

U.S. Environmental Protection Agency (EPA) W.R. Grace (Acton Plant) Superfund Site Community Update

EPA Superfund Community Involvement

July 2009

This community update provides you with information on the activities ongoing at the W.R. Grace Superfund site in Concord & Acton MA.

Northeast Area Remedial Action Activities

The Northeast Area Groundwater Concept Design has been reviewed and conditionally approved by the United States Environmental Protection Agency (USEPA) and the Massachusetts Department of Environmental Protection (MassDEP) with input from key stakeholders from the Town of Acton, the Acton Water District and the Acton Citizens for Environmental Safety. The Concept Design, which is the engineering plans for the treatment system, includes installation of up to 3 groundwater extraction wells and 2 reinjection wells as well as a groundwater treatment system. This work will occur on Linde Inc. property (formerly known as BOC Gases) as shown on Figure 1. The basic layout of the extraction, reinjection and treatment system components is shown on Figure 2 and will be housed in an enclosed structure.

The Northeast Area treatment system will extract and treat contaminated groundwater focusing on the area of highest Vinylidene Chloride (VDC) concentrations as required by the 2005 EPA Record of Decision (ROD). The ROD documented the final site areas that need to be cleaned up and the appropriate clean up levels. Treatment of the extracted groundwater will include air stripping for volatile organic compound (VOC) removal and a filter for arsenic removal. The treated water will be re-injected back into the groundwater in the Northeast Area.

Overall Site Status

In 1984, W.R. Grace installed a groundwater extraction, treatment and discharge system known as the Aquifer Restoration System (ARS). From 1985 until 2008, the ARS has removed approximately 5,936 pounds of total VOC's and pumped over 4,787 million of gallons of groundwater.

Between 1994 and 1997, approximately 177,000 cubic yards of contaminated soil and sludge from the former lagoons were treated and placed on the existing Industrial



Northwest view of WR Grace (Acton Plant) site from atop the Industrial Landfill

Landfill and the landfill was capped. Between 1997 and 2005, investigations were completed to define the extent of any remaining groundwater, sediment and surface water contamination at the Site.

From early 2007 to the present, W.R. Grace and their consultants gathered additional site data and prepared various reports for the engineering design(s) of the final cleanup activities at the site. The additional site work also included installing, sampling and testing of additional extraction wells and various monitoring wells both north and south of the MBTA rail line. W.R. Grace also obtained additional sediment samples, and characterized ecological habitats and wetland characteristics from both Sinking Pond and the North Lagoon Wetland. W.R. Grace intends to begin installation of a test extraction and injection well in the Northeast Area of this site in June of 2009. These test wells will be used to complete the final design of the Northeast Area groundwater extraction, treatment and reinjection system for this area.

Landfill Area Groundwater Treatment System

In addition to the Northeast Area groundwater design plan, W. R. Grace is also preparing a separate design plan for the new groundwater extraction treatment and surface water discharge system for the landfill area on the Grace property. It is expected that the Landfill Area Groundwater Concept Design will be submitted to EPA, MassDEP and the stakeholders in September 2009. This second groundwater treatment system will remove metals and VOC's from the contaminated groundwater at the former Industrial Landfill Area. This new treatment system will be located on the W.R. Grace property, south of the MBTA rail line.

Acton Water District (AWD)

The Acton Water District continues to operate and maintain air strippers to remove any volatile organic compounds which may be present in groundwater pumped from the Assabet 1, Assabet 2/2A, and the School

