

W. R. Grace & Co., Inc. (Acton Plant) Superfund Site

Preliminary Reuse Assessment



Revised October 2005

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APPENDICES

APPENDIX A. ACTON SITE EXECUTIVE SUMMARY (Prepared by W.R. Grace & Co. - Conn., March 4, 2004)

APPENDIX B. SIGN IN SHEET, MEETING WITH ACTON TOWN OFFICIALS, AUGUST 11, 2004

APPENDIX C. COMMENTS ON DRAFT PRELIMINARY REUSE ASSESSMENT:

- Letter from Maryellen Johns (Remedium Group, Inc.) to Derrick Golden (EPA Remedial Project Manager) dated November 11, 2004
- Letter from Don P. Johnson (Acton Town Manager) to Derrick Golden (EPA Remedial Project Manager) and Gretchen Muench, Esq. (EPA Attorney) dated November 11, 2004
- E-mail from Mary Michelman (Acton Citizens for Environmental Safety-ACES) to Derrick Golden (EPA Remedial Project Manager) dated November 15, 2004

PURPOSE OF THIS DOCUMENT

EPA-New England is responsible for the cleanup of over 100 Superfund sites throughout New England. Although protecting human health and the environment is the primary objective of these cleanups, EPA also recognizes the value in helping to return Superfund sites to beneficial reuse. Understanding the current and likely future uses of a site is fundamental to achieving both objectives.

Most importantly, accurate information on the likely uses of a Superfund site and the surrounding areas is necessary to make reasonable assumptions about possible exposures to contaminants. These assumptions form the basis for establishing site-specific cleanup levels and, ultimately, for designing a protective remedy. Uncertainty in this information makes it difficult to appropriately tailor the site investigation and cleanup, and oftentimes leads to increased project costs and delays.

From the standpoint of facilitating site reuse, details regarding current or planned uses can enable EPA to consider those uses in the selection, design, and implementation of the remedy. For instance, it may be possible to locate a soil or groundwater treatment system so as not to physically restrict the use of the site for other purposes. In other cases, the cleanup might be phased in a way that allows certain portions of a site to be available for reuse sooner. There are numerous Superfund sites across the country where reuse has already been facilitated in this manner. However, such accommodations will only be considered if they do not compromise the protectiveness of the cleanup.

This Reuse Assessment summarizes information on the current and potential future land uses at the W.R. Grace & Co., Inc. (Acton Plant) Superfund Site (the Site) that are currently known to EPA. EPA has obtained input from W.R. Grace, Acton Citizens for Environmental Safety (ACES), the Acton Water District (AWD), and the towns of Acton and Concord to summarize the uses considered likely, feasible, and desirable by the various stakeholders involved with the Site. Grace owns most of the land within the Site boundary, as defined by the contaminated groundwater plume, and is actively engaged in planning for the future redevelopment of its land.

The timing for this Reuse Assessment is based on EPA's determination that the Remedial Investigation/Feasibility Study (RI/FS) stage is the appropriate time for a reuse assessment to be performed at all Superfund sites. The RI/FS for the W.R. Grace Superfund Site was completed in September 2005 for Operable Unit 3. Grace is the party responsible for the investigation and remediation of the Site under the

Superfund program and is executing its responsibilities under a 1980 Consent Decree with EPA and the Massachusetts Department of Environmental Protection (MassDEP). These responsibilities also included the remediation of Operable Unit 1 (source area remediation, completed in 1997); ongoing extraction and treatment of groundwater that was initiated in response to the 1980 MassDEP order; and the RI/FS for Operable Unit 3 that was recently completed. Based on Grace's land use/market studies and with consideration of its continued remedial obligations at the Site, Grace is considering various development options for the parcels of land that they own in the towns of Acton and Concord and are part of the Superfund Site.

EPA will continue to work with the towns, ACES, Grace, AWD, and the MassDEP to develop a more complete and realistic understanding of potential Site uses. This information may also be used to support EPA's decisions regarding future cleanup actions at the Site.

This reuse assessment is presented in four sections:

- **Section 1 - Site Background:** Describes the physical, environmental, and historical context of the Site.
- **Section 2 - Use/Reuse Status:** Describes the current and potential future uses of the separate parcels or discrete areas within the Site. The perspectives of W. R. Grace, town officials, and a local citizens' group are included.
- **Section 3 - General Findings/Recommendations:** Provides a general summary of relevant findings and potential issues.
- **Section 4 - References**

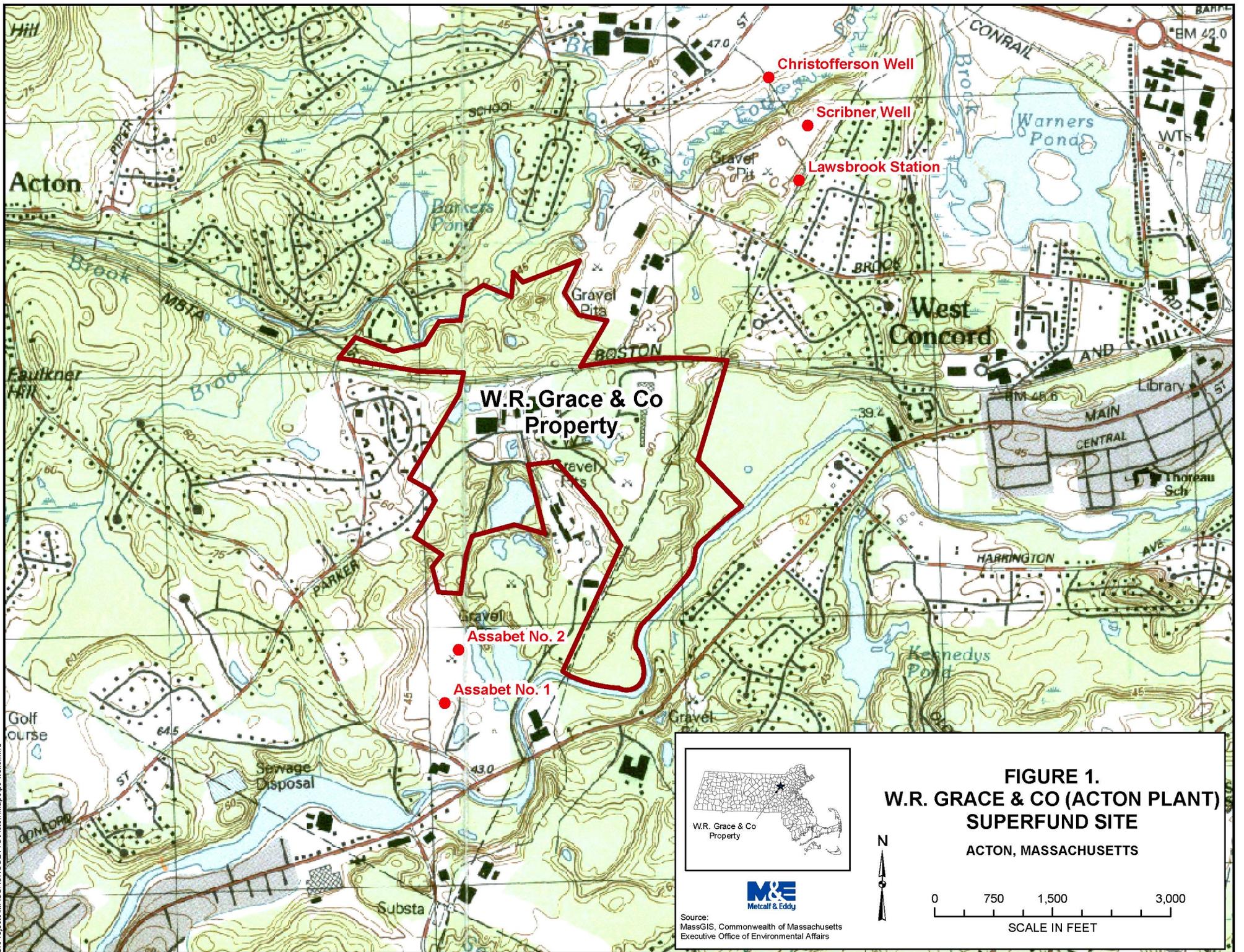
SECTION 1 - SITE BACKGROUND

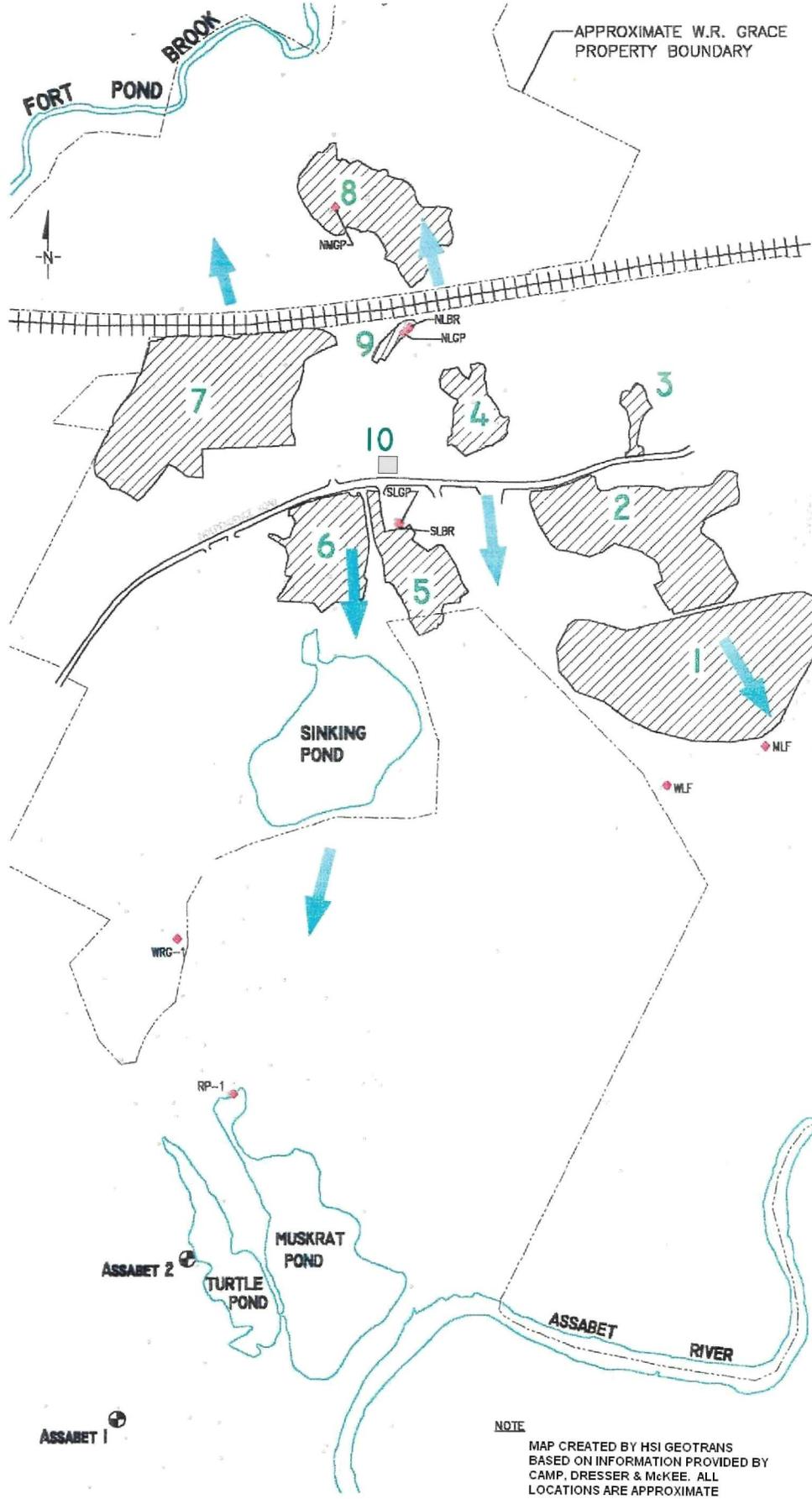
General Site Description

The W.R. Grace (Acton Plant) Site is located off of Independence Road in Acton and Concord, Massachusetts (Figure 1). The Site is partially bordered to the north by Fort Pond Brook, to the east and southeast by the Assabet River, to the south by industrial parks, and to the north and west by residential housing.

Figure 2 shows the Grace property boundary and relevant Site features. The on-site landfill, referred to as the Industrial Landfill, is located within the Acton portion of the Site, just west of the Concord town line. The Industrial Landfill has been capped as part of remedial actions at the Site. As described further below, contaminated sludge and soil from source areas were excavated, stabilized and placed onto the Industrial Landfill prior to capping.

Surface water bodies located at the Site include Sinking Pond, in the southwest area of the Grace property, the Assabet River along the eastern border of the Site, Fort Pond Brook, and several wetland areas. Fort Pond Brook is located just north of the Grace property. The MBTA commuter rail line runs in an east-west direction across the Grace property. A natural gas pipeline easement runs through the Grace property from north to south. A sewer line was recently installed by the town of Acton along Independence Road that carries sewage to the new Middle Fort Pond Brook Sewage Treatment Plant. Previously the Grace property was not serviced by a municipal sewer system, and the property was vacated by Grace prior to construction of the new sewer system. Should the Grace property be redeveloped, the new development could make use of the municipal sewer system or local town approval could be sought to install a septic system.





