

**River's Edge Development
484-490 Boston Post Road, Wayland, MA**

**Release Abatement Measure Status Report No. 3 Update
Massachusetts Department of Environmental Protection
(MassDEP) Release Tracking Number (RTN) 3-36013**

7:00PM, November 18, 2021

Wayland Town Hall

41 Cochituate Road, Wayland, MA 01778



Alta River's Edge, LLC.
A subsidiary of Wood Partners

woodpartners.com



The Vertex Companies, Inc.

vertexeng.com

Meeting Information

- Meeting Platform: In Person
- Simulcast on WayCam Public Access



Project Team Members and Introductions



William J. "Bill" Gibbons, PG, LSP
The Vertex Companies, Inc.
Senior Project Manager



Patrice "Patty" Plante
The Vertex Companies, Inc.
Senior Project Manager

AGENDA

- Meeting Information
- Purpose of Meeting
- Background Information
- Chronology of Site Activities and Reports
- Status of Soil Pile Remediation
- Status of Firing Range Remediation
- Status of Groundwater Investigation
- Next Steps
- Question and Answer Period

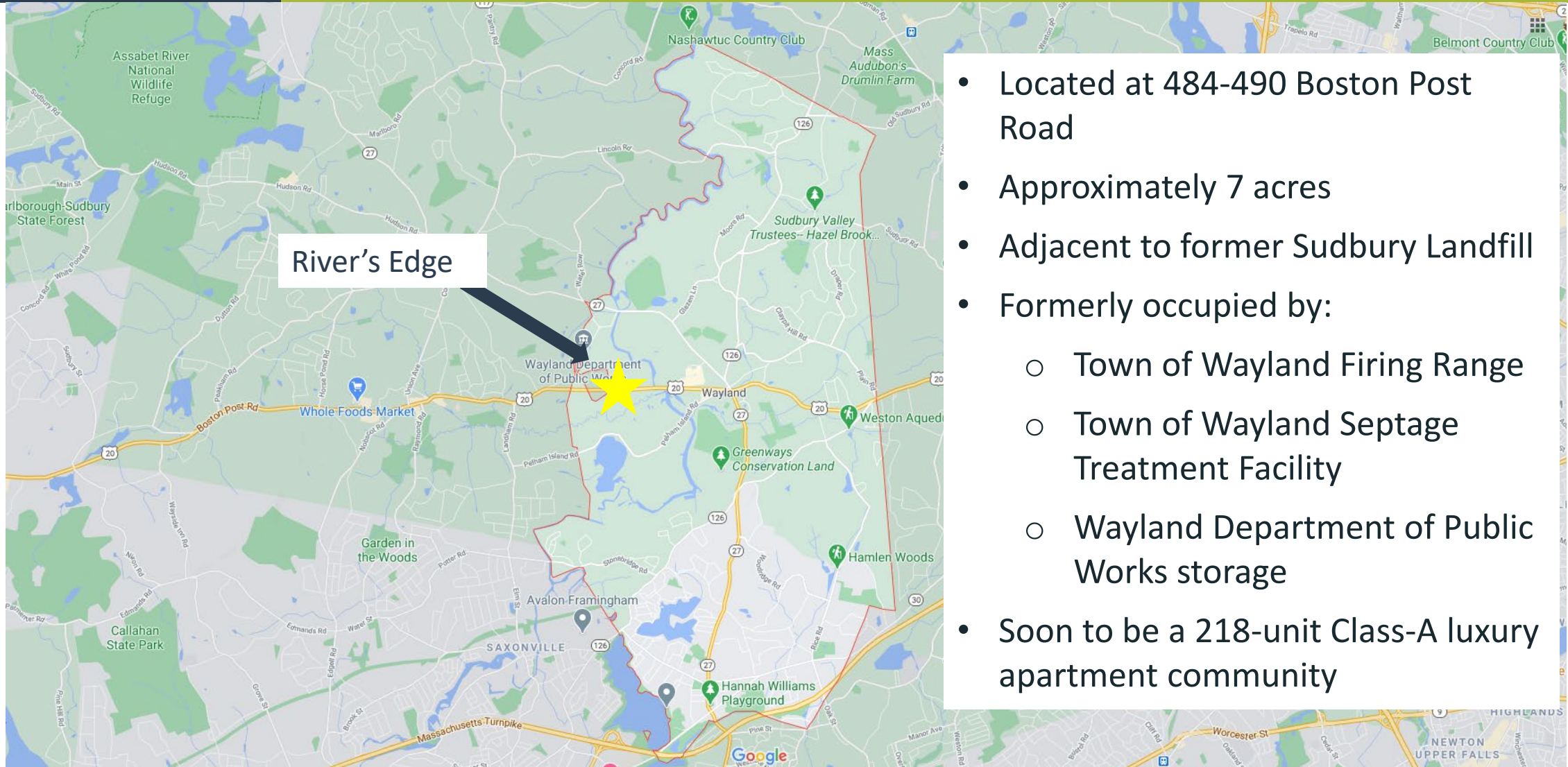
- **MassDEP** = the Massachusetts Department of Environmental Protection
- **MCP** = Massachusetts Contingency Plan 310 CMR 40.0000. The MassDEP regulations requiring notification to be made of releases of oil and hazardous materials, investigation of the nature and extent of those releases, characterization of the risk to human health, public welfare, and the environment, remediation of significant risks if feasible, remediation of contaminant concentrations exceeding background concentrations if feasible, phased reporting, and opportunities for public involvement.
- **PIP** = Public Involvement Plan, finalized in May 2021
- **RAM** = Release Abatement Measure. RAMs are a type of MCP environmental response actions intended to reduce risk and/or increase the cost effectiveness of environmental response actions by allowing the implementation of certain accelerated remedial actions to stabilize, treat, control, minimize or eliminate releases until such time as a Permanent or Temporary Solution is achieved, as described in 310 CMR 40.1000, or until Comprehensive Remedial Actions can be implemented.
- **RTN** = Release Tracking Number
- **Permanent Solution** = When a condition of No Significant Risk to human health, public welfare, safety, and the environment under current and foreseeable site uses has been achieved