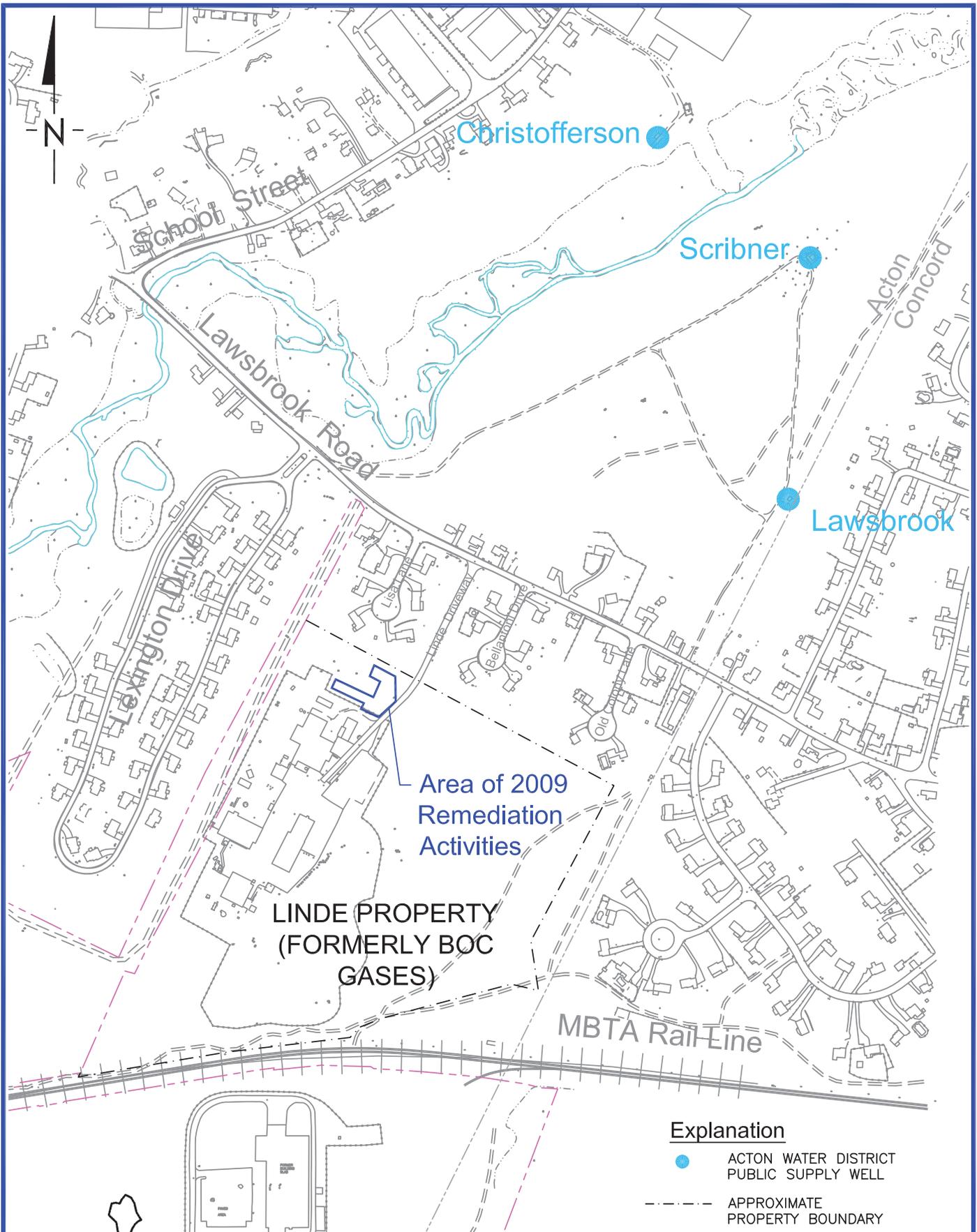


Figure 1 - Location of Northeast Area Remediation Activities, 2009 / 2010 W.R. Grace (Acton Plant) Superfund Site