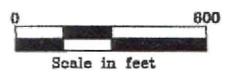
SITE FEATURES

- 1 INDUSTRIAL LANDFILL
- 2 SECONDARY LAGOON
- 3 ACID NEUTRALIZATION PIT
- 4 BLOWDOWN PIT
- 5 EMERGENCY LAGOON
- 6 PRIMARY LAGOON
- 7 BATTERY SEPARATOR AREA
- 8 NORTH LAGOON
- 9 TANK CAR AREA
- 10 EXISTING ARS BUILDING

FORMER

EXPLANATION

- MONITORING WELL (SINGLE OR CLUSTER)
- EXTRACTION WELL
- WATER SUPPLY WELL
- DIRECTION OF GROUNDWATER FLOW



NOTE
 MAP CREATED BY HSI GEOTRANS
 BASED ON INFORMATION PROVIDED BY
 CAMP, DRESSER & MCKEE. ALL
 LOCATIONS ARE APPROXIMATE

FIGURE 2. Site Map
 W.R. Grace & Co.
 Superfund Site
 Acton, Massachusetts
 GRACE-SITE.jpg

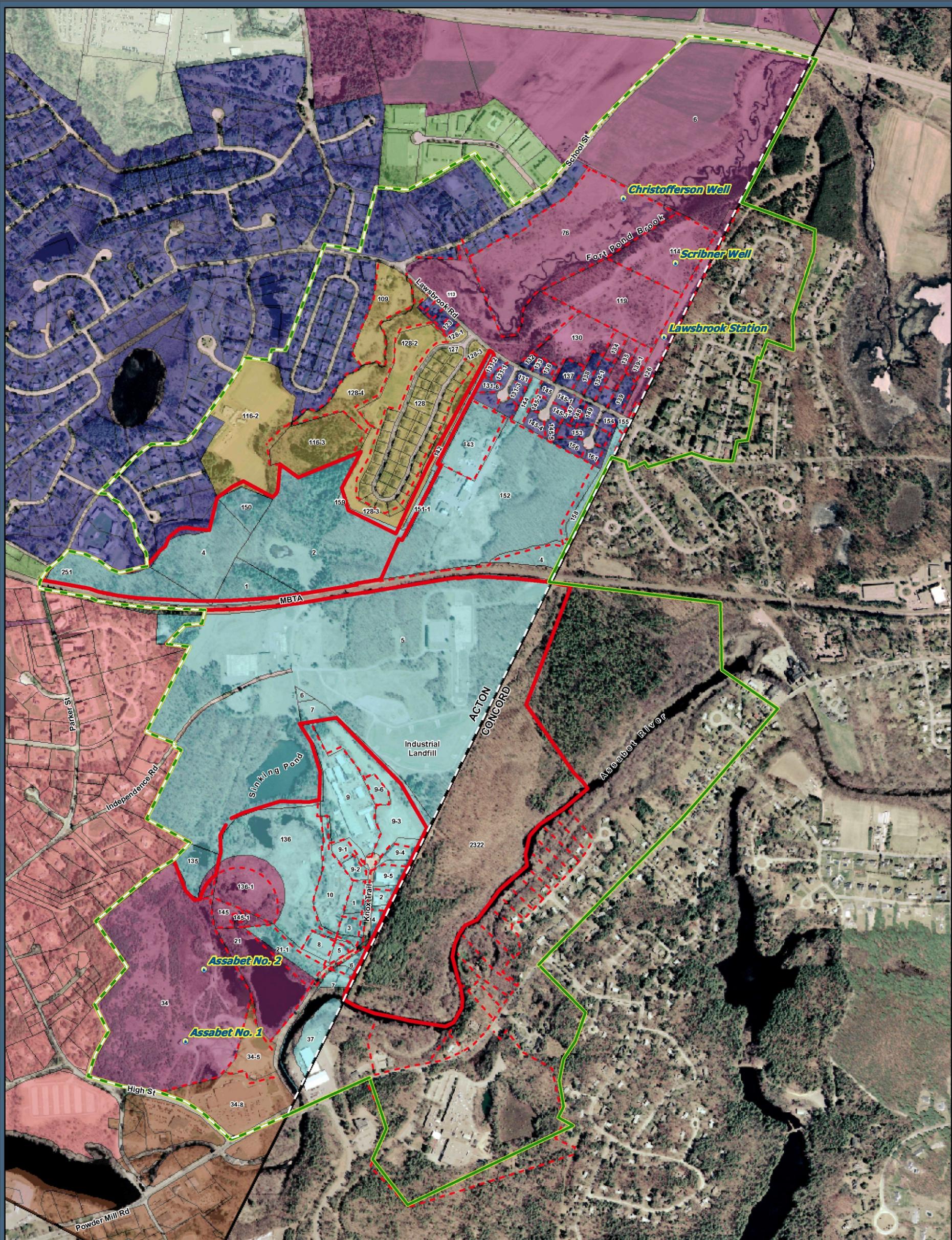
For the purpose of this reuse assessment, the parcels under consideration include those owned by Grace, as well as non-Grace-owned parcels that lie within the area of Acton and Concord and are defined by the green line shown on Figure 3. This border represents the area within 500 feet of the mapped region of contaminated groundwater, and is the area within which a private well survey was performed by consultants for Grace as part of the Remedial Investigation for Operable Unit 3. The Acton Board of Health has established a temporary moratorium on the installation of private irrigation wells in Acton within this area. The purpose of the moratorium is to prevent exposures to unacceptable risk(s) by limiting exposure to contaminated groundwater and to also prevent unexpected migration of contaminated groundwater.

The public health risk assessment estimated risks based on the possibility of future residential use of the Grace-owned property as well as other properties within the Site boundaries, including an evaluation of potential risks from residential use of untreated groundwater for activities such as drinking, showering, and recreation (use in a swimming pool). Potential risks from possible intrusion of vapors into structures built over the plume were also evaluated. For additional details see the July 1, 2005, Public Review Baseline Ecological Risk Assessment, the July 1, 2005, Baseline Ecological Risk Assessment and the September 2005, Record of Decision.

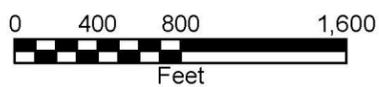
In September of 2005, EPA signed a Record of Decision (ROD) for Operable Unit 3 at the W.R. Grace Site. The ROD established the final clean up levels and actions for groundwater and sediments at the Site. A component of the 2005 ROD includes the requirement for a local town ordinance and/or deed restrictions/institutional controls to restrict the use of contaminated groundwater.

Neighboring Activities and Land Uses

The Site is located in Acton and Concord, Massachusetts, and consists of the Grace property and surrounding parcels within the mapped region of contaminated groundwater. Acton and Concord are suburban communities located northwest of Boston. The Site is located approximately 19 miles from Boston and approximately 28 miles from Worcester. The town of Acton has a population of approximately 20,660 residents (2004 US Census), and an area of 20 square miles. The town of Concord has a population of 16,919 residents (2004 US Census) and an area of 26 square miles.



SOURCE: Orthophoto: MassGIS, Commonwealth of Massachusetts
 Executive Office of Environmental Affairs
 Property Boundaries: GeoTrans, Inc.; Revised Private Will Survey Area 2002



LEGEND	
—	WR Grace Property
- - -	Other Properties
—	Private Well Survey Area
	Municipal Wells
- - -	Acton Temporary Well Moratorium Boundary
■	ARC
■	LI
■	OP-1
■	PM
■	R-2
■	R-4
■	R-8/4
■	TD

FIGURE 3.
PARCELS WITHIN
PRIVATE WELL
SURVEY AREA
WR GRACE RE-USE
ACTON, MASSACHUSETTS



The Site is located near Route 2 which is major commuting route into Boston. The MBTA Commuter Rail Line servicing Fitchburg to Boston bisects the Site. The closest train stops are located in South Acton and West Concord.

Residential areas border the Grace property to the west, north, and east. Industrial areas border the Grace property to the south and northeast.

The Concord parcel of the Grace property (Figure 3, Parcel No. 2322) contains the MassDEP disposal site known as the Debris Area off Knox Trail [MassDEP Release Tracking Number (RTN) #3-21297], also historically referred to as the "Concord Landfill." The Debris Area is located in the southernmost portion of the parcel, bordered by Knox Trail to the west and the Assabet River to the south and east. The Debris Area comprises approximately 4 acres of the approximately 80 acre parcel. It is believed that the Debris Area was used for limited disposal of domestic paper waste, rubber balloons, demolition waste, barreled waste consisting of solidified polymers or other solid materials, and treated paper used in the manufacture of batteries (Sullivan DCM and Woodard & Curran, 2002). Groundwater beneath the Debris Area is regulated as part of the Superfund site; however the soils and debris are being cleaned up under the Massachusetts Contingency Plan (MCP).

A Release Abatement Measure Plan was submitted in April 2002 for removal of solid waste and PCB-contaminated soil and debris from the Debris Area, but it has not been implemented. A Phase I Initial Site Investigation and Tier Classification were submitted for the Debris Area in December 2002. The site was classified Tier 1C and MassDEP issued a Tier 1C permit for the site in April 2003. The Phase II Comprehensive Site Assessment and Phase III Remedial Action Plan were prepared and submitted to MassDEP in April of 2005.

Two other MassDEP disposal sites are located on properties that abut the Grace property. An industrial property, which is referred to as the Agway/Kress site, is located adjacent to the Grace property to the south (Figure 3, Parcel No. 9). The site is a MassDEP disposal site (MassDEP RTN 2-0000003), which was closed out in January 2001 with a Class A4 Response Action Outcome (RAO) in accordance with the Massachusetts Contingency Plan.

This property was first acquired by Eastern States Farmers' Exchange in 1944. In 1964, Agway purchased the property and used it for the production and distribution of agricultural products. In 1973, the property was sold to Nineofus Realty Trust and it has since been used for light industrial and commercial purposes. A Class A4 RAO

indicates that Activity and Use Limitations (AULs) were needed to maintain a condition of No Significant Risk. Also, soil that is considered inaccessible contains oil and/or hazardous materials that exceed one or more MCP Upper Concentration Limits.

Another industrial property is located adjacent to the Grace property to the north (Figure 3, Parcel No. 152). This property was first used for industrial purposes when it was acquired by Airco Industrial in 1948. The facility is now operated by BOC Gases and is currently used as a filling and distribution facility for compressed gases, including helium, nitrogen, and nitrous oxide. The property is a MassDEP disposal site (MassDEP RTNs 2-816, 2-11200, and 2-11461). RTN 2-816 was closed out in August 2003 and RTN 2-11200 was closed out in April 1997, both with Class B1 Response Action Outcomes. A Class B1 RAO signifies that no remedial action was needed, because the release presents No Significant Risk and no Activity and Use Limitation is required to maintain that condition. For RTN 2-11461, a separate oil release, a Class C RAO was filed in February 2002. A Class C RAO signifies that substantial hazards have been eliminated but that ongoing maintenance, monitoring, periodic reviews, and steps to achieve a permanent solution to the contamination must continue.

The Nuclear Metals (Starmet) Superfund Site is located within an industrial park in Concord, south of the Grace property and south of the Assabet River. The site was used for the production of specialty products containing depleted uranium and is currently in the initial RI/FS stage of Superfund.

Site Zoning

Acton. The town of Acton's current zoning designations for the Site and surrounding areas are shown on Figure 3. The Acton portion of the Grace property is zoned Technology District (TD). Business and industrial uses that are allowed without a special permit include: office; health care facility; repair shop, technical shop, or studio; building trade shop; parking facility; transportation services; warehouse; or manufacturing. Allowable institutional and public service uses include: municipal, educational, religious, public or private utility facilities, child care facility, and commercial education or instruction. Agriculture and conservation uses are also allowed. Uses that are prohibited in this zone include recreation, all residential uses, retail stores, services, gas stations, commercial entertainment, and vehicle repair, sale, or rental. Uses that would require a special permit from the Board of Selectmen include: retirement community, hospital, restaurant, hotel, commercial recreation, distribution plant, or scientific. Details are provided in the Town of Acton Zoning Bylaw (amended through April 2004). Soil on the Grace property (Operable Unit 1) was

remediated to a level sufficient to allow for future residential use (see section entitled “Site Contamination”). Similarly, the public health risk assessment for Operable Unit 3 evaluated potential risks under future residential use scenarios, which consider children as well as adults and also evaluate risks over an entire lifetime.

Other parcels in Acton within the private well survey area are zoned TD, various types of residential, Agricultural Recreation Conservation (ARC), or Powder Mill (PM) District. The ARC zoning applies to the parcels owned by the Acton Water District, and where municipal well fields are located (see Figure 3). The Assabet well field is south of the Grace property and the School Street well field is to the northeast of the Grace property. The PM zoning applies to Parcels 34-5 (Assabet Sand and Gravel) and 34-8 (Powder Mill Shopping Plaza). PM is a business district but single-family residences (with or without an apartment) are allowed.