Purpose of Public Meeting

- Provide an update to the public about MCP response action activities completed to date at River's Edge.
- Detailed technical information in Release Abatement Measure (RAM) Plan & RAM Status Reports.
 - Available for download at:
<https://vertexeng.com/rivers-edge-public-involvement-plan-public-repository/>
 - Hard copy available for viewing at Wayland Town Clerk Office



River's Edge Development Location



- Located at 484-490 Boston Post Road
- Approximately 7 acres
- Adjacent to former Sudbury Landfill
- Formerly occupied by:
 - Town of Wayland Firing Range
 - Town of Wayland Septage Treatment Facility
 - Wayland Department of Public Works storage
- Soon to be a 218-unit Class-A luxury apartment community

Background Information

RTN 3-34474



Assigned in August 2017 for > 1 pound of asbestos debris within a 32,000 cubic yard soil stockpile. In August 2018, the extent of the asbestos-containing debris was delineated. In December 2018, the debris and commingled soil was excavated as a MCP Immediate Response Action in accordance with a MassDEP approved plan and was transported off-site.



In January 2021, the Town of Wayland, submitted an Immediate Response Action Completion Report and Permanent Solution Statement indicating that a condition of No Significant Risk had been achieved and that no further action was required.

Background Information

RTN 3-36013



Assigned in December 2019 for polycyclic aromatic hydrocarbons (PAHs) and lead detected the 32,000 cubic yard soil stockpile and for antimony, lead, and copper detected in firing range soil.



The RTN was also assigned to due to the detection of dissolved arsenic, nickel, and ammonia in groundwater.



MCP response actions for this release are currently in the Phase II Comprehensive Site Assessment phase of the MCP requirements. The extent of the impacted soil was delineated, and the impacted soils were removed from the site as a RAM. Investigation of groundwater conditions is ongoing.

LEGEND:

- V-103 (MW) VERTEX Monitoring Well
- V-113 Soil Boring
- MW-3 Monitoring Well Installed by Others
- V-SG-101 Soil Vapor Sample Point
- Approximate Location of Former USTs
- 32,000 cy Stockpile Material Management Area
- Approximate Configuration of 4,500 cy Stockpile
- Former Firing Range Material Management Area
- Approximate Site Boundary
- RAM Area
- RTN 3-36013 Boundary



Chronology of Site Activities & Reports



- January 2021:
 - Submittal of Release Abatement Measure (RAM) Plan
- March 2021:
 - Stockpile Remediation Began
 - Submittal of RAM Interim Status Report
- April 2021:
 - Stockpile Remediation Continued
 - Firing Range Remediation Began
- May 2021:
 - Stockpile and Firing Range Remediation Completed
 - Submittal of RAM Status Report No. 2
 - Submittal of Final Public Involvement Plan

Chronology of Site Activities & Reports, cont.