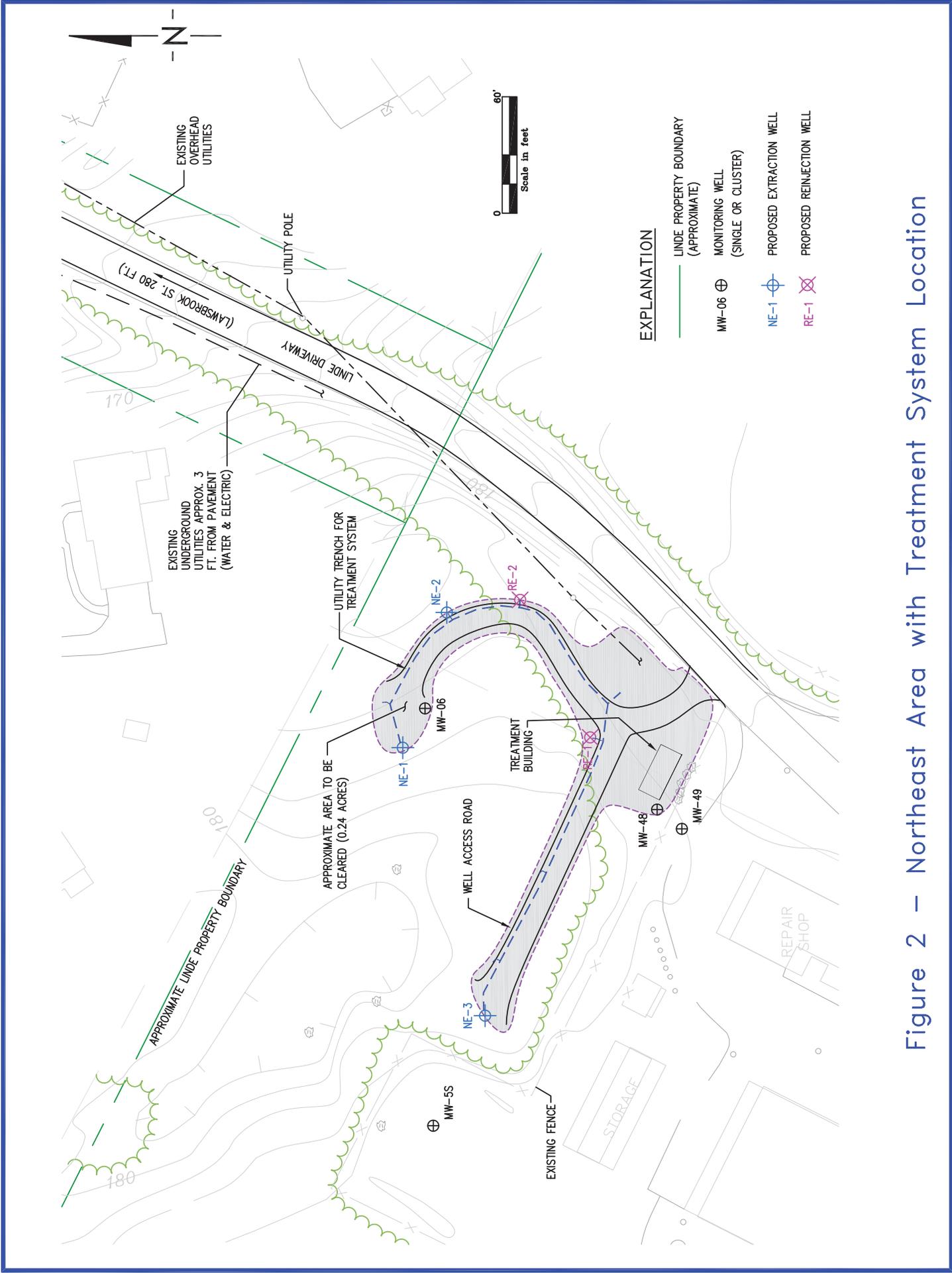


Figure 2 – Northeast Area with Treatment System Location

ALL LOCATIONS ARE APPROXIMATE

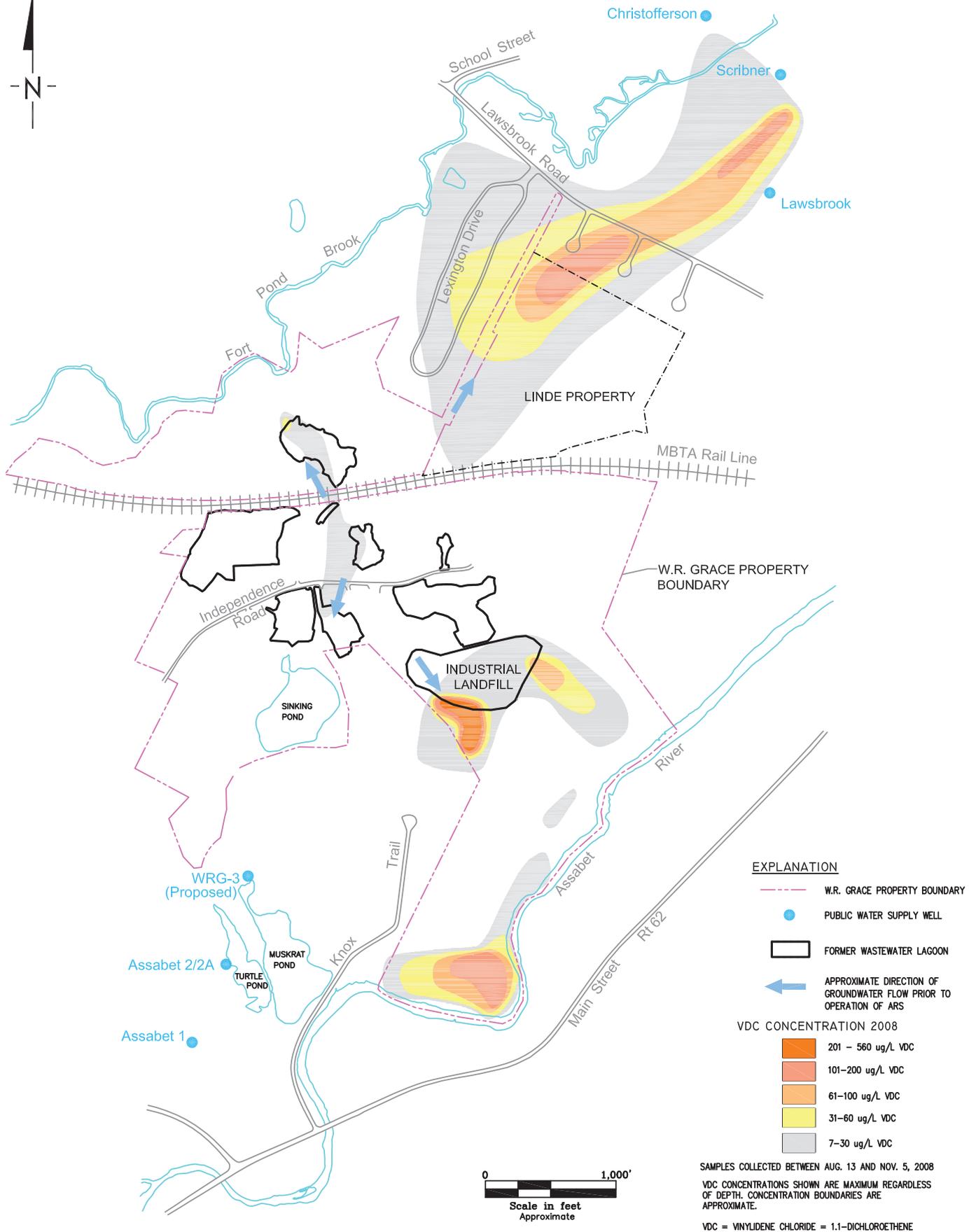


Figure 3 - Distribution of VDC in Groundwater, 2008

Street well field (Christofferson, Lawsbrook, and Scribner wells). Low concentrations of several VOCs have been detected in untreated raw water samples from these wells prior to treatment. The treatment system for the School Street and Assabet Well fields removes any VOC's that are present in the untreated raw water in these areas. Water delivered to customers is sampled quarterly to ensure the treated water meets or exceeds all state, federal and Acton Water District safe drinking water standards.

Current Extent of Groundwater Contamination

The nature and extent of contaminated groundwater at the Site has been defined and documented in the 2005 Public Review Draft Remedial Investigation Report. Figure 3 depicts the current extent and concentrations of vinylidene chloride (VDC or 1,1-dichloroethene). VDC is the most widespread contaminant at the site. As of 2008, VDC levels in groundwater at the site ranged from less than 7 to 550 parts per billion. The maximum contaminant level that EPA considers safe for VDC in groundwater is 7 parts per billion. Figure 3 shows the maximum VDC concentrations regardless of depth, as of fall of 2008.

Northeast Area Schedule

Installation of the Northeast Area treatment system is expected to occur between June 2009 and October 2009, Monday through Friday during normal business hours. After being field tested, the Northeast Area system will operate for a period of approximately 3 to 5 years. Prior to giving final approval, EPA and MassDEP will review the data from the system operations and confer with the local stakeholder's before the Northeast Area system can be shut down.

