once the written questions have been answered.

Agenda and Purpose of Presentation

1. Provide background information to those unfamiliar with the Site
2. Explain and request written comments on three documents addressing parts of the Site:
    - Interim Phase II – Comprehensive Site Assessment Report
    - Partial Permanent Solution Statement
    - Activity and Use Limitation for 80-90 Bridge Street
3. Answer questions from the public

Background

Key Parties Involved

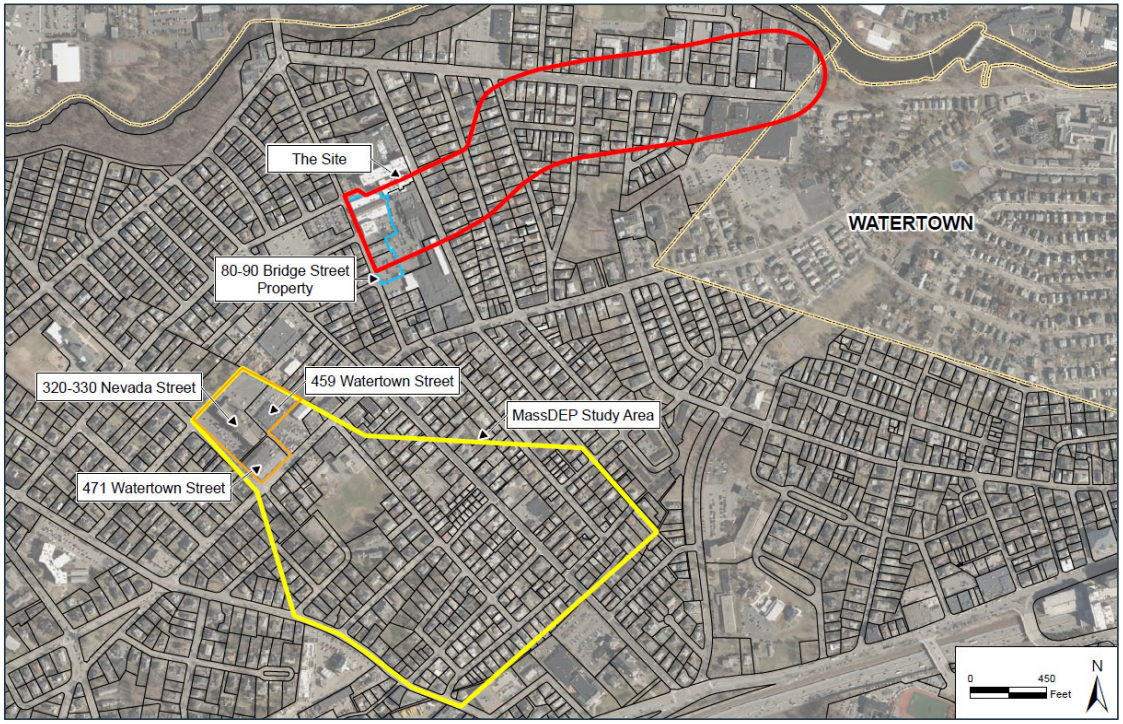
- Chapelbridge Park Associates (Chapelbridge) – current owner of the 80-90 Bridge Street property
- Wood Environment & Infrastructure Solutions, Inc. (Wood) – environmental engineering and consulting firm
- Matt Grove, Ph.D., LSP – Licensed Site Professional (LSP) directing assessment and cleanup activities
- MassDEP – environmental regulatory agency

Site Location

- 80-90 Bridge Street, former 102 Bridge Street, 59-85 Chapel Street, and a portion of the neighborhood east of Chapel Street

- Contamination from industrial activities that ended decades ago
  - Chlorinated solvents trichloroethene (TCE) and tetrachloroethene (PCE)
  - Metals and cyanide