- June 2021:
 - Excavation and Off-Site Transportation and Disposal of Soils Complete
- October 2021:
 - Installation of Six Monitoring Wells
 - Groundwater Sampling and Analysis
- November 2021:
 - Submittal of RAM Status Report No. 3

Soil Reuse, Recycling, and Disposal

Soil excavated from the RAM Area was transported off-site for reuse, recycling, or disposal at the following locations:

Facility	Approximate Weight	
	RAM Status Period No. 3	Total
Dudley Reclamation Facility	5,545.60 Tons	61,224.75 Tons
Southbridge Landfill	--	7,174.14 Tons
Winchendon Landfill	3,043.59 Tons	4,056.68
Ondrick Recycling Facility	545.63 Tons	2,074.34 Tons
Turnkey Landfill	1,141.08 Tons	1,141.08 Tons
Total of Soil Exported Off-Site		75,670.99 Tons

*Numbers remain to be verified – pending complete disposal receipts



32,000 Cubic Yard Soil Pile Remediation

During this RAM Status period:



Remaining portions of the 32,000 cubic yard soil stockpile was loaded and transported off-site to approved facilities and was completed on July 20, 2021



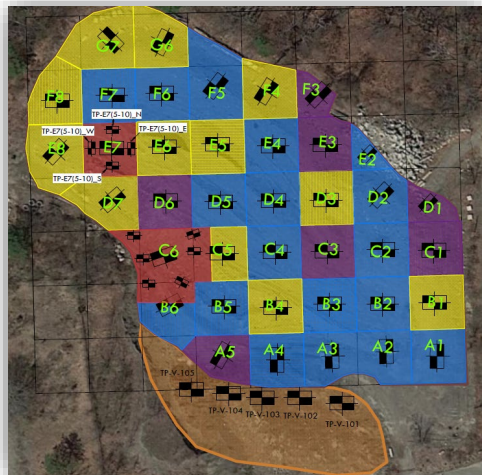
Number of stockpile samples collected and analyzed: 2 (103 total)



Total sub-stockpile samples collected and analyzed: 7 (9 total)



Soil was trucked to four approved off-site reuse, recycling, or disposal facilities



Firing Range Soil Remediation



Potentially leachable lead was stabilized.

- 1 stabilization event this RAM period
- 2 total RAM stabilization events



Total horizontal delineation samples collected and analyzed during this RAM Status Period: 13

15 vertical samples collected/analyzed during previous RAM periods



Groundwater downgradient of the stabilization was monitored once during this RAM period

During the entire RAM groundwater monitored 3 times after soil stabilization



One post-stabilization confirmatory sample collected and analyzed this RAM period

12 during the entire RAM



During this RAM Status period, firing range soil was transported to Waste Management Turnkey Landfill in Rochester, NH



Phos-75®
Safety Data Sheet 212
Revision date: 04/30/2025

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Mixture
Product name	: Phos-75®
Product code	: AMMGA, BDMGA
Formula	: H ₃ PO ₄ (Phosphoric acid)
Synonyms	: Phosphoric Acid

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: Industrial use
	: Agricultural chemical

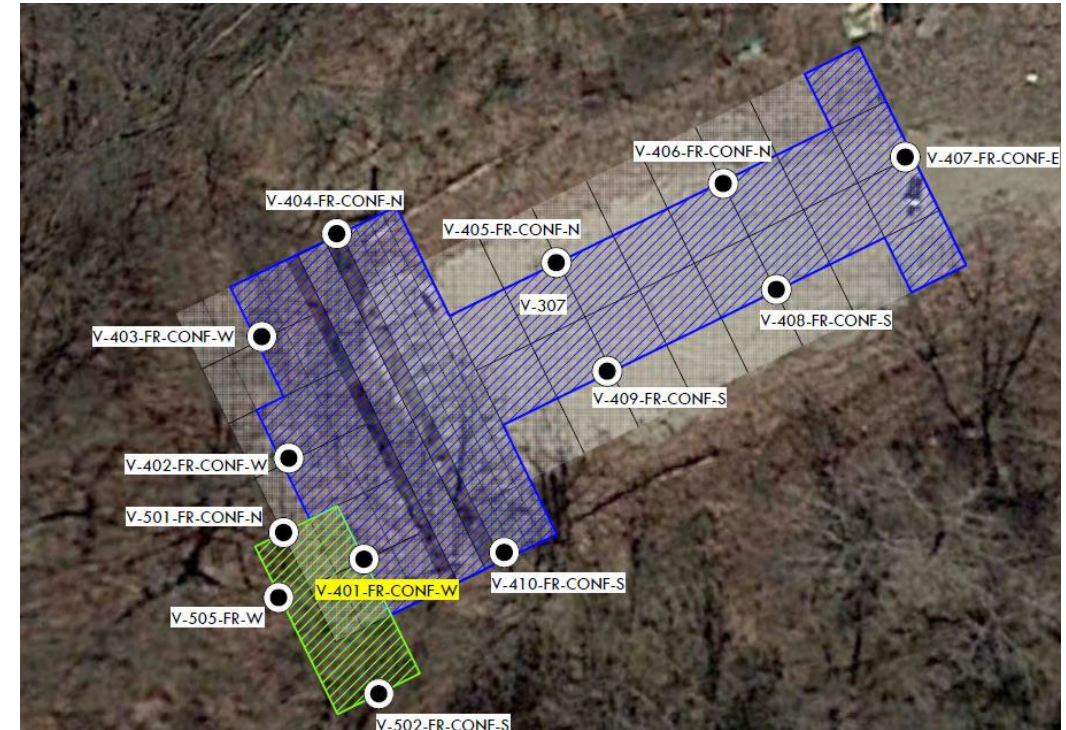
1.3. Details of the supplier of the safety data sheet