Concord. The Concord portion of the Grace property (Parcel No. 2322 on Figure 3) is zoned as Residence B. Uses that are allowed in Residence B areas without a special permit include: single-family dwellings; certain institutional uses (educational, child care facility, religious, or cemetery); municipal or underground utility uses; or forestry, agriculture, or conservation uses. Other uses are allowable with a special permit, such as residential developments; private recreation (e.g., country club, playground, boating, fitness club); philanthropic (library, museum, art gallery); lodge and club (private); or greenhouse. Details are provided in the Town of Concord Zoning Bylaw (amended through April 2004).

Of the non-residential parcels located within the private well survey area, the majority are in use in accordance with TD or PM zoning for various commercial purposes. Uses include offices, manufacturing, warehouses, a gravel pit, various shops, and commercial recreation. The Grace-owned parcels are vacant, as are the parcels that are zoned ARC (with the exception of the municipal wells located on ARC-zoned parcels; see Figure 3).

It is noted that the temporary well moratorium issued by the Acton Board of Health is not applicable to Concord. Figure 3 illustrates the areas in both towns within 500 feet of the mapped region of contaminated groundwater (that is, the boundary for the private well survey), but it should not be interpreted to mean that a moratorium on private well installation exists in this part of Concord.

Environmental History/Status

Table 1 provides a chronology of Site events, with further explanation below.

Table 1: Chronology of Site Events	
Event	Date
Dewey & Almy Chemical Company manufactures various products at the Acton site at various times, such as: latex, resins, plasticizers, and paper battery separators	1945 - 1954
W.R. Grace acquires Dewey & Almy and continues various chemical manufacturing processes at the Acton site	1954 - 1991
Organic contaminants (vinylidene chloride, vinyl chloride, ethylbenzene, and benzene) detected in municipal wells, Assabet No. 1 and No. 2	1978
The United States sues W.R. Grace to require cleanup of the Site	April 17, 1980
MassDEP issues an Administrative Order to W.R. Grace, specifying procedures and requirements for evaluating and correcting Site contamination	July 14, 1980
W.R. Grace and EPA enter into a Consent Decree to clean up waste disposal areas and restore groundwater in drinking water aquifers. The provisions of the Consent Decree are similar to the requirements of the July 14, 1980 MassDEP Administrative Order.	October 21, 1980
MassDEP issues an Amended Order to W.R. Grace, amending MassDEP's July 14, 1980 order to conform with the Consent Decree language	April 15, 1981
Site added to the National Priorities List	September 8, 1983
Aquifer Restoration System construction completed and operation begins	March 1985
Phase IV Report and Addendum, detailing the OU-1 remedy, is completed	June 6, 1989
Risk Analysis Report completed by Alliance Technologies Corporation for EPA	June 30, 1989

Table 1: Chronology of Site Events	
Event	Date
Record of Decision for OU-1 signed by Paul G. Keough, Acting Regional Administrator	September 29, 1989
Camp, Dresser & McKee (CDM), consultant for W.R. Grace, issued Remedial Design/Remedial Action (RD/RA) Work Plan for OU-1	January 1991
CDM issued report on Field Pilot Programs for upgrading air stripping tower portion of ARS	May 1991
Quarterly well monitoring begins	March 1992
Odor controls for air-stripping tower installed and operational; Site security measures implemented	September 1992
CDM submitted revised 100% design package for OU-1 remedial action	August 1993
GZA issued Final Site Work Plan and Construction Quality Control Plan for OU-1 remedial action	July 1994
OU-1 Remedial Action initiated; Air monitoring system installed	October 17, 1994
Landfill gas treatment system delivered and installed; Permanent fencing around landfill installed	March 1997
Final site inspection performed	June 1997
Remedial Action Report for OU-1 issued by EPA	September 30, 1997
Revised Construction Quality Assurance Closeout Report for OU-1 issued by CDM for W.R. Grace	February 1998
First 5-year review report issued by EPA for the Site	September 1999
Draft Remedial Investigation Report and Phase 2 Work Plan for OU-3 issued by GeoTrans for W.R. Grace	August 30, 2002
Phase 2 Remedial Investigation Report issued by GeoTrans for W.R. Grace	May 14, 2003
Draft Baseline Ecological Risk Assessment issued by Menzie-Cura for W.R. Grace	July 30, 2004
Draft Public Health Risk Assessment Deliverable 3 issued by Menzie-Cura for W.R. Grace	August 5, 2004

Table 1: Chronology of Site Events	
Event	Date
Second 5-year review report issued by EPA for the Site	September 29, 2004
Public Review Feasibility Study, Public Health & Baseline Ecological Risk Assessments and Remedial Investigation Reports are issued for public comment	July 1, 2005
Record of Decision (ROD) for Operable Unit 3	September 30, 2005

Past Site Operations

Former occupants of the Grace property include American Cyanamid Company, which manufactured explosives, and Dewey & Almy Chemical Company, which produced synthetic rubber container sealant products, latex products, plasticizers, and resins.

W.R. Grace and Company (Grace) acquired the property from Dewey & Almy in 1954. Historical operations at the Grace property included the production of materials used to make concrete and organic chemicals, container sealing compounds, latex products, and paper and plastic battery separators. Effluent wastes from these operations were disposed of in several on-site unlined lagoons and an on-site landfill. In addition, the by-products of some chemical processes were disposed of in the Blowdown Pit, which was located in the center of the property. Wastewater discharge to these areas ceased in 1980. Production of organic chemicals was discontinued in 1982. A second battery separator plant (Daramic) was constructed in 1979 and operated until 1991. All buildings have been demolished, with the exception of the building associated with the Aquifer Restoration System (ARS).

Federal and State Response Actions

Groundwater contamination was first discovered in 1978, when two Acton municipal supply wells, Assabet No. 1 and No. 2, were found to be contaminated with 1,1-dichloroethene (also known as vinylidene chloride or VDC), and lesser amounts of vinyl chloride, ethylbenzene, and benzene. Assabet No. 1 and Assabet No. 2 are located southwest of the Grace property (Figure 3). The Town of Acton closed the two wells as a precautionary measure.

The United States sued Grace on April 17, 1980 and in October 1980, EPA and Grace

entered into a Consent Decree which outlined the framework for site cleanup. On September 8, 1983, the Site was added to the National Priorities List (NPL).

Shortly after the Consent Decree was finalized, Grace initiated an engineering plan for aquifer cleanup and accelerated restoration of groundwater to address groundwater contamination. Beginning in 1980, groundwater investigations and monitoring were performed to evaluate the hydrogeology of the Site and the nature and extent of groundwater contamination. The results of these investigations were used as a basis for the design of the Aquifer Restoration System. Grace constructed and began operating the ARS in March 1985, following approval of the design by EPA and MassDEP. The ARS consists of a network of extraction wells which pump groundwater from both the overburden and shallow bedrock. Groundwater from the extraction wells is treated by an on-site treatment plant consisting of an air stripper and vapor-phase carbon for treatment of stripper off gas and for odor control. Treated groundwater is then discharged to Sinking Pond.

In 1989, EPA issued the first Record of Decision (ROD) (USEPA, 1989) for the Site. The Site cleanup was divided into three operable units (OUs), as follows:

OU 1 - Disposal areas and surficial contamination areas at the Site

OU 2 - Residual contamination in disposal areas at the Site following implementation of OU 1

OU 3 - Contaminated groundwater and the establishment of groundwater target cleanup goals

Implementation of the remedy for OU 1 began in November 1994 and was completed in July 1997. The remedy consisted of excavation of contaminated material from several source areas with off-site incineration of highly contaminated soil and sludge. Less contaminated soil, sludge, and sediment was solidified on-site with removal of VOCs by heat followed by on-site disposal in the Industrial Landfill. The Industrial Landfill was then capped and excavated waste areas were graded.

The OU 1 soil cleanup goals were met based on the results of post-excavation sampling at each source area. The soil cleanup goals were developed to protect against the potential risks from continued leaching of source area contamination into the groundwater. It was also determined that attainment of the soil cleanup levels would reduce risks from direct contact with and incidental ingestion of contaminated

soil to an acceptable level assuming the property was developed for residential use in the future.

Source areas that were excavated include the Battery Separator Area (Lagoons 1, 2, and 3 and battery chip pile), Blowdown Pit, Boiler Lagoon, Emergency Lagoon, North Lagoon, Primary Lagoon, Secondary Lagoon, and Tank Car Area (see Figure 2). Since soil cleanup goals were met at each source area, no additional remedy under OU 2 was needed.

In order for the remedy to be protective in the long-term, it may be necessary to put institutional controls in place to ensure that the integrity of the landfill cap is maintained and contaminated groundwater is not used in the future. These controls could supplement the requirements of the existing Consent Decree, which required Grace to file a notice with the Registry of Deeds, and also requires Grace to provide “notice of intent to sell” to the federal government and to provide for the fulfillment of all requirements of the decree should Grace convey title, easement or other interest in the property. The deed notice for the landfill cap that was required under the Consent Decree is in place and Grace continues to maintain the integrity and security of the Industrial Landfill.

The ROD for Operable Unit 3 was issued by EPA in September 2005. The cleanup measures included in the OU 3 ROD are described in the following section.

Site Contamination

The following summarizes the contaminants detected at the Site as identified in the Phase I and Phase II investigations that formed the basis for the 1989 ROD:

Soils, Sludge, & Sediment. Soils and sludge have been identified as “surface materials” in the ROD for OU 1. The Blowdown Pit contained the most highly contaminated material on the Site (primarily VDC), while material in and under the Boiler Lagoon demonstrated lower contaminant levels than the other lagoons. VDC, vinyl chloride, ethylbenzene, and benzene were the primary contaminants identified in the Primary Lagoon, Secondary Lagoon, and Emergency Lagoon sludge and underlying soils. Benzene, toluene, and ethylbenzene were the prominent compounds in soils underlying the Industrial Landfill. In North Lagoon sludge and underlying soils, VOC contamination was detected along with metals, cyanide, and phthalates. The principal contaminants found in Boiler Lagoon sludge and underlying soils were phthalates and metals, while ethylbenzene, formaldehyde, VDC, benzene, phenol, and

metals predominated in Battery Separator Area soils/sludge. Soils in the Tank Car Area were contaminated with VDC, phthalates, and metals. Eight surface material indicator chemicals were selected for evaluation in the risk assessment. The eight indicator chemicals included: vinyl chloride, VDC, benzene, toluene, ethylbenzene, formaldehyde, arsenic, and cadmium.

Groundwater. Fifteen indicator chemicals were selected for evaluation in the risk assessment. The fifteen indicator chemicals included: vinyl chloride, VDC, benzene, toluene, trichloroethene (TCE), ethylbenzene, formaldehyde, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, and zinc.

Surface Water. 1,1,1-Trichloroethane (TCA) and VDC were detected in surface water samples from the Assabet River. Benzene, chloroform, toluene, xylene, tetrachloroethene (PCE) and VDC were detected in Fort Pond Brook surface water samples.

A risk analysis was performed by Alliance Technologies Corporation (Alliance, 1989) that evaluated future human health risks associated with site-wide exposure to surface material and groundwater and specific source area exposures under conditions of residential use. Without any clean up actions for Operable Unit 1, the 1989 risk analysis concluded that the Grace property was likely to pose significant carcinogenic and noncarcinogenic risk to human health in the event the property were to be developed and used for residential purposes. Significant groundwater risk contributors included VDC, vinyl chloride, arsenic, lead, and zinc. Risks associated with exposure to surface material were primarily attributed to VDC, vinyl chloride, and arsenic.

As stated previously, contaminated source areas were remediated under OU 1, with completion of the OU 1 remedy in July 1997. The OU 1 remedy consisted of excavation of contaminated material from several source areas with off-site incineration of highly contaminated soil and sludge. Less contaminated soil, sludge, and sediment was solidified on-site with removal of VOCs by heat followed by on-site disposal in the Industrial Landfill. The Industrial Landfill was then capped and excavated waste areas were graded. The soil cleanup goals for OU 1 were developed to protect against the potential risks from continued leaching of source area contamination into the groundwater. These soil cleanup goals also were determined to reduce risks from direct contact with and incidental ingestion of contaminated soil to a level protective of human health under residential assumptions (USEPA, 1989). Sampling was performed after soil excavation was completed and it was found that the OU 1 soil cleanup goals were met. Therefore, the soil remediated under OU 1 has been remediated to a level

sufficient to allow for future residential use.