- Not related to the 459-471 Watertown and 320-330 Nevada Street Site

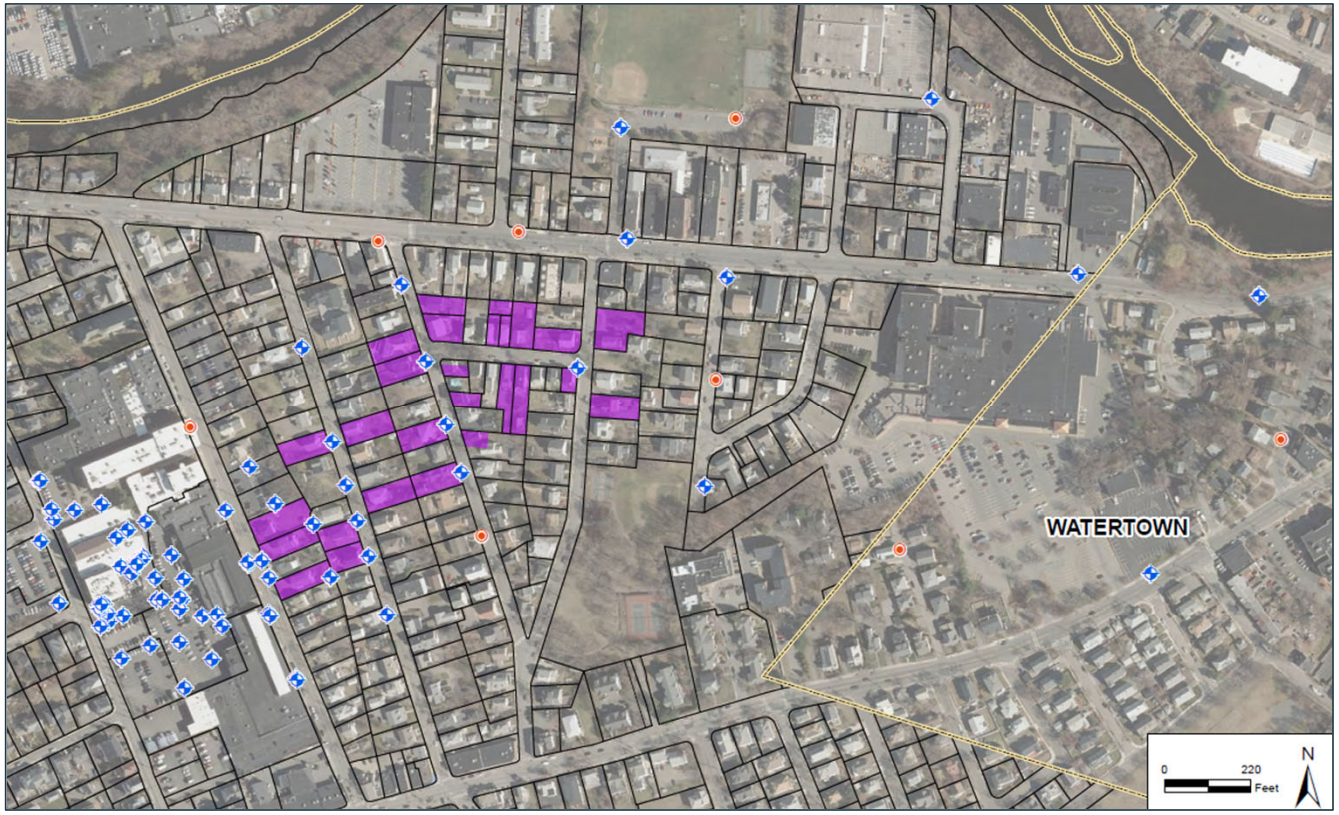


Location of 80-90 Bridge Street Site relative to the 459-471 Watertown and 320-330 Nevada Street Site

History of Use

- Textile manufacturing from 1850s to 1930s
- Raytheon Corporation occupied the property from the 1940s to 1965
  - High technology manufacturing and R&D facility
  - Included a laboratory and chemical storage
- Ferrotec Inc. manufactured electronic components from 1965 to 1972
- General Connector Corporation manufactured electrical connectors from 1972 to 1986
- Commercial office space and R&D use since 1986

Current Status



Monitoring wells (blue symbols), Geoprobe soil borings (red symbols), and residential properties investigated for vapor intrusion (purple shading)

- Sources of contamination were removed in the 1980s.
- The limits of soil and groundwater contaminants have been determined.
- A vapor intrusion assessment is ongoing in certain homes.
- A sub-slab depressurization system (SSDS) has eliminated vapor intrusion into 80-90 Bridge Street.
- No current risk to workers at 80-90 Bridge Street or 59-85 Chapel Street.
- Of the 51 homes tested to date, SSDSs have been installed in two residences to eliminate vapor intrusion where risks were identified.
- SSDS have also been installed in nine additional residences to eliminate Critical Exposure Pathways (CEPs).
- 23 basements have been sealed to mitigate or eliminate vapor intrusion.

Documents Available for Public Comment

Interim Phase II – Comprehensive Site Assessment Report
Partial Permanent Solution Statement
Activity and Use Limitation for 80-90 Bridge Street

Context of the Documents

- Interim Phase II Report
  - Describes completed soil and groundwater investigation as well as vapor intrusion assessment to date
  - Provides results of site-specific risk assessment
  - Additional vapor intrusion sampling will be conducted in certain homes
- Partial Permanent Solution
  - Applies to commercial properties and 18 residences
  - Additional residences to be closed out as assessment is completed
- Activity and Use Limitation (AUL)
  - Memorializes certain restrictions, conditions, and obligations required to maintain No Significant Risk

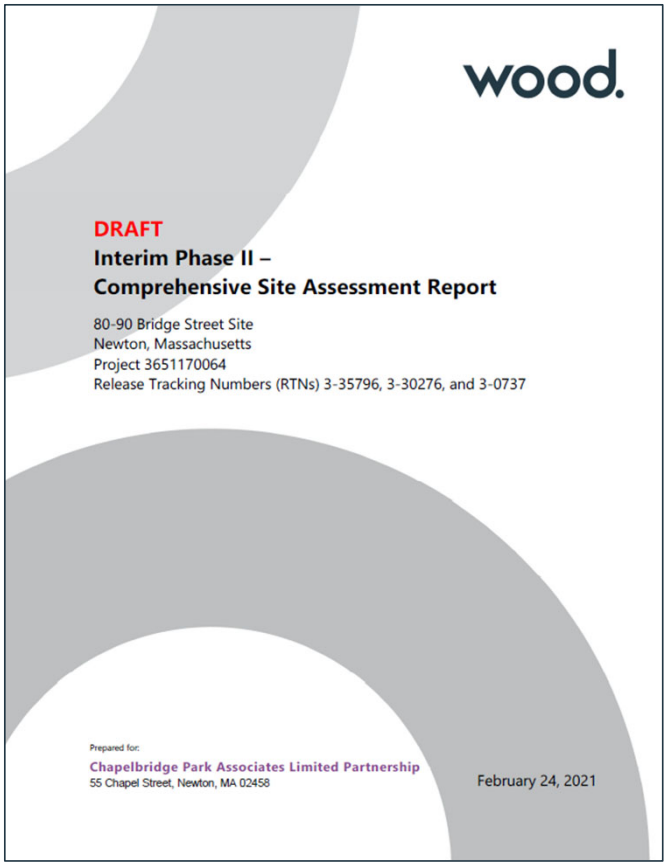
Interim Phase II – Comprehensive Site Assessment Report

Interim Phase II – Comprehensive Site Assessment Report

- **Purpose:** Document progress made to date in meeting Massachusetts Contingency Plan (MCP) requirements for comprehensive site assessment.
- **Objective of Phase II:**
  - Characterize the source, nature, and extent and migration pathways of contamination.
  - Evaluate exposure pathways and potential risk to health and the environment.
- **Document Includes:**
  1. Findings and conclusions from work conducted to date
  2. Site-specific (Method 3) risk assessment
  3. Summary tables and figures of data

Note:

- Multiple rounds of soil, groundwater, soil gas, and indoor air sampling have been conducted.
- The vapor intrusion assessment is ongoing, and access is required at additional properties.
- Supplemental Phase II CSA Report(s) addressing additional residences will be prepared after the vapor intrusion assessment is completed.