Chemical Solutions, Inc.
1000 Franklin Village Drive,
P. O. Box 675
Franklin, MA 02038
T 800-637-4504 / 508-520-3900
www.chemicalsolutions.net
MSDS@meltsnow.com

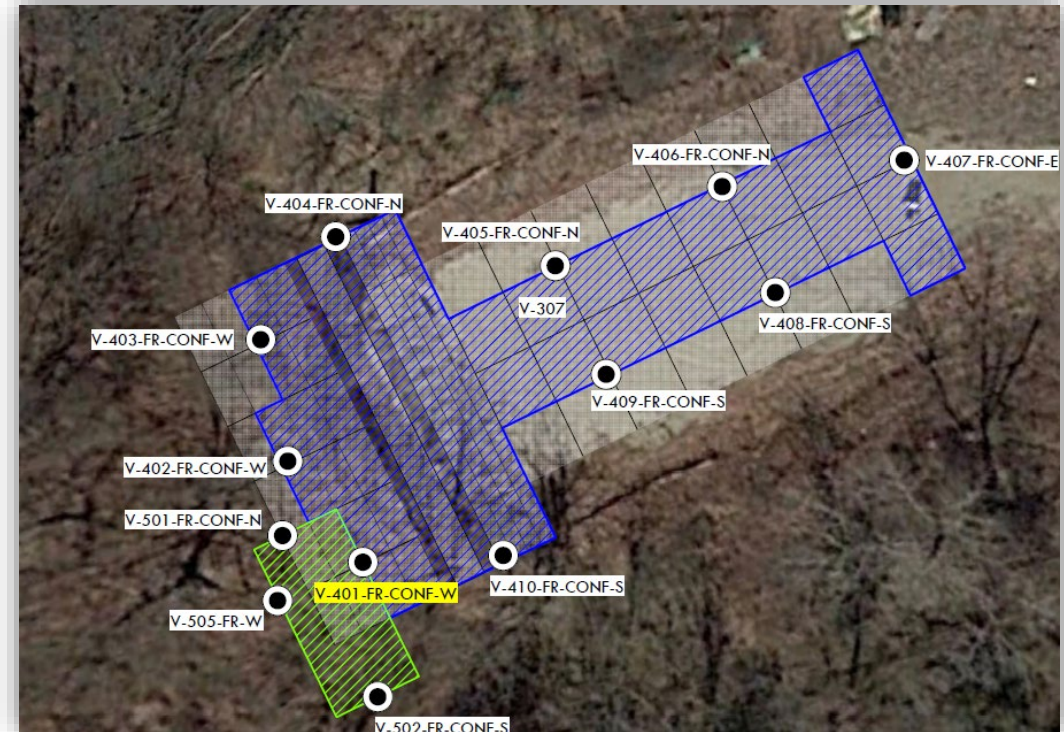


Firing Range Remediation

- Confirmation samples collected and analyzed after the removal of the stabilized firing range soil (blue on figure) indicated that impacted soil remained along the southwestern corner (green on figure).
- Based on results of those analyses, additional samples were collected & analyzed for lead to delineate area needing further excavation & characterize for soil disposal.
- Based on these results, these soils also required stabilization.



- During this RAM period, approximately 35 cubic yards of soil was consolidated within firing range for stabilization
- Sprayed with 75% concentration of Phos-75 solution
 - Phosphoric acid product
 - Rate of 0.5% by volume of soil
- A 15 foot by 30 foot, 2-foot-deep area was stabilized along the southwest corner of the firing range.







Firing Range Remediation, Cont.