Since 1984, the ARS has been remediating groundwater as stated above, in accordance with the 1980 Consent Decree that preceded the Site's listing on the NPL. The effectiveness of the ARS was evaluated as part of the Feasibility Study for OU 3. The Remedial Investigation (GeoTrans, 2005a), the Feasibility Study (GeoTrans, 2005b), and the Public Health and Ecological Risk Assessments for OU 3 (Menzie-Cura, 2005a and 2005b) were completed in July of 2005. The Public Health Risk Assessment estimated potential risks based on the possibility of future residential use of the Grace-owned property as well as other properties within the site boundaries. It also included an evaluation of potential risks from residential use of untreated groundwater (e.g., drinking, showering, irrigation), as well as potential exposure of future residents to sediments in Sinking Pond and on-site wetlands. Potential risks from possible intrusion of vapors into structures built over the contaminated groundwater plume were also evaluated.

In the Record of Decision (ROD) for Operable Unit 3, which was signed in September of 2005 (USEPA, 2005), EPA is requiring the following clean up measures to reduce unacceptable risk(s) from site contamination:

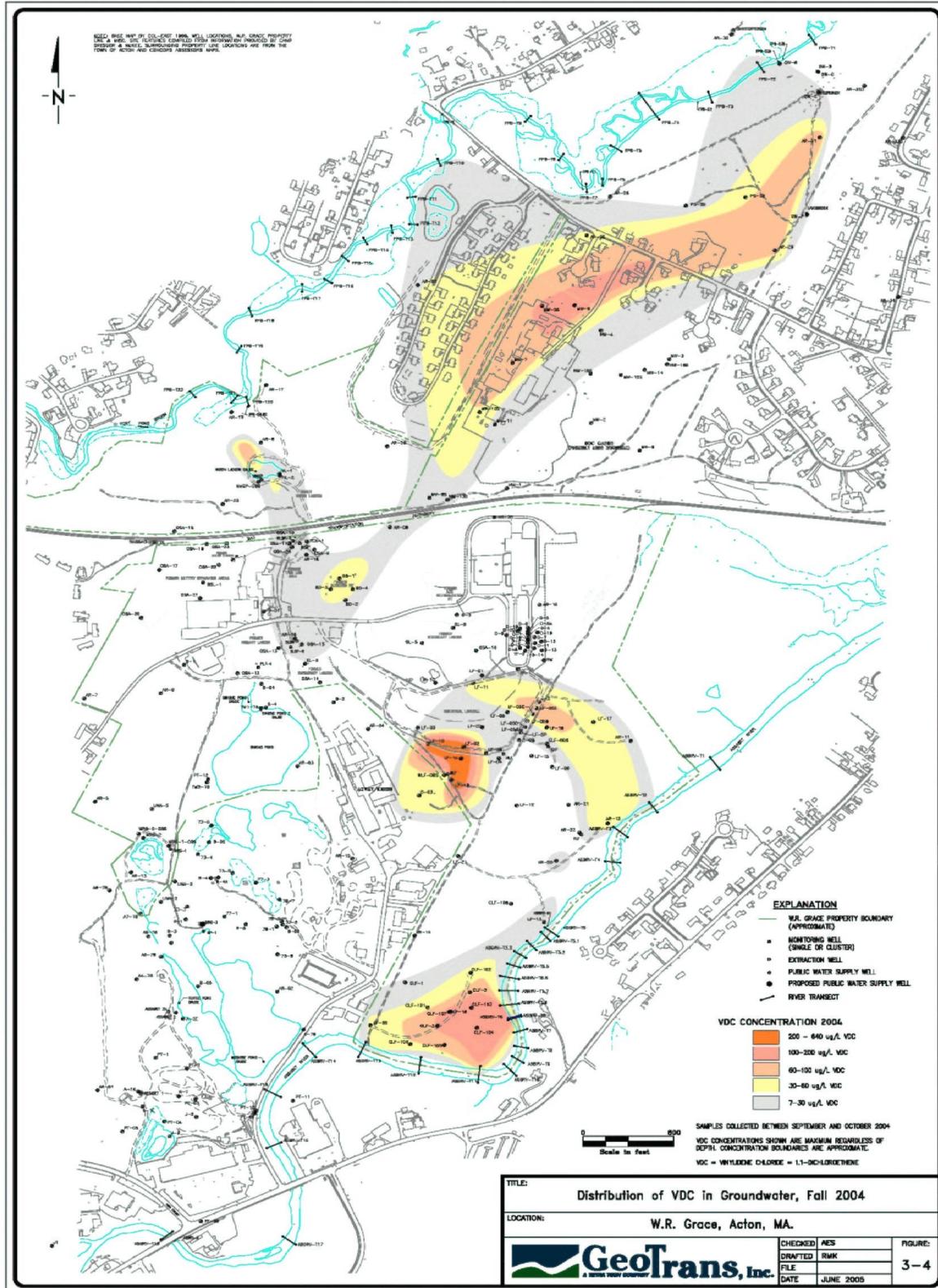
- Clean up of contaminated sediments and soils posing an unacceptable risk to human health and/or the environment in Sinking Pond and the North Lagoon Wetlands.
- Extraction and treatment of groundwater contamination in the Southeast and Southwest Landfill Areas and at targeted areas within the Northeast Area. Construction of a new 200 gallon per minute groundwater pump and treatment system that would consist of air stripping, activated carbon (air treatment) and a metals (inorganic) removal system.
- Monitored natural attenuation of areas of groundwater contamination not captured by the extraction system.
- Institutional controls such as deed restrictions and/or local ordinances to prevent unacceptable exposures to contaminated groundwater until cleanup levels are met and to protect against unacceptable future exposures to any wastes left in place on-Site.
- Long-term groundwater, surface water, and sediment monitoring and

periodic five year reviews of the remedy.

The distribution of VDC in groundwater, based on groundwater monitoring conducted in the fall of 2004 by GeoTrans for W.R. Grace (GeoTrans, 2005c), is illustrated in Figure 4.

Figure 4: Distribution of VDC in Groundwater, Fall 2004

G:\WRG-ACT\2005\04-05_2004DataRpt\Fall04-VDC-B.dwg GeoTrans, Inc.



SECTION 2 - USE/REUSE STATUS

Figure 3 shows the parcels within the private well survey area, with those owned by Grace shown within the red border. This discussion considers the currently undeveloped parcels by ownership as follows:

Grace-owned parcels

Acton parcels, zoned as Technology District (TD) - Concord parcel, zoned as Residence B

Acton Water District parcels

Parcels that are currently being used for residential and commercial purposes are not further discussed, except to note that the parcels within Acton (see Figure 3) are currently subject to restrictions on groundwater use (that is, the Acton Board of Health has instituted a temporary private irrigation well moratorium). This temporary moratorium may or may not become a permanent component of future clean up actions, depending on the outcome of the Remedial Design/Remedial Action.

Grace-Owned Parcels

W.R. Grace hired a consultant to perform a land use analysis for its parcels in March of 2001. Subsequently in August 2004, representatives of Grace, the town of Acton, Acton Citizens for Environmental Safety and the town of Concord were interviewed to obtain their input on potential reuse options for the Grace-owned parcels. This section summarizes information obtained from the following sources: the 2001 Grace land use analysis, the 2004 summary prepared by Grace regarding the impediments to redevelopment of the Grace property, interviews performed for this reuse assessment in August 2004, and the town of Acton master plan and zoning by-laws.

Town officials have formally disputed the conclusions of the Grace land use analysis and Grace's summary of impediments to redevelopment of the Grace property, as presented in a letter dated November 11, 2004 from the town manager (Mr. Donald Johnson) to the EPA project manager (Mr. Derrick Golden). A summary of the letter is also included in this section. The letter was prepared to provide the town's position on the Draft Preliminary Reuse Assessment dated September 2004, and is included in Appendix C. Appendix C also includes comments from W.R. Grace on the Draft Preliminary Reuse Assessment (letter from Maryellen Johns to Derrick Golden dated

November 11, 2004) and an E-mail from Mary Michelman (Acton Citizens for Environmental Safety-ACES) to Derrick Golden (EPA Remedial Project Manager) dated November 15, 2004.

Grace Land Use Analysis, 2001

Grace commissioned the preparation of a land use analysis in 2001. The land use analysis was prepared by Sasaki Associates, Inc. The analysis divided the Grace-owned parcels into several areas: Area 1 - north side of railroad tracks (51 acres, Acton), Area 2 - south side of railroad tracks (136 acres, Acton), Area 3 - south side of railroad tracks (72 acres, Concord) (see figure in Appendix A). Net Usable Land Areas were estimated as follows: Area 1 - 27 acres (53% of the actual acreage); Area 2 - 92 acres (67% of the actual acreage); and Area 3 - 42 acres (58% of the actual acreage).

The analysis identified several potential constraints to redevelopment, such as: steep slopes and wetland areas/surface water bodies that limit the usable land area (see second figure in Appendix A for slopes), the railroad tracks that separate Area 1 from Areas 2 and 3, the gas transmission line that bisects the property, abutting uses that are noisy and/or visually unappealing, and currently limited access for vehicles via a small residential street (Independence Road).

The analysis presented three redevelopment scenarios encompassing the three areas: Office R&D, Light Industrial, and Residential/Recreational. The first two scenarios are consistent with the Technology District zoning, but the land use analysis noted that they were developed based on the assumptions of "unconstrained market, utility, and traffic conditions." The conclusion of the analysis was that a residential/recreational plan was more likely to be feasible, and a conceptual site plan was presented for an 18 hole golf course and some housing.

Update from Grace

The Grace representative who is overseeing the Superfund site investigation and remediation was contacted, to inquire whether Grace had given further consideration to the potential for redevelopment of their property since the 2001 land use analysis was prepared. In March of 2004, as an update to the 2001 land use analysis, she provided to EPA an executive summary of the impediments to redevelopment of the Grace-owned parcels that was prepared by Grace's real estate counsel. The executive summary and supporting figures from Grace are included in Appendix A. The obstacles presented in the summary were similar to those presented in the 2001 land

use analysis and were as follows: 1) access, 2) slopes, 3) surface waters and wetlands, 4) physical encumbrances, 5) zoning, and 6) net usable land area.

Access. The two current access roads, Parker Street and Independence Road, were cited as being limited because they are secondary roadways through residential areas. Access via Powder Mill Road (Route 62) or Knox Trail would require access to be opened through land that is not owned by Grace.

Slopes. Steep slopes (see figure entitled “Site Constraints” in Appendix A) were cited as an obstacle, because they affect most portions of the property and would limit the locations and sizes of buildings that could be constructed on the property.

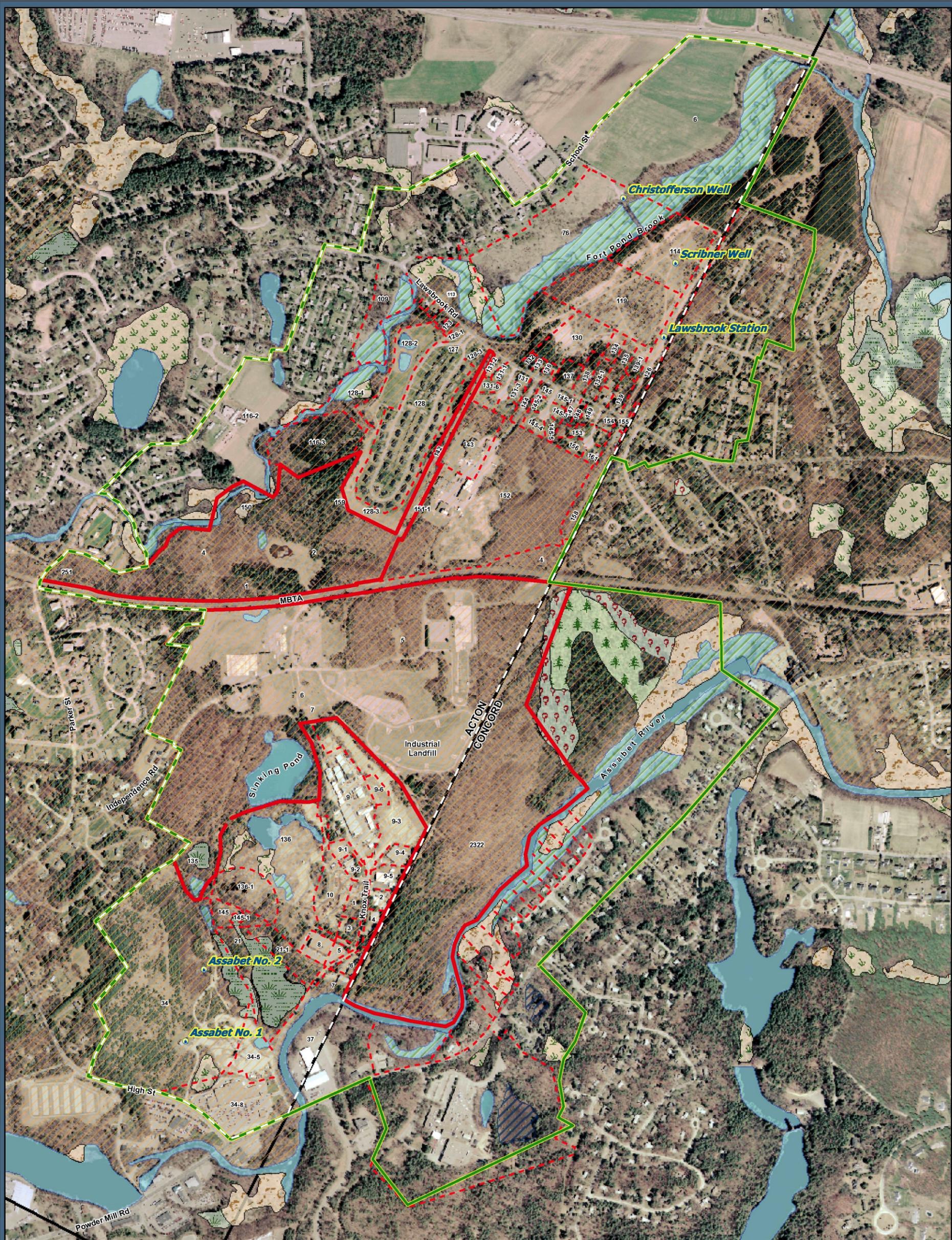
Surface Waters and Wetlands. Sinking Pond, the flood plain of the Assabet River, and the on-site wetlands near Fort Pond Brook and on the Concord parcel were noted as obstacles because the acreage they encompass must be excluded from the total developable land at the site. Figure 5 shows the wetlands, uplands, and open water within the private well survey area as obtained from MassGIS.