Investigation Summary (2017 – 2020)

- Installed six pairs of shallow and deep groundwater wells to delineate vertical extent of contamination
- Installed 55 soil borings and 32 shallow wells to delineate the horizontal extent of contamination
- Conducted nine rounds of seasonal groundwater monitoring from 18 to 47 wells over three years (2017 - 2020) to characterize groundwater conditions
- Assessed 51 residences for potential vapor intrusion to date
- Conducted eight rounds of seasonal residential vapor intrusion sampling over more than two years

Soil and Groundwater Sampling

Conventional Drill Rig (top left)
Geoprobe Drill Rig (bottom left)
Monitoring Well Covers (above)

- Soil samples collected using a drill rig to advance cores into the ground
- Groundwater samples collected primarily from permanent monitoring wells
- Samples analyzed by commercial laboratories for chemicals related to the Site

What is Vapor Intrusion?

- Vapor intrusion is gas (vapor) entering a building from the subsurface.
- The most well-known example of vapor intrusion is radon.
- At the 80-90 Bridge Street Site, vapors are coming from contaminated groundwater.
- Note that groundwater in Newton is NOT used for drinking water!

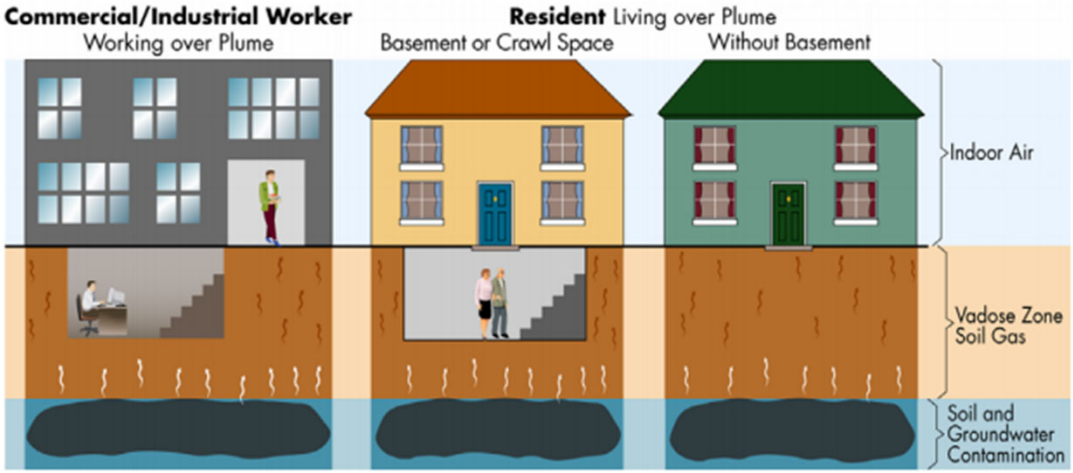


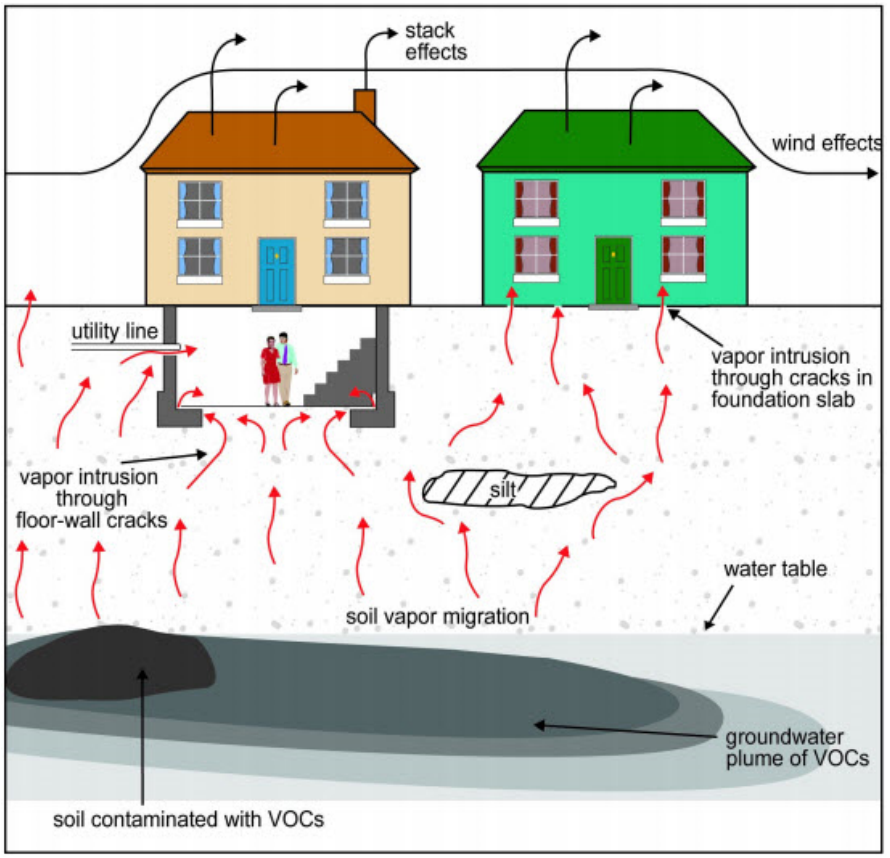
Figure 1-1. Typical conceptual model of vapor intrusion.

From "Vapor Intrusion Pathway: A Practical Guideline"
prepared by the Interstate Technology Regulatory Council (ITRC)

Factors that Affect Vapor Intrusion

Vapor intrusion into a building is affected by:

- The concentration of the contaminant in groundwater.
- The depth of groundwater beneath the building.
- The construction of the building.
  - Does the building have a basement?
  - Are there cracks or gaps in the slab or basement walls?