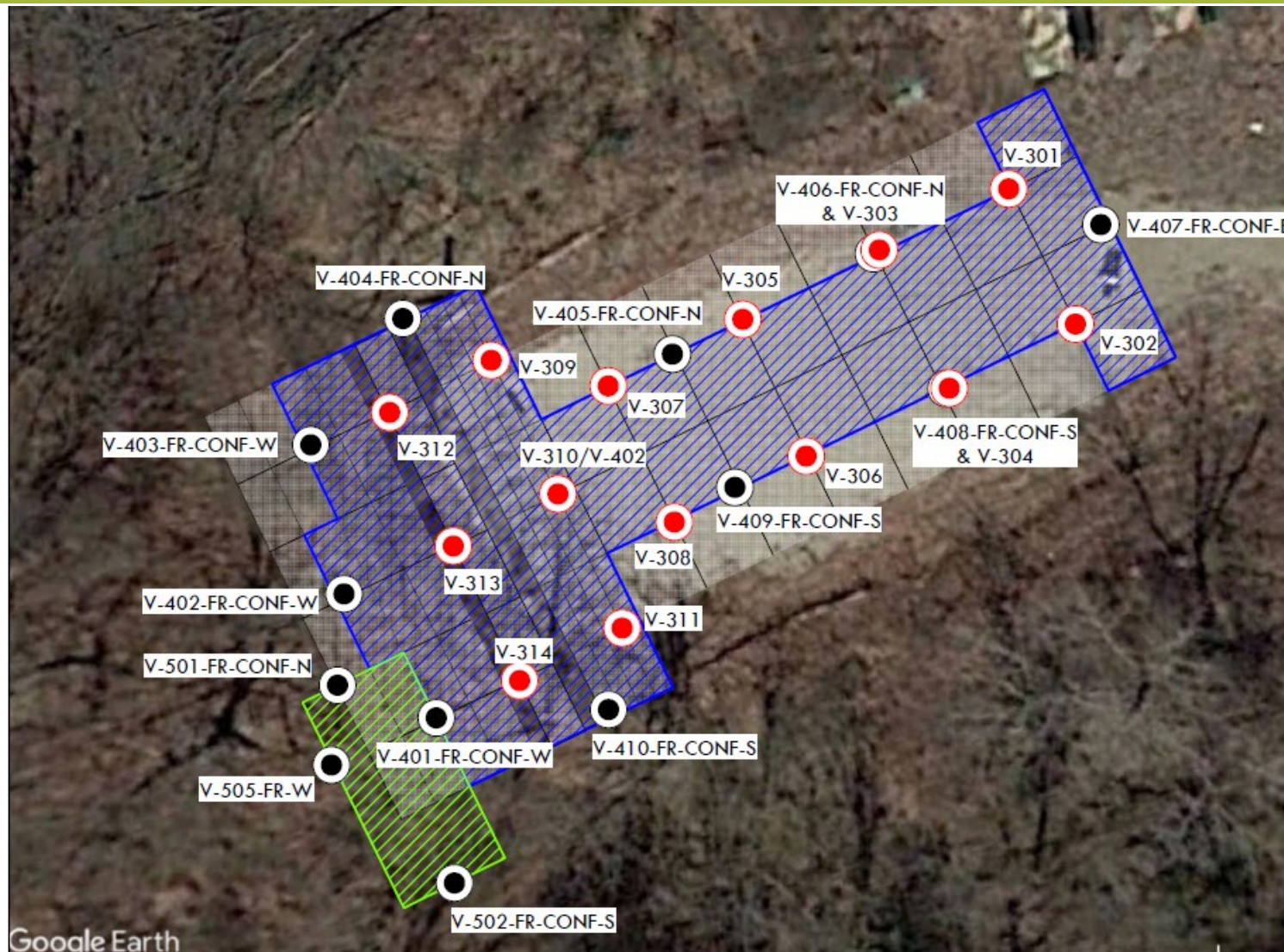
- Immediately following stabilization, six stabilized soil samples were collected from the firing range area
 - Laboratory extracted by the TCLP Method and analyzed for lead
- TCLP extractable lead was not detected at concentrations exceeding regulatory limits in the confirmatory soil samples.
- The stabilized soil was excavated, transported off site, and disposed of at Turnkey Landfill (approximately 1,141 tons).