Physical Encumbrances. The MBTA commuter rail line was cited as an obstacle because it cuts Area 1 off from Area 2 and Area 3, reducing flexibility in developing the areas together. The easement for the Tennessee gas transmission line, which runs approximately along the Acton/Concord town line and separates Area 2 from Area 3, was also cited as a physical obstacle.

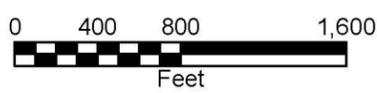
Zoning. The zoning of the Site is shown on Figure 3. Grace considers the zoning of their parcels in Acton as Technology District to be an obstacle, because most of the surrounding land is residential. Grace views residential and recreational uses as more likely to be viable for their property, because of its location and access through abutting residential areas, but notes that rezoning of the Acton parcels to allow for such uses would be difficult. Grace also notes that their analysis indicates that access constraints, as well as current and near future market conditions, are significant barriers for development under the current zoning for the site.

The Town of Acton disputes Grace’s statements regarding the access constraints as well as Grace’s other claims of impediments to redevelopment of the property.

Net Usable Land Area. The executive summary cites the 2001 analysis by Sasaki Associates, which indicates that while the acreage owned by Grace appears to be large, a significant percentage of the land is not usable for redevelopment.



SOURCE: Orthophoto: MassGIS, Commonwealth of Massachusetts
 Executive Office of Environmental Affairs
 Property Boundaries: GeoTrans, Inc.; Revised Private Will Survey Area 2002
 Wetlands: MassGIS, Commonwealth of Massachusetts
 Executive Office of Environmental Affairs



LEGEND

- WR Grace Property
 - - - Private Well Survey Area
 - - - Other Properties
 - Municipal Wells
 - - - Acton Temporary Well Moratorium Boundary
- Wetlands**
- | | |
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**FIGURE 5.
 WETLANDS WITHIN
 PRIVATE WELL
 SURVEY AREA
 WR GRACE RE-USE
 ACTON, MASSACHUSETTS**



Grace summarized these obstacles by noting that even after the Site is fully remediated, it is their judgment that only a limited portion of the Grace-owned parcels will be suitable for redevelopment. The town of Acton disputes these claims from Grace also.

Town of Acton Officials' Comments on Grace's Position

Town of Acton officials disagree with Grace's assessment of the impediments to redevelopment of the Grace property, as documented in the town's letter dated November 11, 2004 (reproduced in Appendix C). The letter speaks to each impediment noted by Grace and provides the town's position, as summarized below.

Access. The town's letter includes deed research indicating that Grace has perpetual easement rights to "Plant Road," which the town maintains would allow access to the Grace property from the present Knox Trail across intervening land owned by others. The town also suggests in the letter that there may also be an easement that would allow access to the Grace property from West Concord. The letter also points out that the Grace chemical manufacturing plant operated for many years using the Independence Road access, and suggests that this access should be sufficient for future uses of the property as well. The letter maintains that the access issues are resolvable and not as difficult as has been described by Grace. The letter also indicates that the town would consider use of its eminent domain powers to improve public infrastructure in the area of Route 62 and Knox Trail.

Slopes. The town's letter maintains that development routinely occurs on land with the slopes of the Grace property, and that grading of the property should not be difficult given the underlying soils in the area.

Surface Waters and Wetlands. The town feels that surface waters and wetlands occupy only a small portion of the Grace property and therefore do not represent a significant impediment to redevelopment.

Physical Encumbrances. The town views the "encumbrance" of the MBTA rail line as a potential benefit, and suggests that Grace could work with the MBTA to develop a commuter rail station on the property that could service its redevelopment. The town also thinks the gas line can be designed around or possibly relocated if necessary.

Zoning and Net Usable Land Area. The town's letter presents some calculations to show that the Net Usable Land Area owned by Grace would be sufficient to allow for

development of 1,190,000 square feet of office building net floor area, with 50% of the area still remaining for other uses.

Interviews: Town of Acton

Input from the town of Acton was solicited from three sources: town officials, the Acton Water District, and the citizens' group Acton Citizens for Environmental Safety (ACES). The Acton representatives generally have a more optimistic view of the potential for redevelopment of the Grace-owned parcels within the current zoning restrictions (i.e., Technology District), than has been expressed by Grace representatives. Town officials also strongly dispute Grace's contention that there are significant impediments to redevelopment of the Grace property, as has been discussed in the previous section. Interviews with these groups are summarized below. It is noted that these interviews were held prior to release of an initial draft of the Preliminary Reuse Assessment, and hence do not reflect the town officials' rebuttal of Grace's land use analysis that was summarized in the previous section (see letter dated November 11, 2004 presented in Appendix C).

Interview with Town Officials. Town of Acton officials plan to take an active role in shaping the future reuse of the Grace-owned property, as discussed in an interview conducted with EPA and MassDEP on August 11, 2004. The attendance list for the interview session is presented in Appendix B.

The town made available copies of the zoning bylaw (amended through April 2004) and excerpts from the town's 1998 Master Plan Update. The economic development component of the Master Plan Update included several recommended actions that relate to the town's preferences for reuse of the Grace-owned property: encouragement of commercial development, giving special attention to development of the few remaining commercial/industrial sites in the town, and preventing the conversion or loss of commercial and industrial land to residential development (Master Plan Update Executive Summary, Acton Planning Board, December 1998). During the August 11 meeting, town representatives confirmed that the economic development goals expressed in the Master Plan Update were of primary importance to town residents, primarily because of the need to increase the commercial tax base and reduce the residential taxpayer burden. The Grace-owned property has been identified as worthy of special attention, because it is viewed as one of the few remaining areas within Acton that is available for commercial redevelopment. The plan presented in the 2001 Grace land use analysis, which included a golf course and residences, would require a zoning change and is not consistent with the town's master plan. The view was

expressed that the voters would not support the rezoning of the parcels to allow for non-commercial uses (residential or recreational). However, town representatives also strongly expressed their preference that the selected remedy for the Superfund site should be designed and constructed to allow for the possibility of residential use in the future. Town representatives also expressed the opinion that developers would be more interested in acquiring the property from Grace if there were no need for institutional controls restricting land use.

During the interview session, it was learned that the town recently established the Acton Economic Development and Industrial Corporation (EDIC) under a special act of the Massachusetts Legislature. The purpose of the EDIC is to seek out and implement economic development opportunities that are consistent with the town's planning goals. The directors of the EDIC were appointed by the Board of Selectmen and had their first meeting on August 10, 2004. The EDIC is going to prepare an economic development plan that will need to be approved by town meeting before it can be implemented. The EDIC would like to examine the Grace-owned property, with the goal of fostering redevelopment for light industrial/commercial uses consistent with the Technology District zoning. The EDIC has requested funding from Grace to perform a market study of the Grace-owned property, and may also pursue grant funding to study a broader spectrum of properties and issues. Grace, in their comments on the Draft Preliminary Reuse Assessment (see Appendix C), has suggested that efforts might be more effectively directed at updating the market study Grace already had performed, as well as resolution of access issues and discussions with the MBTA.

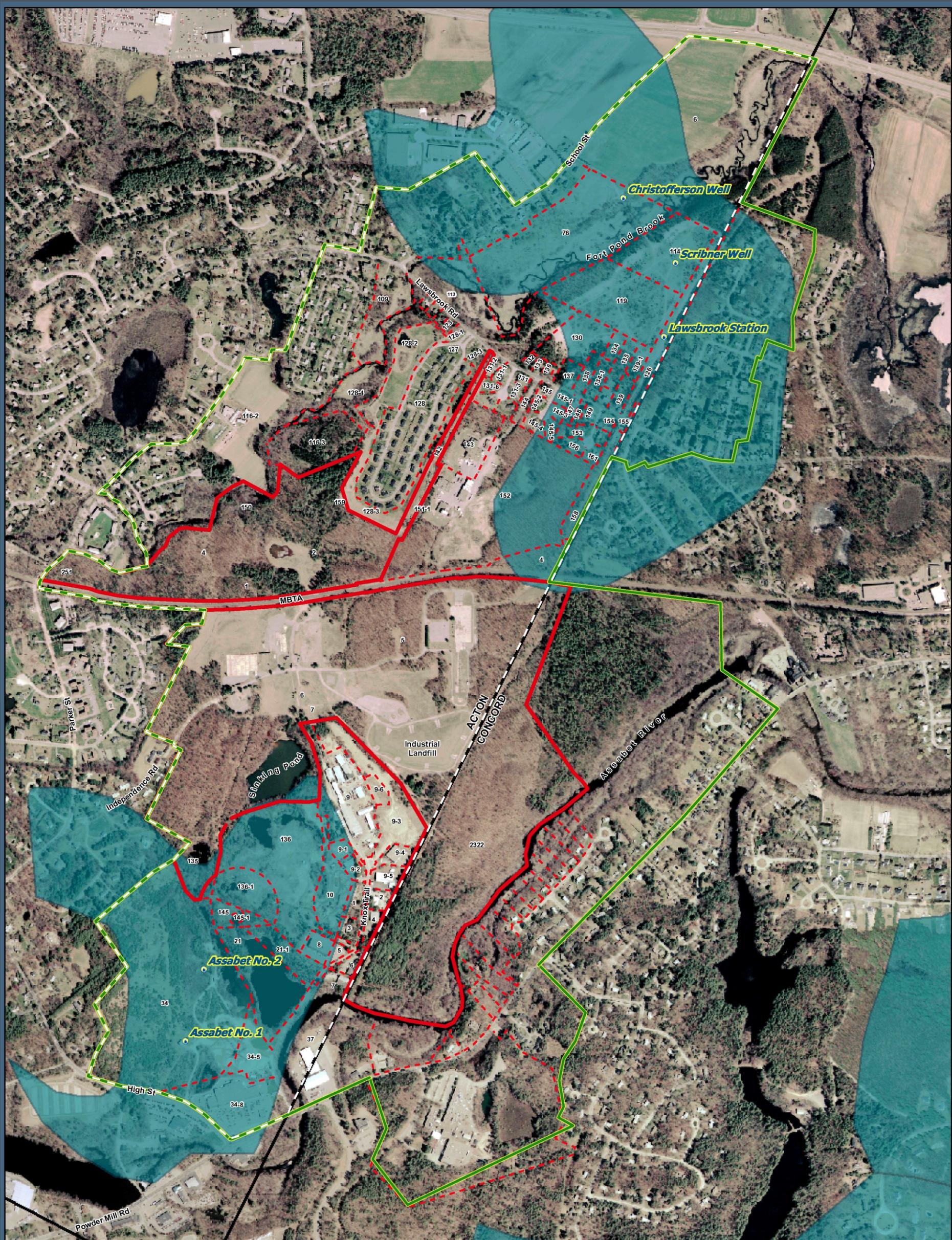
During the interview session, participants expressed the view that the town and Grace would need to work together, and communicate early and regularly, to redevelop the property successfully. The EDIC and Planning Board members expressed willingness to work with Grace to reduce obstacles to commercial redevelopment. For example, although access to the Grace-owned property is currently limited, the town believes that access can be improved and is willing to work with Grace or a future new owner to improve it. The possibility of working with MBTA to develop a train station was also mentioned.

Town representatives identified possibilities for redevelopment that they would view favorably, such as an office park or a university satellite campus. A restaurant would be allowable under current zoning, to service office workers. A preference was expressed for larger projects, but incremental development via approval of smaller projects was not ruled out.

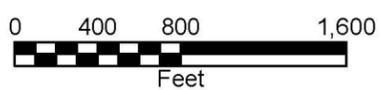
Town representatives were asked what they felt were the biggest obstacles to redevelopment of the Grace-owned property. The obstacles mentioned included: the need for remediation facilities to remain on the property (for example, a possible new groundwater treatment plant, monitoring wells, the Industrial Landfill); the possibility that potential buyers would be concerned about liability for site remediation; and the currently limited access to the property. EPA and MassDEP explained some mechanisms whereby the concern about potential liability for remediation could be addressed. Town representatives did not seem to feel that any of these obstacles were insurmountable.