From the United States Environmental Protection Agency Vapor Intrusion website (https://www.epa.gov/vaporintrusion/what-vapor-intrusion)

Vapor Intrusion Assessment

Goal of investigation is to determine if the vapor intrusion pathway is:

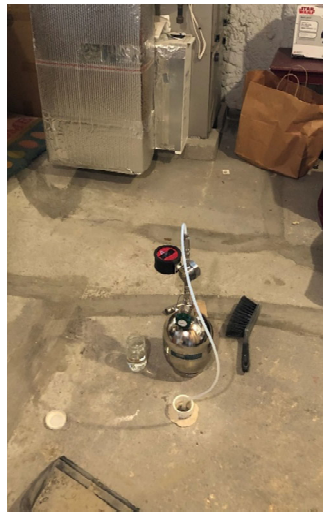
- complete (vapors are entering the building) and
- likely to be of concern (concentrations above risk levels)

- Collect samples of sub-slab soil gas and indoor air in areas of higher groundwater concentrations (generally above MassDEP GW-2 standards).

- Compare results to:
  - Residential Sub-Slab Soil Gas Screening Values
  - Residential Indoor Air Threshold Values

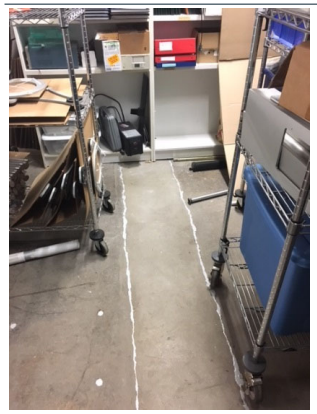
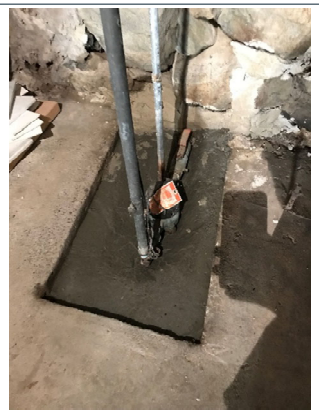
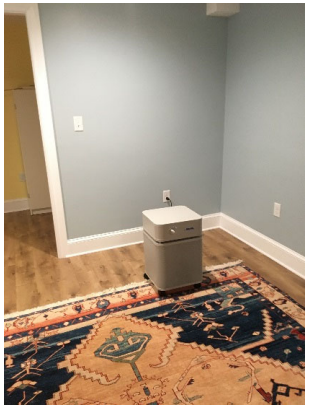
- If indoor air concentrations are above MassDEP's Threshold Values in living or working space, then a Critical Exposure Pathway (CEP) exists

- Complete preliminary risk calculations to evaluate short-term exposure risks (Imminent Hazards) and long-term exposure risks



Installation and sampling of a sub-slab soil gas point (above)
Canister for sampling indoor air (below)

Vapor Intrusion Mitigation Measures

Sealing cracks and gaps and an air purifying unit (APU) (above)
Sub-slab depressurization system (SSDS) extraction pipe, pressure gauge, and fan (below)



If a CEP is determined to exist, then follow-up actions may include one or all of the following:

- Sealing of accessible gaps or cracks in the basement floor or walls
- Installation of air purifying units (APUs) as a temporary measure
- Installation of an SSDS as permanent measure
- Sampling to confirm the effectiveness of the implemented measures

Site-Specific (Method 3) Risk Characterization Process

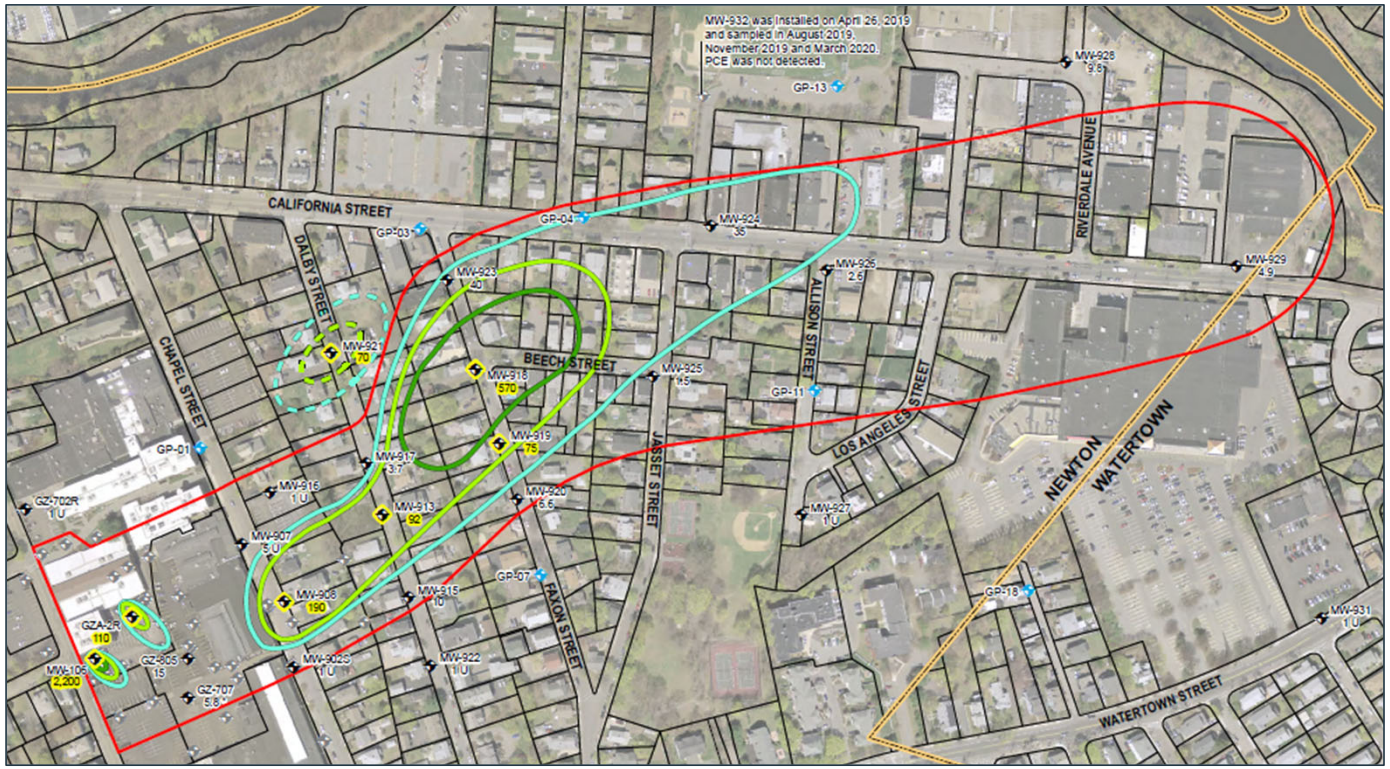
1. **Identify nature and location of contamination**
    1. What is the nature of the contamination? (e.g., volatile chemicals, metals)
    2. Which media? (e.g., soil, groundwater, indoor air)
2. **Identify who could be exposed, where they would be exposed, and to how much they would be exposed**
    1. Identify people or environmental receptors (e.g., a resident or worker, or birds/fish)
    2. Identify locations (e.g., a home or a commercial property)
    3. Calculate concentrations of chemicals at each location
3. **Evaluate the potential effects of the chemicals on people and environmental receptors**
4. **Calculate cancer and non-cancer risks**