* *TCLP = Toxicity Characteristic Leaching Procedure*

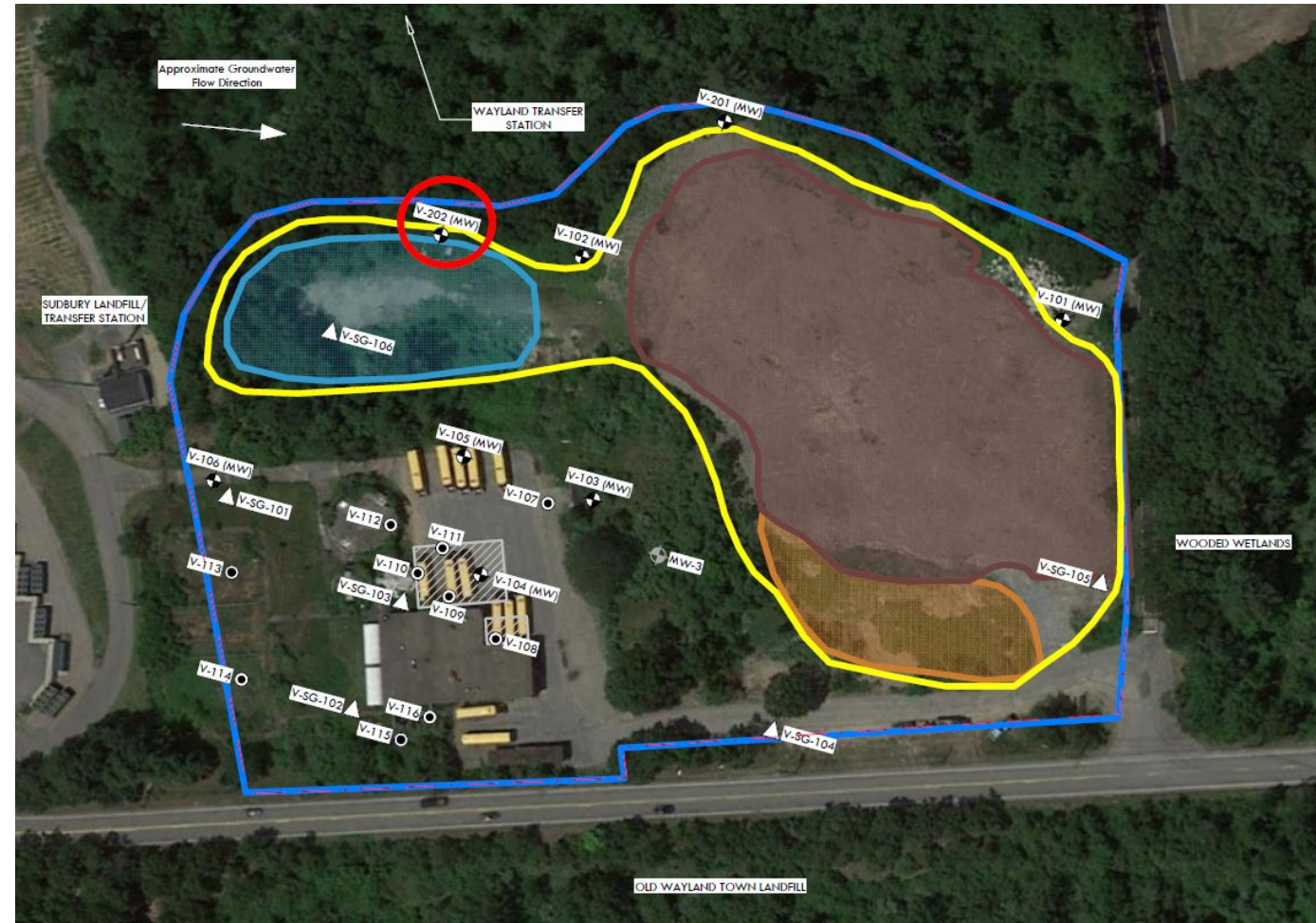
LEGEND:

-  Approximate Area Stabilized & Disposed at TREE
-  Additional Area Stabilized & Disposed at TREE
-  Horizontal Extent Confirmatory Sample Locations
-  Vertical Extent Confirmatory Sample Locations

Based on the laboratory analytical results, remediation of the firing range area is complete