History of Site Operations

The W.R. Grace Superfund site located off Independence Road in South Acton has been

used for industrial purposes since the 1800s. After purchasing the property in 1954, W.R. Grace & Co. (Grace) produced a variety of latex and rubber-based products as well as cellulose battery separators. The waste products from these manufacturing operations were disposed of on-site in unlined lagoons. In 1980, all on-site waste disposal operations at the facility ceased. In early 1982, Grace discontinued its organic chemical operations at the South Acton site which generated the bulk of the site wastes.

How We Got Here

Record of Decision and Statement of Work

On September 30, 2005, EPA, with concurrence from the MassDEP, selected and documented the third and final cleanup plan for the Site in a Record of Decision (ROD). The ROD addresses clean-up of contaminated groundwater, sediment and soil in Sinking Pond and the North Lagoon Wetlands that pose a potential unacceptable risk to human health and/or the environment.

Details of the ROD can be found at: www.epa.gov/region01/superfund/sites/graceacton/237033.pdf

In August 2006, EPA, MassDEP and W. R. Grace entered into a legally binding agreement known as the remedial design/remedial action Scope of Work (SOW), under a Consent Decree previously approved by the court. The SOW, which was finalized in August 2006, outlines the framework for the final cleanup activities and includes schedules, engineering designs and construction requirements that Grace must fulfill in order to complete the final cleanup actions at the site.

More specific details of the SOW may be found at: www.epa.gov/region1/superfund/sites/graceacton/256924.pdf

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