Interview with Acton Water District. In addition to owning several parcels within the private well survey area, the Acton Water District is interested in the Site because of the potential for utilizing a former Grace production well (WRG-3) as a future water supply well, and because the redevelopment of the Grace property would likely increase the demand for town water. The AWD's Environmental Manager was contacted by telephone on August 19, 2004 to obtain AWD's perspective regarding the potential for redevelopment of the Grace property, or possible changes in the use of property currently owned by AWD.

AWD has an interest in possibly obtaining additional land in the vicinity of the former Grace production well known as WRG-3, and in pursuing the possibility of using this well as a future water supply well. Well WRG-3 is located to the northeast of Assabet No. 2 (outside of the Grace property) in Parcel 145-1 (Figure 6). The combined Zone II delineation for Assabet No. 1, Assabet No. 2, and WRG-3 is shown in Figure 6. AWD currently owns the land surrounding the Zone I delineation for WRG-3 but does not own Parcel 136 or Parcel 21-1. In 2000, AWD contemplated performing a pumping test of WRG-3, and approached EPA, MassDEP, and Grace to discuss the issue. At that time, the regulatory agencies and Grace expressed concern that it was not known whether the pumping test or possible reactivation of the well permanently, would impact remediation of the groundwater plume. WRG-3 is located within 20 feet of extraction well RP-1, and within 600 feet of extraction well WRG-1, both of which are part of the Aquifer Restoration System currently in operation (see Figure 2). The pumping test was not performed and the possibility of reactivating WRG-3 was put on hold.



SOURCE: Orthophoto: MassGIS, Commonwealth of Massachusetts
 Executive Office of Environmental Affairs
 Property Boundaries: GeoTrans, Inc.; Revised Private Will Survey Area 2002



LEGEND

- Acton Temporary Well Moratorium Boundary
- WR Grace Property
- Other Properties
- Private Well Survey Area
- Municipal Wells
- Zone II

**FIGURE 6.
 ZONE II PROTECTION
 DISTRICTS**

**WR GRACE RE-USE
 ACTON, MASSACHUSETTS**



AWD believes that although considerable barriers exist to using WRG-3, the water is needed and it is worth pursuing the possibility further. Redevelopment of the Grace parcels would likely increase demand for water. AWD commented that redevelopment for Technology District uses (such as an office park) would most likely result in lower demand for water than would residential redevelopment. AWD also believes that no matter how the Grace-owned property is developed, there will be a demand for water that will likely exceed the capacity of the current supply wells. AWD recommends that redevelopment of the Grace-owned property be pursued hand in hand with an evaluation of reactivating WRG-3 as a supply well. The availability of water to support redevelopment is considered by AWD to be an obstacle to redevelopment.

With respect to the parcels within the private well survey area that are already owned by AWD, no changes in land use are planned. The parcel just north of the School Street well field (Parcel 6 on Figure 6) is owned by the Commonwealth of Massachusetts and is leased for agricultural uses. AWD is not interested in acquiring this parcel.

Interview with ACES. The president of ACES attended the interview with Town of Acton officials conducted on August 11, 2004. Subsequent to that meeting, she solicited input from other ACES members, and M&E interviewed her on September 2, 2004, to obtain that input. ACES echoed the views expressed by town officials regarding cleanup objectives; namely, that the selected remedy should be designed and constructed to allow for the possibility of residential use in the future. ACES strongly feels that future redevelopment plans must consider that the site is in a sensitive area, near five municipal supply wells, and that no use should be allowed that could potentially result in additional contamination of groundwater, soil, surface water, or sediment. Examples cited by members as undesirable future uses included: any underground storage tanks, disposal of sewage effluent, or a golf course. ACES does not want a golf course because maintenance of it would require irrigation water (they are not in favor of using contaminated water for irrigation), and use of herbicides at a golf course could impact the groundwater. ACES also requests that any redevelopment be designed so that it does not interfere with site remediation, expose individuals to existing contamination before remediation is complete, or adversely impact Sinking Pond or other environmental resources. Grace, in their comments on the Draft Preliminary Reuse Assessment (see Appendix C), has commented that ACES concerns regarding redevelopment as a golf course are concerns that can be addressed, with potential problems avoided, by the golf course developer and operator.

ACES members offered input regarding their preferences for redevelopment of the

Grace-owned parcels. Similar to town officials, ACES believes the property offers some advantages (size, proximity to rail line) that should be maximized. A use that benefits the community is highly desirable, either in the form of increased tax revenue, or a direct benefit to residents. An example of the latter might be the development of a teen center or university satellite campus on the property. The risk assessments were conservative by assuming that the site would be reused in the future for residential purposes. Other desirable uses mentioned included an office park or wildlife habitat/open space. Low-impact development practices (“green” buildings, smaller building footprints, retaining some open space, reducing impermeable surfaces, use of rain barrels to collect water) are advocated by ACES for whatever development does take place on the property.

An architect who is a member of ACES also suggested that vapor barriers be used for any building constructed on the property, even if a risk assessment indicates that vapor intrusion will not present a risk to building occupants. Her suggestion is derived from her belief that it is not very expensive to install vapor barriers for new construction, but if a problem develops later it is expensive to correct it for an existing structure. Town of Acton representatives later commented that they supported this suggestion, as well. It was also mentioned that the selected remedy will need to demonstrate effective odor control, if redevelopment is to proceed successfully. The Public Health Risk Assessment that was completed in July 2005 for OU 3 determined that there are no unacceptable risk(s) from the vapor intrusion pathway if residential structures were located on the site.

In her comments on the Draft Preliminary Reuse Assessment (sent by e-mail to the EPA project manager, D. Golden, on November 15, 2004), the president of ACES requested that a comment be added regarding the possibility of re-activation of WRG-3, as follows: “ACES has serious concerns about the possibility of WRG-3, a former W.R. Grace production well, being proposed as a public water supply well.” The comment goes on to describe monitoring well data for wells located near WRG-3 that show exceedances of toxicity screening values for certain contaminants. Results are also cited for lead and arsenic concentrations above drinking water standards in nearby wells. The comment concludes that “ACES does not favor pursuing WRG-3 as a public water supply well, both because of water quality concerns for consumers, and because of the possibility that reactivation of this well may interfere with site remediation.” It should be noted that prior to reactivation of WRG-3, a pump test would need to be performed along with additional groundwater sampling and groundwater modeling in the area of WRG-3.

Interviews: Town of Concord

M&E spoke with the Concord Town Planner, Ms. Marcia Rasmussen, on September 20, 2004 regarding the town's preferences for redevelopment of the Grace-owned parcel in Concord (Parcel No. 2322), and possible obstacles to redevelopment.

Ms. Rasmussen noted that the primary obstacle to redevelopment of this parcel, other than its designation as a Superfund site, is the difficulty in gaining access to the parcel in Concord. With the Acton-Concord town line serving as the western edge of the parcel in Concord, the parcel is bounded on the north by the MBTA commuter rail line (an active railroad line) and permanently protected open space. To the east is a parcel of privately owned land that has questionable frontage and access on a way that was abandoned by the Middlesex County Commissioners in the 1980's, and to the south is the Assabet River (a designated "Wild and Scenic River"). In order to gain access to Parcel No. 2322 in Concord, one would need to either build a bridge over the Assabet River (acquiring additional property to the south of the Assabet River), or acquire the adjacent privately owned land to the east and conduct the legal research needed to demonstrate that there is right of access and frontage on Pond Lane.

Ms. Rasmussen explained that this parcel (No. 2322) is zoned Residence B. Uses that are allowed "by right" in the Residence B district include: single-family dwelling, educational uses, child care facility, religious use, municipal use, and the extensive uses of forestry, agriculture and conservation. Uses allowed by special permit include: two-family or additional dwelling, boarding house, philanthropic and lodge/club, greenhouse, and private recreation. In addition, there are certain cluster development options that are allowed by special permit (Planned Residential Development, Residential Cluster and Residential Compound) but these uses generally require minimum criteria that this parcel may not meet.

As for potential subdivision of the land, the Town of Concord's Subdivision Rules and Regulations (amended through August 2003) do not allow a subdivision of land where access to the subdivision tract in Concord is through land in another Town (Section 6.2.3) and no subdivision shall be approved unless the land to be subdivided has frontage on an existing public street or an existing private way in the Town of Concord (Section 6.7.1). Hence, Parcel No. 2322 could not be subdivided unless there were a way to gain access through Concord. Uses that would not require subdivision and that could otherwise be permitted under Residence B zoning, as outlined above, would be possible.

The town would be interested in acquiring the parcel for conservation and open space purposes (and perhaps other municipal purposes) and views the parcel as being essentially undevelopable now, because of the limited access. However, the Town is concerned about site contamination and possible liability if the Town were to acquire the parcel from Grace.

SECTION 3 - GENERAL FINDINGS/RECOMMENDATIONS

Reasonably Anticipated Future Land Uses

It is important to emphasize that the federal government (EPA) does not have an ownership or redevelopment interest in the Site. As such, EPA maintains a neutral position with respect to the nature of its future use(s). In conducting a Reuse Assessment, EPA seeks to identify those land uses that can be reasonably anticipated based on currently available information. However, in doing so, EPA does not attempt to determine which reuse scenario is “best suited” for a given Site. Where multiple uses are possible, or there is uncertainty regarding those uses, EPA will consider the range of protective uses that could reasonably occur (USEPA, 2001; USEPA, 1995).

Grace-Owned Parcels in Acton. The initial findings suggest that a range of future uses is possible for the parcels in Acton that are currently owned by Grace. A range of uses has been proposed, including residential/recreational, educational (university campus), and light commercial (office park). The likelihood of any of these proposals succeeding is complicated by the physical obstacles noted by Grace, as well as the differing views of Grace and the town of Acton regarding uses that are likely to be successful and desirable. The zoning of the parcels, as Technology District, does not allow for the residential or recreational uses that Grace’s land use analysis suggests are most feasible. The town has strongly expressed the position that the zoning is unlikely to be changed in the foreseeable future. Sustained communication between Grace and the town will be needed to allow for successful redevelopment.

The presence of Site contamination limits reuse potential in the vicinity of the Industrial Landfill, where enforceable institutional controls will likely be required to maintain the integrity of the landfill cap. Other obstacles that can be overcome relate to concerns about Superfund liability or exposure to contamination that may be raised by future landowners or tenants. EPA and MassDEP will need to work with Grace, the town, the community, and potential developers to allay these concerns.

Grace-Owned Parcel in Concord. The findings indicate that redevelopment of this parcel is limited by access issues to a greater degree than Superfund site issues. The town of Concord is interested in acquiring the parcel for conservation land, a use for which access is not a limitation, but has concerns about Superfund liability.

Acton Water District Parcels. The use of the parcels within the Site boundary that are owned by the Acton Water District is likely to remain the same for the foreseeable

future. The AWD intends to maintain the School Street and Assabet well fields, and in the long term may also pursue re-activation of WRG-3 as a public water supply well.

Reuse Issues/Considerations

Communication. As noted above, communication between Grace and the town of Acton will need to be strengthened to allow for redevelopment of the Grace-owned parcels in Acton. The Economic Development Industrial Corporation recently established by the town is positioned to play a significant role in facilitating redevelopment and maintaining communication with Grace. The purpose of the EDIC is to seek out and implement economic development opportunities that are consistent with the town's planning goals. The EDIC intends to examine the Grace-owned property, with the goal of fostering redevelopment for light industrial/commercial uses consistent with the Technology District zoning. In its comments on the Draft Preliminary Reuse Assessment (see Appendix C), Grace expressed a willingness to work with the EDIC and encouraged the EDIC to concentrate their efforts on finding feasible and cost-effective solutions to resolve the access problem. EPA may be able to provide the services of an EPA facilitator to help the town/EDIC and Grace overcome obstacles to effective communication, should the parties be interested in such facilitation.

Superfund Liability Concerns. The towns have raised several questions regarding Superfund and Massachusetts General Law 21E liability that could have a bearing on reuse of the Site. These are:

- The town's liability, should the town consider acquiring property from Grace.
- A developer's liability if they acquire or lease the property from Grace, which could impact the marketability of the property.
- Mechanisms for funding long-term operation and maintenance of the remedy, to protect against the possibility of Grace going out of business and ceasing to perform operation and maintenance.