Findings and Conclusions – Soil

Green highlighted soil borings were non-detect for PCE and TCE. Yellow highlighting indicates concentrations above applicable standards.

- The extent of VOCs, metals, and cyanide remaining in soil has been delineated.
- Residual soil contamination is primarily limited to the upper 10 feet of soil beneath and immediately adjacent to the 80-90 Bridge Street buildings.
- The shallow soil VOC contamination is limited to the 80-90 Bridge Street, former 102 Bridge Street, and 59-85 Chapel Street properties.

Findings and Conclusions –Groundwater



Tetrachloroethene (PCE) in shallow groundwater from May 2019. Yellow highlighted results exceed MassDEP GW-2 criteria.

- The horizontal and vertical extent of VOC, metals, and cyanide in groundwater has been delineated.
- The highest concentrations of VOCs are found in wells located within the former source areas and concentrations rapidly decrease by an order of magnitude, or more, downgradient.
- VOC contamination is limited to the shallow groundwater zone, except in the source areas immediately outside the 80-90 Bridge Street building.
- Other sources of chlorinated VOCs are contributing to observed concentrations in groundwater east of Chapel Street

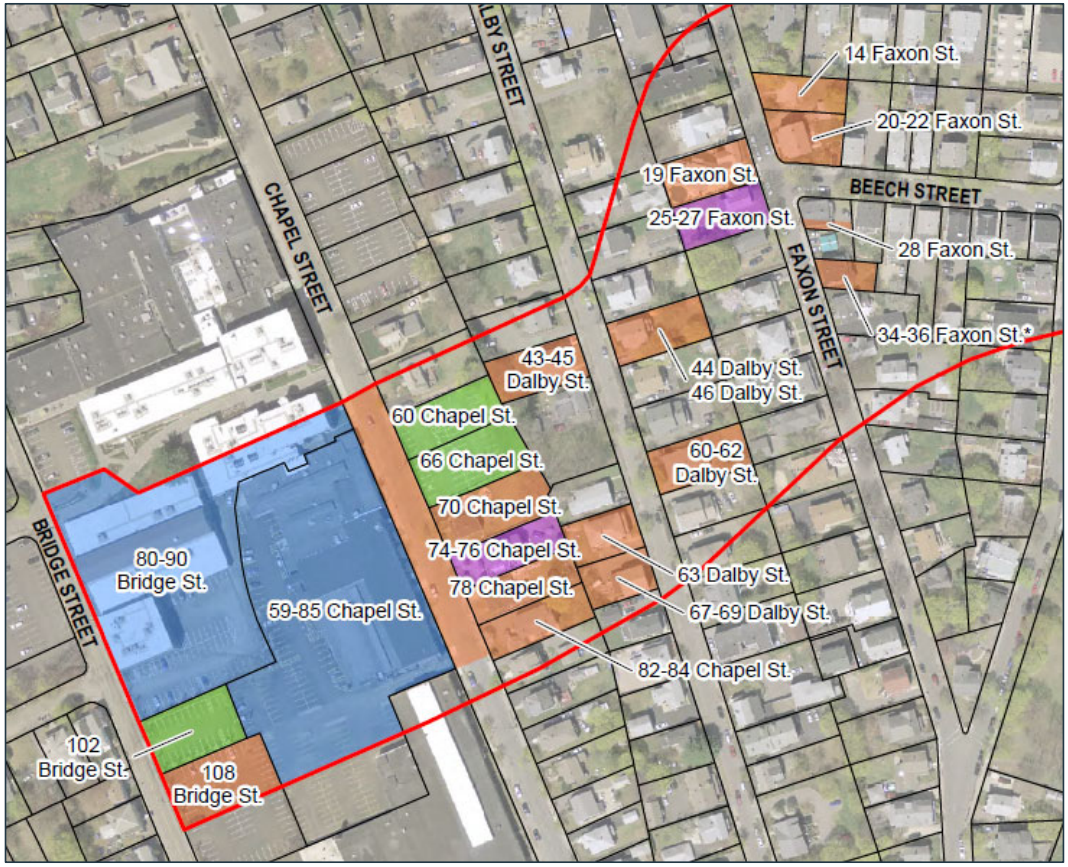
Findings and Conclusions - Vapor Intrusion Assessment