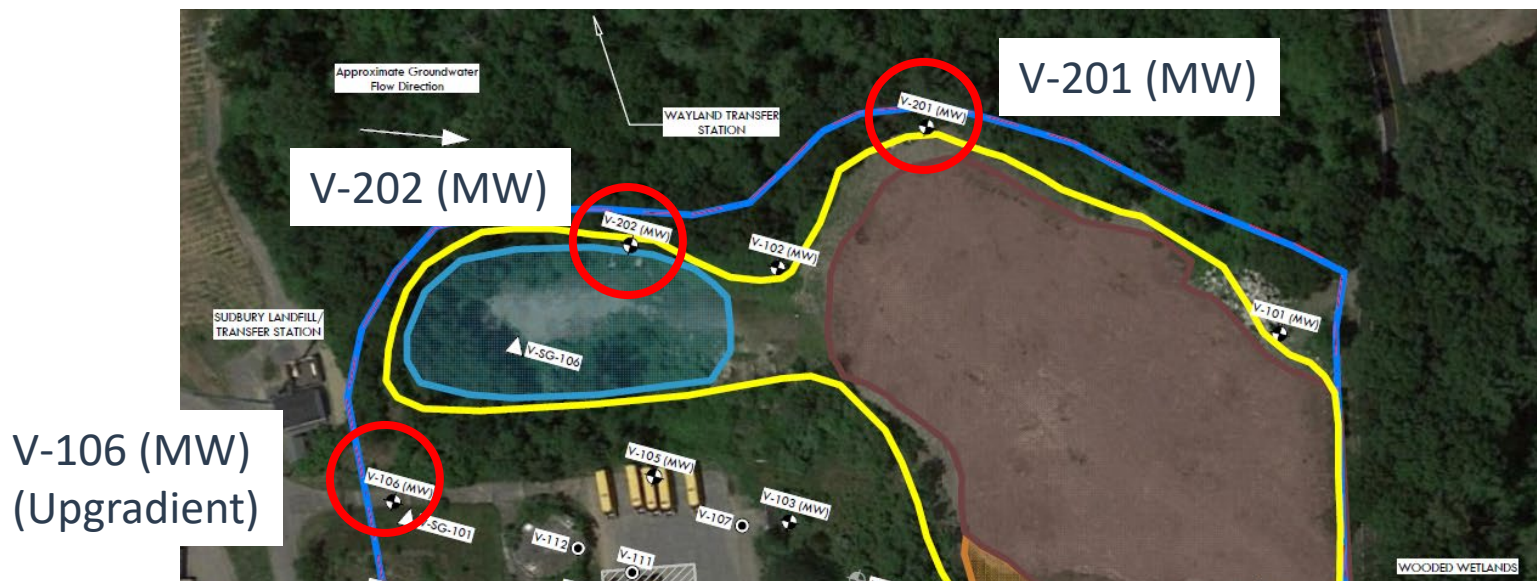


- To confirm firing range stabilization activities did not impact groundwater:
 - A groundwater sample was collected from monitoring well V-202 (MW), located hydraulically downgradient from the firing range soils
 - Groundwater was analyzed for:
 - Dissolved antimony, copper, lead, and nickel.
 - Total phosphorus & pH.



Groundwater Evaluation - Results

Location ID	MCP RCGW-1 Reportable Concentration	Units	V-106		V-201		V-202		
			3/29/2021	4/16/2021	3/29/2021	4/16/2021	3/29/2021	4/16/2021	5/24/2021
Sample Date			V-106 (MW)-	V-106 (MW)-	V-201 (MW)-	V-201 (MW)-	V-202 (MW)-	V-202 (MW)-	V-202 (MW)-
Sample ID			2021-03-29	2021-04-16	2021-03-29	2021-04-16	2021-03-29	2021-04-16	2021-05-24
Lab ID			21C1453-01	21D0885-01	21C1453-03	21D0885-03	21C1453-02	21D0885-02	21E1391-01
Metals, Dissolved									
Antimony	6	µg/L	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Copper	NSE	µg/L	5.3	3.6	7.4	4.6	2.8	1.1	3.5
Lead	10	µg/L	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)
Nickel	100	µg/L	--	--	--	--	--	--	12
General Chemistry									
pH	NSE	S.U.	5.8	6.0	6.4	6.5	6.4	6.6	6.7
Phosphorus	NSE	µg/L	ND(50)	150	ND(50)	ND(50)	67	ND(50)	87



V-106 (MW)
(Upgradient)

Monitoring Well Installation

- Six monitoring wells, installed. Identified as V-301-MW through V-306 MW
- The wells were installed to depths of 15 to 39.7 feet below surface grade

Monitoring Well Sampling

- October 11 and 12, 2021
 - Groundwater samples collected from the new monitoring wells and from existing monitoring wells, V-201 (MW) and V-202(MW)
- Groundwater samples analyzed for:
 - Ammonia as nitrogen;
 - Dissolved arsenic and dissolved nickel;
 - n-Nitrosodimethylamine; and ,
 - 14 Per and polyfluoroalkyl substances (PFAS)
- Results will be included in a Downgradient Property Status Opinion or in a Phase II Comprehensive Site Assessment Report.