It will be important for EPA and MassDEP to work with Grace, the town, the community, and potential buyers to help minimize the potential barriers posed by liability concerns. Some options include:

- **Statutory Exemptions.** The Small Business Liability Relief and Brownfields Revitalization Act, enacted in January 2002, amended CERCLA to provide liability limitations for landowners. A prospective purchaser can obtain liability protection by meeting certain criteria and satisfying certain continuing obligations. The Massachusetts Brownfields Act of 1998 provides similar limitations on 21E liability.
- **Insurance Products.** Environmental insurance policies are commercially available that can be purchased to limit financial exposure and help secure loans from lending institutions.
- **EPA Ready for Reuse Determinations.** EPA has developed a new document called a Ready for Reuse (RfR) determination that EPA may use to communicate that all or a portion of a Superfund site is protective for specified types of uses. RfR determinations are intended to provide helpful information to the real estate marketplace about the environmental status of Superfund sites to facilitate their reuse. RfR determinations are technical documents that do not provide any legal rights or legally enforceable commitments, and do not include any statements about EPA's enforcement intentions or any party's potential liability regarding a specific site. The issuance of RfR determinations is not mandatory - EPA Regions have discretion in deciding whether to issue RfR determinations. RfRs are not intended to address reuse issues that are unrelated to the environmental status of a Superfund site, and hence would not be useful for resolving disagreements between Grace and the town of Acton regarding desirable redevelopment options for the Grace-owned property. Should a proposed reuse be identified by Grace that is also acceptable to the town, an RfR determination might be useful as support documentation for prospective developers interested in pursuing the proposed reuse.

Recommendations for Follow-up

It should be noted that there are uncertainties and unresolved issues associated with the reuse/redevelopment of the W.R. Grace Superfund Site. In order to assist with the redevelopment of the Site, EPA recommends that the Town of Acton, W.R. Grace, and other relevant parties attempt to meet to begin the process of resolving outstanding issues. EPA and/or MassDEP could be available to provide assistance with

environmental concerns regarding redevelopment. However, it is noted that a number of the unresolved issues are not related to the Grace property's status as a Superfund site, and are instead related to differing viewpoints among Grace, town of Acton representatives, and citizens regarding the feasibility and desirability of various reuse options. Difficulties with communication among the parties seem to be an obstacle to progress. If Grace and the town of Acton are interested, EPA may be able to provide an EPA facilitator to help with communication among the parties regarding future redevelopment of the Grace-owned property.

SECTION 4 - REFERENCES

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- Sullivan Design and Construction Management (DCM), P.C. and Woodard & Curran, Inc., 2002. *Release Abatement Measure Plan, RTN #3-21297, Debris Area off Knox Trail, Concord, MA*. Prepared for W.R. Grace & Co. - Conn. April 2002.

USEPA, 1989. *Record of Decision, W.R. Grace Site - Acton, Massachusetts*, Prepared by the United States Environmental Protection Agency, September 29, 1989.

USEPA, 1995. *Land Use in the CERCLA Remedy Selection Process*. OSWER Directive No. 9355.7-04, May 25, 1995.

USEPA, 2001. *Reuse Assessments: A Tool To Implement The Superfund Land Use Directive*. OSWER Directive No. 9355.7-06P, June 4, 2001.

USEPA, 2005. *Record of Decision, W.R. Grace Site - Acton, Massachusetts*, Prepared by the United States Environmental Protection Agency, September 30, 2005.

APPENDIX A

**ACTON SITE EXECUTIVE SUMMARY
(PREPARED BY W.R. GRACE & CO. - CONN., MARCH 4, 2004)**

Acton Site Executive Summary

Prepared by W. R. Grace & Co. – Conn.
March 4, 2004

W. R. Grace & Co. – Conn. (“Grace”) is the fee owner of a contiguous tract of land containing approximately 259 acres (the “Site”), of which approximately 187 acres are located in the Town of Acton, Massachusetts and approximately 72 acres are located in the Town of Concord, Massachusetts. The Site was formerly used by Grace for production of container sealant products, latex products, plasticizers and resins, as well as paper and polyethylene battery separators. All of the former manufacturing facilities have been demolished (although several building slabs and paved areas are still present). The purpose and intent of this summary is to provide for the benefit of the Office of Site Remediation & Restoration of the U.S. Environmental Protection Agency an overview of the major impediments to the redevelopment of the Site, other than those related to the environmental condition or remediation of the Site.

Attached hereto is a plat of the Site, prepared by Sasaki Associates, Inc. (“Sasaki”), a site civil engineering company retained by Grace to assist in Grace’s planning for the re-use of the Site. At times throughout this summary, different parts of the Site will be referenced as follows, based on the areas shown on this plat:

- Area I – North side of railroad tracks (51 acres; Acton);
- Area II – South side of railroad tracks (136 acres; Acton);
and
- Area III – South side of railroad tracks (72 acres; Concord).

Access to the Site

A major obstacle to the successful redevelopment of the Site is its limited access. Area I can only be accessed from Parker Street, and Areas II and III can only be accessed from Independence Road. Neither Parker Street nor Independence Road is a primary transportation roadway, nor does either have a primary roadway in close proximity. While the southernmost portions of Area III are close to Knox Trail, and while much of Area III is close to Main Street (Route 62), the intervening land between each such roadway and Area III is not owned by Grace. Therefore, access to the Site is limited in location and, where it can occur, it must occur by secondary roadways through residentially zoned districts.

Slopes

The steep slopes that are scattered throughout the Site present another significant obstacle. As the attached chart, labeled "Site Constraints," shows, approximately 72 acres of the Site (a full 28% of the land mass) contains slopes of greater than 15%. Another 19 acres (an additional 7% of the total acreage) contains slopes of between 10% and 15%. These areas of steep slope would be less of an obstacle to development if they were clustered together. However, they affect most portions of the Site, and would seriously limit the location and size of the footprint of any buildings to be constructed on the Site.

Surface Waters and Wetlands

Any redevelopment of the Site must take into account the surface water bodies and wetlands present. These include Sinking Pond at the southwest of Area II, the Assabet River forming the eastern border of Area III, and the wetlands in Area III. There are also wetlands in Area I, not far from Fort Pond Brook on the northwest side of Area I. These areas must be excluded from the total developable land at the Site.

Physical Encumbrances

Also noteworthy is the active railroad commuter line which bisects the Site, separating Area I, to the north, from Areas II and III to the south. This railroad line will make any linkages between Area I and Areas II and III extremely difficult, and further restrict the flexibility of future development.

There is also a major gas transmission line which bisects the Site, this time separating Area II, to the west, from Area III, to the east. This, too, will restrict the flexibility of future development.

Zoning

Areas I and II are both zoned TD, Technology District. The Technology District zoning classification permits business or professional offices, warehouse and light manufacturing uses, but does not permit any residential uses, retail stores, non-office business uses, or most recreational uses. Given the residential nature of surrounding areas on the west, north, and east, Grace believes that residential uses would be desirable on portions of the Site unaffected by Grace's prior operations, and that recreational uses would be appropriate on significant other portions. Based on the political structure of the Town of Acton, any zoning change would require not only the support by the Town's selectmen and governing bodies, but also a positive vote by the Town's citizenry, making the possibility of rezoning both a major and an uncertain

endeavor. Consequently, the development options for the Site are further constrained.

In addition to the significant limitations in use imposed by the existing Technology District zoning classification for Areas I and II, the zoning code imposes increased required setbacks (200 feet) from the adjacent residential use zoning, riverfront setback requirements associated with the frontage along Fort Pond Brook, and setbacks associated with all of the existing wetlands. These setback requirements further limit Grace's ability to develop the property.

Net Usable Land Area

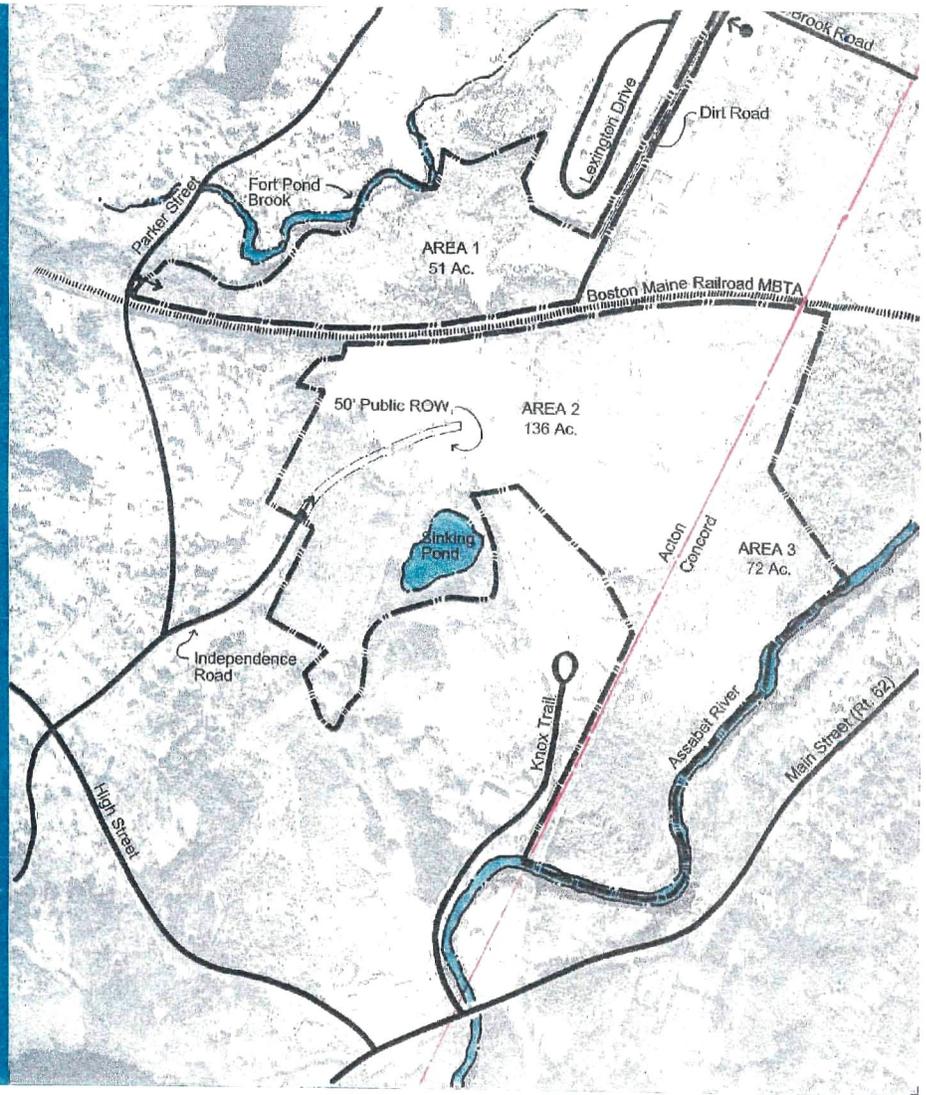
Based upon Sasaki's compilation and evaluation of all of the foregoing factors, along with the environmental constraints resulting from Grace's prior use of the Site and current remediation, Sasaki established a Net Usable Land Area ("NULA") as a primary indicator quantifying the potential reuse and redevelopment of the Site. Sasaki ultimately concluded that Area I only had an NULA of 27 acres, or 53% of the actual acreage of Area I; Area 2 had an NULA of 92 acres, or 67% of the actual acreage of Area II; and Area 3 only had an NULA of 42 acres, or 58% of the actual acreage of Area III, each a disappointingly low percentage.

Conclusion

In summary, the impediments to redevelopment of the Site are not purely related to environmental conditions, but also derive from the significant inherent problems of access, topography, surface waters and wetlands, a railroad crossing, a gas transmission line, and zoning. Even after remediation of the Site, only a limited portion of the site will be suitable for reuse and redevelopment, and then only for certain carefully chosen purposes.

Local Roads
Potential Access Points

Total Acres: 259 ac.
Area 1 : 51 ac.
Area 2: 136 ac.
Area 3: 72 ac.