- Indoor air sampling conducted in 51 residences to date
  - No Critical Exposure Pathway (or CEP) in 34 residences (Site-related indoor air contaminants were not detected above MassDEP Threshold Values in living or working spaces).
  - CEPs identified in 15 residences (Site-related indoor air contaminants were detected above MassDEP Threshold Values in living or working spaces).
  - CEP eliminated, or mitigated, in 12 residences by sealing or installing sub-slab depressurization systems (SSDS).
  - Two residences had indoor air concentrations that posed a short-term or long-term risk. SSDSs were installed at both residences to eliminate vapor intrusion and mitigate risk.
- Access needed at additional properties to continue the vapor intrusion assessment

Next Steps - Vapor Intrusion Assessment

- Continue to investigate where the vapor intrusion pathway is complete and likely to be of concern.
- The vapor intrusion pathway is not likely to be of concern beyond a boundary where:
  - a condition of No Significant Risk exists, and
  - no Critical Exposure Pathways (CEPs) exist.
- Goal is to collect seasonal samples for about one year (three to four seasonal rounds).
- Access to additional residences may be requested based on the findings of the current sampling.

Findings and Conclusions – Method 3 Risk Characterization

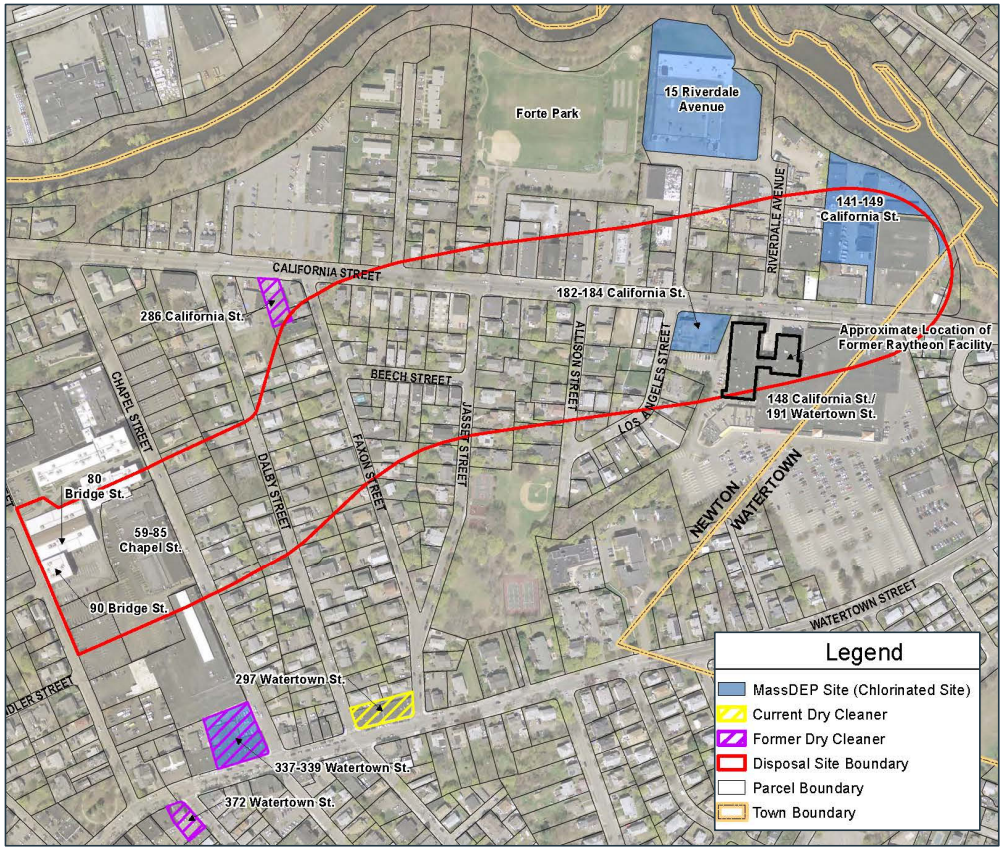


Commercial properties with AULs (blue shading), commercial properties with non-AUL restrictions (green shading), residential properties where AULs are needed (purple shading), and properties with no conditions (orange shading).

- No current risk to health
- No future risk to health with the implementation of AULs
  - 80-90 Bridge – maintain SSDS and restrict residential use
  - 59-85 Chapel – restrict residential use
  - 76 Chapel – maintain SSDS
  - 27 Faxon – maintain SSDS
- No current or future risk to public welfare, the environment, and safety

Unrelated Releases

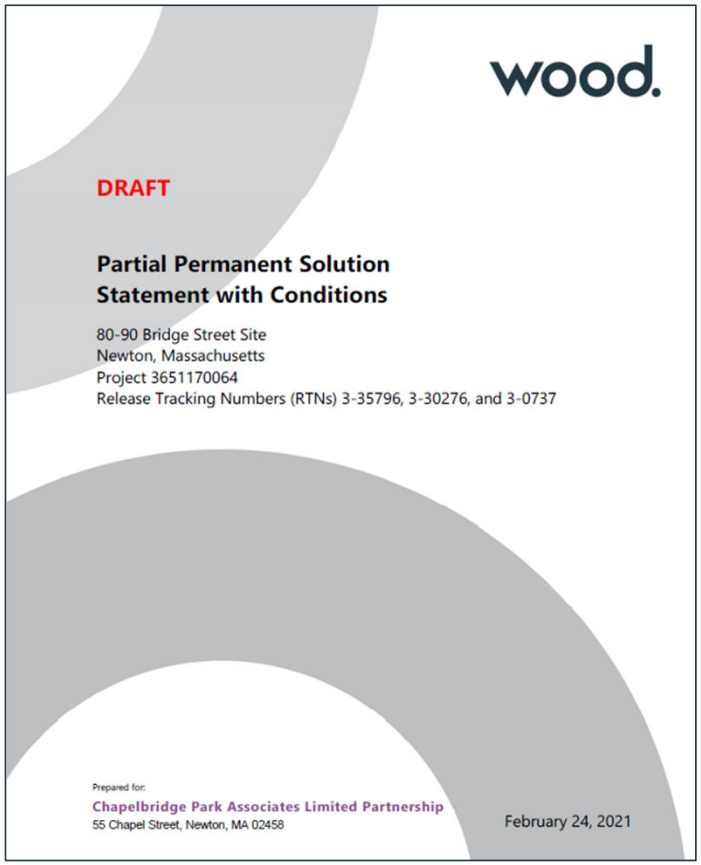
- VOCs routinely detected in groundwater monitoring wells upgradient of the Site are evidence of off-Site VOC contamination
- As investigation expanded away from source area it was anticipated that contamination unrelated to the Site would be encountered
- Area along and north of California Street includes
  - Current or former dry cleaners
  - Manufacturing facilities
  - Other MassDEP chlorinated VOC sites