14 Per- and Polyfluoroalkyl Substances





- *Perfluorodecanoic acid (PFDA)
- *Perfluoroheptanoic acid (PFHpA)
- *Perfluorohexanesulfonic acid (PFHxS)
- *Perfluorononanoic acid (PFNA)
- *Perfluorooctanesulfonic acid (PFOS)
- *Perfluorooctanoic acid (PFOA)

- Perfluorododecanoic acid (PFDoA)
- Perfluorotetradecanoic acid (PFTA)
- Perfluorotridecanoic acid (PFTrDA)
- Perfluoroundecanoic acid (PFUnA)
- N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)
- N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluorohexanoic acid (PFHxA)

* = MCP Standards are promulgated for these substances

Approximate Monitoring Well Locations

LEGEND

-  Existing On-Site Monitoring Well
-  Destroyed Monitoring Well
-  New On-Site Monitoring Well
-  Off-Site Monitoring Well

All locations are approximate

*Locations of monitoring wells are approximate. An updated figure based on a survey of the well locations and an updated groundwater elevation contour map will be submitted in the RAM Completion Report



Groundwater Analytical Results

Parameters	GW-1 / RCGW-1 (µg/L)
NDMA	NSE/500
Arsenic, dissolved	10/10
Nickel, dissolved	100/100
Ammonia as Nitrogen	NSE/NSE

V-302-MW
10/11/2021
ND(9.8)
98
14
8700

V-302(MW)

V-303-MW
10/12/2021
ND(10)
160
22
12000

V-303(MW)

V-306-MW
10/12/2021
ND(10)
ND(0.80)
44
3900

V-306(MW)

MW-2

V-202(MW)

V-202-MW
10/11/2021
ND(9.8)
120
15
4800

V-201(MW)

V-201-MW
10/11/2021
ND(9.9)
9.1
9.7
2000

V-304(MW)

V-304-MW
10/11/2021
ND(10)
4.7
ND(5.0)
ND(300)

V-301(MW)

V-301-MW
10/12/2021
ND(9.7)
1.2
29
5700

V-305(MW)

V-305-MW
10/11/2021
ND(10)
ND(0.80)
11
ND(300)

Notes
NDMA= n-Nitrosodimethylamine
µg/L = micrograms per liter
NSE = No standard exists
ND = Not detected
Highlighted = exceeds GW-1 or RCGW-1

Boston Post Rd

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Next Steps

- Currently: Evaluate laboratory analytical data from recent groundwater sampling event.
- Soon: Plotting of new monitoring well locations/elevations and calculation of groundwater flow direction.
- January 2022: Anticipated Draft Downgradient Property Status Opinion and associated public involvement meeting.
- January 2022: Anticipated Submittal of RAM Status Completion to the MassDEP and associated public involvement meeting



Opportunity for Public Involvement

For additional information, to submit written questions/comments, to request hard paper copies of documents, or to be added to the PIP Group Mailing list please contact either:

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The Vertex Companies, Inc.

100 North Washington Street, 302

Boston, MA 02114

Email: bgibbons@vertexeng.com

Patty Plante

The Vertex Companies, Inc.

400 Libbey Parkway

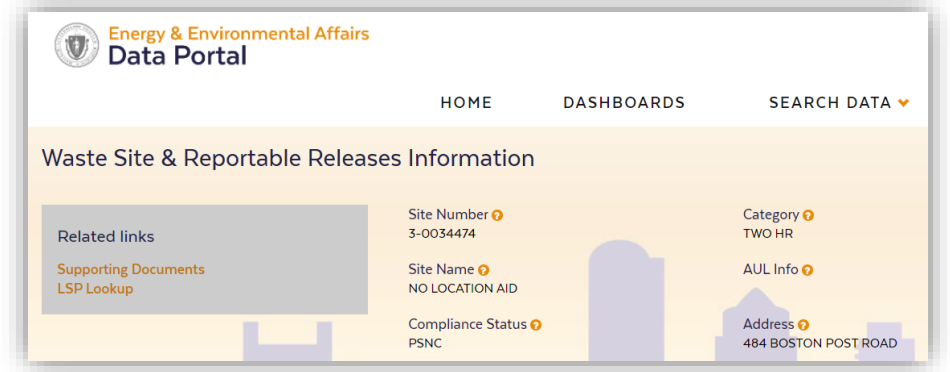
Weymouth, MA 02189

Email: pplante@vertexeng.com

Public notices will be published in the Weston/Wayland Town Crier 14-days prior to future public meetings

Notices of public meetings will be mailed to those specified in the Public Involvement Plan, including all those on the PIP mailing list and emailed to everyone on the list who has provided an email address

- Documents will be available for download from:
 - The online VERTEX repository:
 - <https://vertexeng.com/rivers-edge-public-involvement-plan-public-repository/>
 - The Massachusetts DEP Online File Viewer:
 - <https://eeaonline.eea.state.ma.us/portal#!/wastesite/3-0034474>
 - <https://eeaonline.eea.state.ma.us/portal#!/wastesite/3-0036013>
- Hard copies are available for review at the Town of Wayland Town Clerk located at 41 Cochituate Road in Wayland, MA





QUESTIONS?

Call in Number: (857) 702-8337

Conference Room ID: 794 695 930#