Partial Permanent Solution Statement

Partial Permanent Solution Statement

- **Purpose:** describes the portions of the Disposal Site that have achieved a Permanent Solution with and without conditions.
- **Objective:**
  - Summarize the evidence for why a Permanent Solution exists at each property.
  - Explain which properties require AULs or other conditions.
- **Document Includes:**
  - Evaluations of need to:
    - Eliminate or control sources
    - Assess, eliminate, or control migration
    - Reduce concentrations to background
  - Description of conditions required to maintain Permanent Solution:
    - Operation, maintenance, and monitoring
    - AULs
    - Other conditions (non-AUL)



Criteria for a Permanent Solution

Permanent Solution

1. Property has been adequately assessed;

2. A level of No Significant Risk exists or has been achieved;

3. All sources of OHM have been eliminated or controlled to the extent feasible;

4. Contamination has been reduced as close to background levels as feasible; and

5. Concentrations do not exceed applicable Upper Concentration Limits

No Conditions

Maintaining a condition of No Significant Risk is not dependent on any use restrictions, exposure pathway mitigation systems, or other limitations.

AUL Conditions

Maintaining a level of No Significant Risk requires the implementation of an AUL.

Non-AUL Conditions

Best management practices for non-commercial gardening, and

Evaluation of the vapor intrusion pathway prior to the construction of any occupied building.

Conclusions of the Partial Permanent Solution

- The sources of contamination have been eliminated:
  - Manufacturing was discontinued and the chemicals and equipment were removed.
  - Contaminated soil beneath the 80 Bridge Street building was removed to the extent feasible.
- There are no current risks to human health, and no current or future risks to public welfare, the environment, or safety.
- AULs have been or will be put in place to address future risks to human health.
- It is not feasible to achieve or approach background in soil or groundwater as the costs are substantial and disproportionate to the reduction in risk as a condition of No Significant Risk already exists.

Properties included in the Partial Permanent Solution

Commercial properties with AULs (blue shading), commercial properties with non-AUL restrictions (green shading), residential properties where AULs are needed (purple shading), and properties with no conditions (orange shading).

Permanent Solution with AULs:

- 80-90 Bridge Street (AUL needed to require continuous operation of the existing SSDS).
- 59-85 Chapel Street (AUL exists to limit future use of the property).

Permanent Solution with non-AUL Conditions:

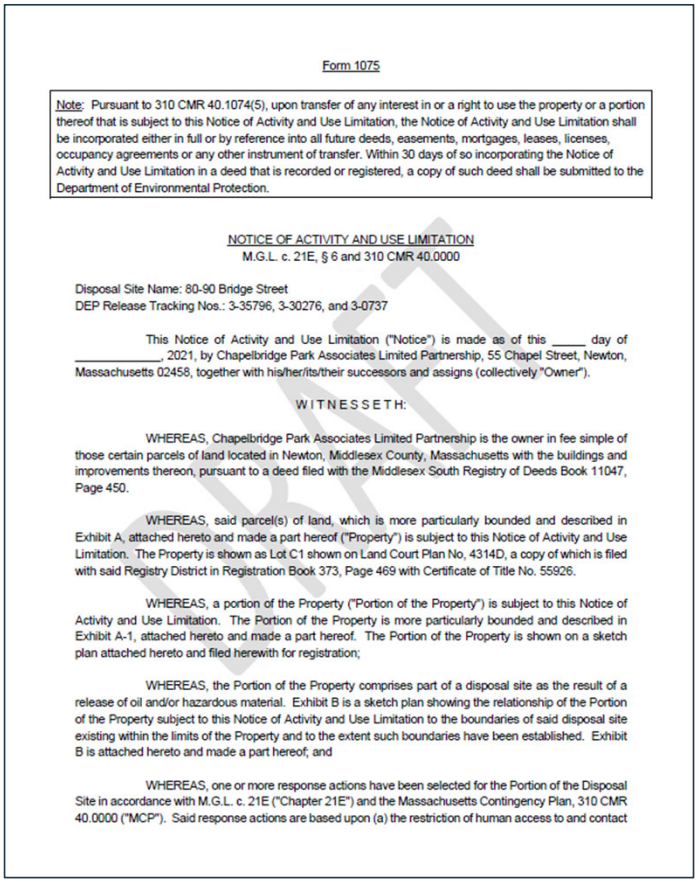
- 60 and 66 Chapel Street
- 102 Bridge Street

Permanent Solution with No Conditions:

- 108 Bridge Street
- 70 Chapel Street
- 43, 45, 44, 46, 60-62, 63, and 67-69 Dalby Street
- 14, 19, 20, and 22 Faxon Street

Activity and Use Limitation for 80-90 Bridge Street

Activity and Use Limitation for 80-90 Bridge Street



Form 1075

Note: Pursuant to 310 CMR 40.1074(5), upon transfer of any interest in or a right to use the property or a portion thereof that is subject to this Notice of Activity and Use Limitation, the Notice of Activity and Use Limitation shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer. Within 30 days of so incorporating the Notice of Activity and Use Limitation in a deed that is recorded or registered, a copy of such deed shall be submitted to the Department of Environmental Protection.

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: 80-90 Bridge Street
DEP Release Tracking Nos.: 3-35796, 3-30276, and 3-0737

This Notice of Activity and Use Limitation ("Notice") is made as of this _____ day of _____, 2021, by Chapelbridge Park Associates Limited Partnership, 55 Chapel Street, Newton, Massachusetts 02458, together with his/her/its/their successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, Chapelbridge Park Associates Limited Partnership is the owner in fee simple of those certain parcels of land located in Newton, Middlesex County, Massachusetts with the buildings and improvements thereon, pursuant to a deed filed with the Middlesex South Registry of Deeds Book 11047, Page 450.

WHEREAS, said parcel(s) of land, which is more particularly bounded and described in Exhibit A, attached hereto and made a part hereof ("Property") is subject to this Notice of Activity and Use Limitation. The Property is shown as Lot C1 shown on Land Court Plan No, 4314D, a copy of which is filed with said Registry District in Registration Book 373, Page 469 with Certificate of Title No. 55926.

WHEREAS, a portion of the Property ("Portion of the Property") is subject to this Notice of Activity and Use Limitation. The Portion of the Property is more particularly bounded and described in Exhibit A-1, attached hereto and made a part hereof. The Portion of the Property is shown on a sketch plan attached hereto and filed herewith for registration;

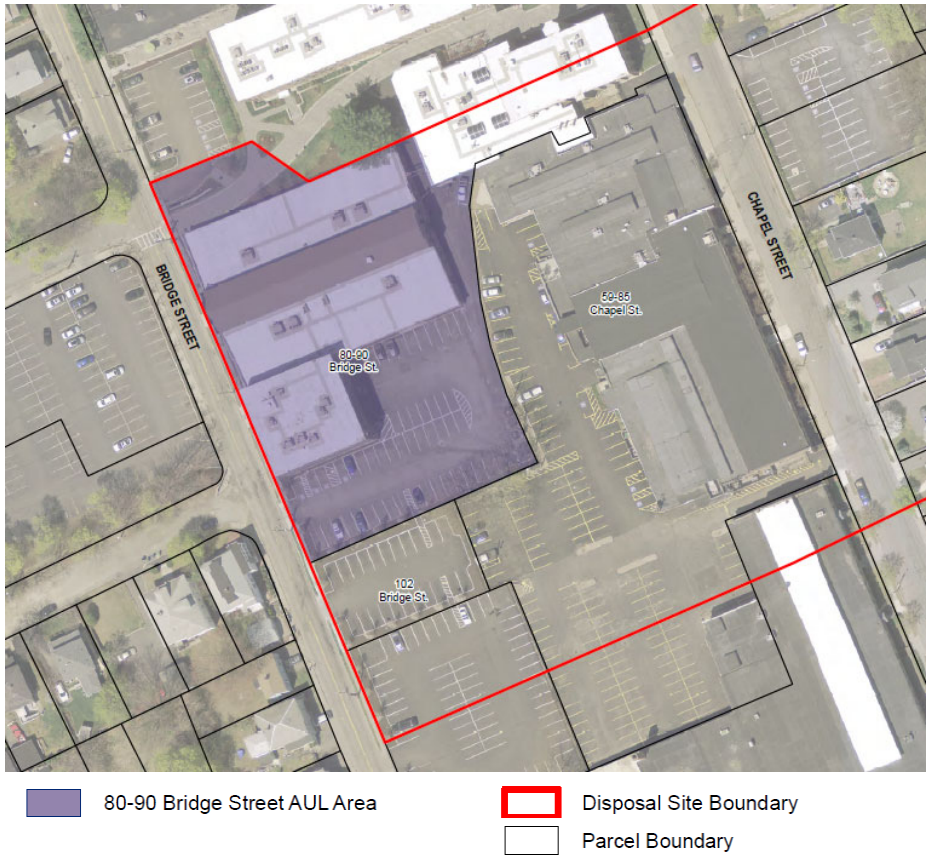
WHEREAS, the Portion of the Property comprises part of a disposal site as the result of a release of oil and/or hazardous material. Exhibit B is a sketch plan showing the relationship of the Portion of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. Exhibit B is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Portion of the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact

- **Purpose:** Document the conditions necessary to maintain No Significant Risk
- **Objective of AUL:**
  - Incorporate requirements into the deed for the property to maintain them in the future
- **Document Includes:**
  1. Lists of activities and uses that are, and are not, consistent with No Significant Risk
  2. Obligations and conditions
  3. Plans showing the area subject to the AUL
  4. Discussion of why AUL is appropriate

Why is the AUL needed at 80-90 Bridge Street?

- Continue operation of the SSDS.
- Limit future residential use, or
- Require actions to address soil-related and vapor intrusion-related indoor air exposures prior to residential use.
- Maintain the building slabs to minimize potential vapor intrusion.
- Prohibit use of groundwater for drinking water or other uses.
- Prohibit use of soil on the property for gardening of fruits and vegetables.



Your Comments are Requested

- Interim Phase II Report, Partial Permanent Solution Statement, and Activity and Use Limitation for 80-90 Bridge Street are available online:
  - https://eeaonline.eea.state.ma.us/EEA/fileviewer/Rtn.aspx?rtn=3-0030276
  - Documents are on a BWSC126 Miscellaneous Document Transmittal Form dated February 25, 2021 (Transaction IDs 1259750, 1259751, 1259752, 1259753, and 1259754)
- Copies can be provided via email or mail if requested.
  - Documents will be placed in Newton Free Library, which is open on a limited basis.
- Submit written comments via email to Matt Grove (matt.grove@woodplc.com) by April 7, 2021.
- Comment period extended to 40 days due to Covid-19.
- Written summary and response to relevant comments will be sent out within 30 days of end of comment period (by May 7, 2021).

Contact Information

Submit written comments on documents to:

Matt Grove, PhD, LSP
Wood Environment & Infrastructure Solutions, Inc.
271 Mill Road, 3rd Floor
Chelmsford, MA 01824

matt.grove@woodplc.com

Questions?

woodplc.com