GRACE

CONSULTANTS

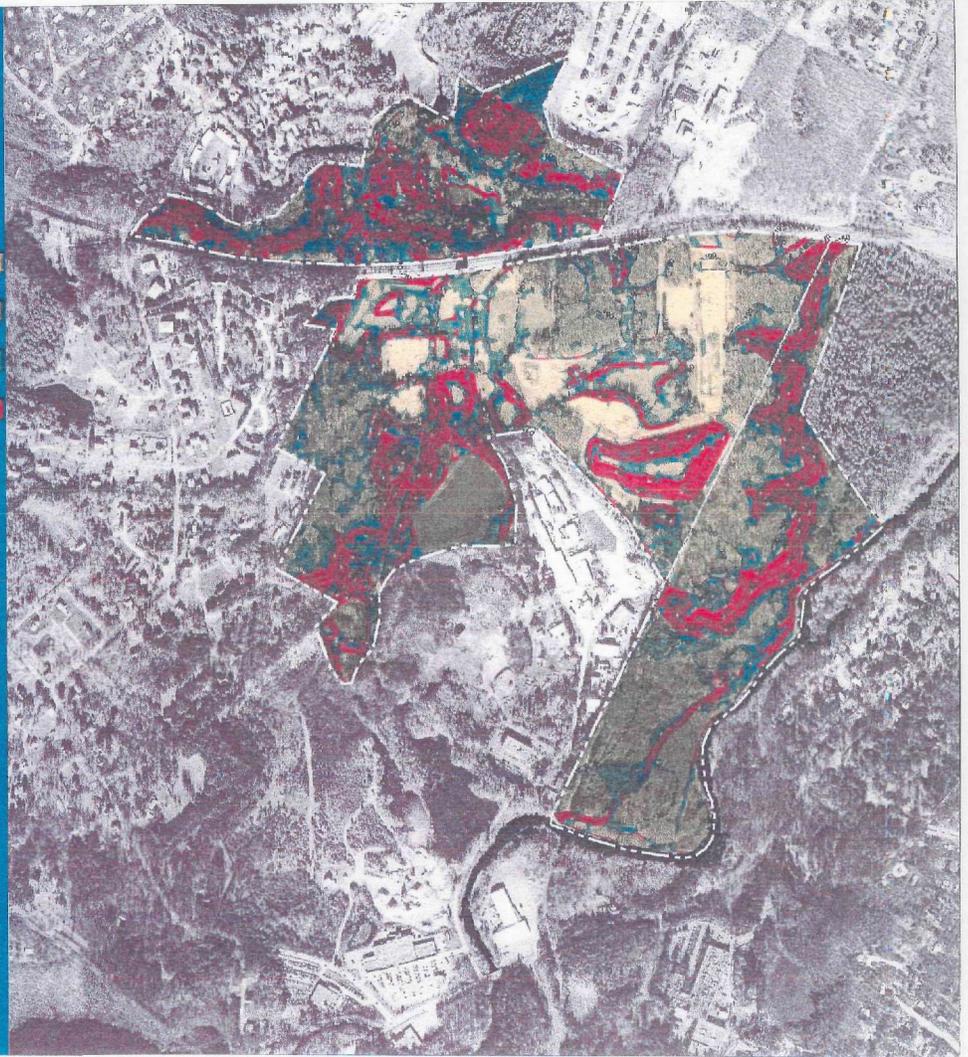
SPALDING & SEYE

Site Constraints

Total Acres: 259 ac.

Slopes:

0-5%	135 ac. (52%)	
5-10%	33 ac. (13%)	
10-15 %	19 ac. (7%)	
> 15%	72 ac. (28%)	



GRACE

CONSTRUCTION

FOUNDING & SITE

APPENDIX B

SIGN-IN SHEET, MEETING WITH ACTON TOWN OFFICIALS, AUGUST 11, 2004

W.R. Grace Reuse Meeting Sign In Sheet

Wednesday, August 11, 2004

Acton Town Hall, Room 204

Name	Organization	Telephone Number
1.) Derrick Golden	USEPA	617-918-1448
2.) Barbara Weir	M+E (contractor for EPA)	781-224-6608
3.) Daniel Keefe	DEP	617-292-5940
4.) Doug Halley	Acton Board of Health	978-264-9634
5.) Josh Chernin	Acton EDIC	(978) 264-9505
6.) Sarah White	EPA	617/918-1026
7.) Mary Michelman	ACES	978 263-7370
8.) DON JOHNSON	ACTON TOWN MANAGER	978 264-9612
9.) Jonathan Avesey	Acton EDIC	978-263-5002
10.) Ann Chang	EDC	978 263-4726
11.) Walter Foster	Board of Selectmen	978 (617) 228-4448
12.) Lauren Rosenzweig	Acton Planning Board	978-263-8918
13.)		
14.)		
15.)		
16.)		
17.)		

EDIC = Economic Development and
Industrial Corporation

APPENDIX C

LETTERS OF COMMENT ON DRAFT PRELIMINARY REUSE ASSESSMENT:

Letter from Maryellen Johns (Remedium Group, Inc.) to Derrick Golden (EPA Remedial Project Manager) dated November 11, 2004

Letter from Don P. Johnson (Acton Town Manager) to Derrick Golden (EPA Remedial Project Manager) and Gretchen Muench, Esq. (EPA Attorney) dated November 11, 2004

E-mail from Mary Michelman (Acton Citizens for Environmental Safety) to Derrick Golden (EPA Remedial Project Manager) dated November 15, 2004

[Double-Sided]

WA 102 Conres. from Remedium
cc B. Wein

Remedium

Maryellen C. Johns
Project Engineer

Remedium Group, Inc.

A Subsidiary of W. R. Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, MA 02140
Tel: (617) 498-2668
Fax: (617) 498-2677

November 11, 2004

Mr. Derrick Golden
Remedial Project Manager
USEPA Region I
One Congress Street, Mail Code HBO
Boston, Massachusetts
02203-0001

RE: Draft Preliminary Reuse Assessment for the W.R. Grace & Co
(Acton Plant) Superfund Site located in Acton & Concord, Massachusetts

Dear Derrick:

Thank you for the opportunity to review and provide comments on the Draft Preliminary Reuse Assessment for the W.R. Grace Site. As I discussed with you and Metcalf & Eddy staff during the preparation of this document, unlike most EPA lead Superfund sites that are often truly orphan properties, the Grace Site has an active property owner who is interested in, and actively engaged in planning for, the future development of its land. Grace is currently considering various redevelopment options for the Acton and Concord parcels that take into account the considerable site constraints affecting the property, including access, as well as the marketability of these options in the near future. One of Grace's primary concerns in reviewing potential development options is consideration of continued remedial obligations at the Site.

As to the document in general, we believe it would be improved by including a description of Grace's role as the property owner, the party responsible for the investigation and remediation under the Superfund program, and the party with the right to redevelop the Grace Site. The Purpose section of the document should be expanded to explain in more direct language that the timing for this reuse assessment is based on the EPA's determination that the Feasibility Study (FS) stage is the appropriate time for a reuse assessment to be performed at all Superfund Sites and that the Grace Site is in the FS process for OU-3, which is primarily related to groundwater. There is text at the beginning of Section 3, which would be helpful to emphasize at the beginning of the document, as it adds context to the role of EPA and the overall purpose of the reuse assessment process.

Below, I have listed some specific comments we would like to see addressed in the Final Reuse Assessment document.

Page 14, last paragraph – The text states that the Consent Decree “also requires Grace to obtain the consent of the United States before transferring any of the Site property”. Section XVI of the 1980 Consent Decree actually only requires Grace to provide “notice of intent to sell” to the federal government parties and to provide for the fulfillment of all requirements of the decree in a transaction which conveys title, easement or other interest in the property.

Page 20, Zoning Paragraph -The basis for Grace considering Technology District zoning an obstacle is more complex than portrayed in this paragraph. Access constraints as well as current and near future market

conditions are both significant barriers for development under the current zoning. The fact that the Grace parcels are surrounded by residential is key to consideration in Grace's review of development options such as a golf course with some residential development in the previously unused portions of the Grace parcels.

Page 22, third paragraph – There is inconsistency in the Town's expression that the remedy should "allow for residential use in the future" when they are also indicating the parcels are not currently zoned for residential and a zoning change is unlikely. Grace believes the remedy should be geared to the likely development that in Grace's opinion includes residential for portions of the property. As you know, the Public Health Risk Assessment, which provides the basis for the cleanup goals in the Feasibility Study, has been conservatively written to include the potential residential use of the entire Superfund site in the future.

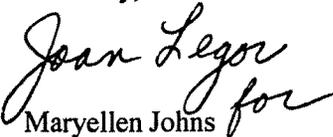
Page 23 – The Town wants the EDIC to solicit funds to perform a market study of our property. We'd like to point out that Grace has already had a market study of its property performed by a well respected consultant and, therefore, we suggest that any additional efforts in this direction be devoted to updating that study and to addressing the difficult access issues, including possibilities related to the MBTA.

Page 26, first paragraph - ACES echoes some of the concerns made by the Town that the selected remedy should allow for residential use in the future. See comment page 22 above. ACES also includes golf course in their list of undesirable future uses. All of the issues they list as concerns regarding a development that includes a golf course are issues that could be addressed, with potential problems avoided, by the golf course developer and operator.

Page 30 – This section notes "EDIC intends to examine the Grace-owned property, with the goal of fostering redevelopment for light industrial/commercial uses consistent with the Technology District Zoning." Grace looks forward to working with the newly formed EDIC and will encourage them to concentrate their study and efforts on finding feasible and cost effective solutions to resolve the access problem.

Grace's Real Estate department has considerable experience in dealing with the redevelopment of previously industrially used properties and considers the future redevelopment of the Acton /Concord parcels a unique and important project. While we welcome the input and expertise of the EPA, and appreciate their efforts to coordinate the opinions of the various interested parties, we do not want this exercise, and the final assessment report issued, to blur the basic fact that Grace, as the owner of the Grace Site, has the final responsibility for developing the property, subject to local zoning and building regulatory authority. Grace will continue to communicate with the Town of Acton and the Town of Concord as needed regarding future redevelopment of the parcels.

Sincerely,


Maryellen Johns

CC: Dan Keefe/MA DEP
Doug Halley/Town of Acton
John Podgurski/EPA
Barbara Weir/Metcalf & Eddy
Marcia Rasmussen/Town of Concord



TOWN OF ACTON
 Town Manager's Office
 472 Main Street
 Acton, Massachusetts, 01720
 Telephone (978) 264-9612
 Fax (978) 264-9630
 E-mail djohnson@acton-ma.gov

November 11, 2004

FEDERAL EXPRESS	FEDERAL EXPRESS
Mr. Derrick Golden Remedial Project Manager USEPA Region I One Congress Street, Mail Code HBO Boston MA 02114	Gretchen Muench, Esq. Environmental Protection Agency One Congress Street Boston, MA 02114

Re: EPA Draft Preliminary Reuse Assessment:
 W.R. Grace & Co., Inc. (Acton Plant) Superfund Site

Dear Derrick and Gretchen:

On behalf of the Town of Acton, I am writing to comment on EPA's draft of the Preliminary Reuse Assessment for the W.R. Grace Superfund Site in Acton, MA. The Town appreciates EPA's efforts to promote responsible redevelopment and reuse of the Grace property. The Town believes that appropriate redevelopment and reuse of the property can and should occur as soon as possible in accordance with the Town's duly promulgated Master Plan and Zoning Bylaw, copies of which were previously provided by the Town to EPA's consultant. At the same time, as the Town has recommended, for more than twenty-five years, that environmental remediation of the Grace property and the groundwater aquifers contaminated by the historical use of the Grace property should be completed to the most stringent remediation standards. The Town stands by that recommendation.

With this as background, the Town has the following specific comments on the draft Preliminary Reuse Assessment:

EPA Should Declare the Grace Site Ready for Appropriate Reuse

As the time line in the Preliminary Reuse Assessment indicates (on page 11), in 1978, contamination in the municipal drinking water wells was discovered. In 1980, the United States sued Grace; DEP issued an administrative order to Grace; and the United States and Grace entered a Consent Decree for Grace to clean up its waste disposal areas and restore the contaminated groundwater affected by pollution from the Grace property. Despite some significant delays in the remediation process in the twenty-four years since the Consent Decree was entered, Grace has remediated and EPA has approved the remediation of the waste disposal areas on the Grace property itself. While Grace continues to remediate the extensive groundwater contaminant plumes emanating from the Grace property toward multiple public water supply wells, there is no reason for Grace or EPA to delay the appropriate redevelopment of the Grace property itself. Indeed, in the interests of environmental protection and returning this "brownfields" property to positive and productive use in the community, the Town believes that EPA should (a) declare in the Reuse Assessment that the Grace property itself is ready for redevelopment in accordance with the Master Plan and the Town Zoning Bylaw, and (b) issue as soon as possible appropriate "Ready for Re-Use Determinations" for the Grace Property (see Preliminary Reuse Assessment at page 31).

As the Preliminary Reuse Assessment indicates (on page 9) the Grace property is zoned in the Technology District, which allows a variety of business, manufacturing and industrial uses including, without limitation, offices, institutional and public service uses, and infrastructure such as parking,

transportation, and utilities. In addition, by special permit, uses allowed in the Technology District also include a restaurant, hotel, distribution plant and scientific facility. EPA should declare that the Grace property itself has been sufficiently remediated to allow the construction and use of such facilities. If EPA does not think that this is the case after more than twenty-four years of government-supervised remediation, EPA should explain in the Preliminary Reuse Assessment specifically what, if anything, needs to be done to prepare the property for such reuse, and EPA should require Grace to take those actions forthwith.

The Technology District also allows, with appropriate municipal permits or approvals, a health care facility, childcare facility, a retirement community, a hospital, and an educational institution. Because these type of facilities may involve more sensitive receptors (*i.e.* children, residents, or patients) to be present on the site for extended periods, EPA should also determine whether or not the Grace property itself has been sufficiently remediated to allow construction and use of such facilities. If EPA does not think that this is the case, and if EPA deems that such use may nonetheless be appropriate at the site, EPA should explain its reasoning fully and specify what needs to be done to prepare the property for such reuse and what restriction would apply thereto.

The Public Sewer Enhances the Development Potential of the Grace Property

The Town has recently completed the construction of the Middle Fort Pond Brook Sewage Treatment Plant and sewer system to accommodate almost a thousand properties in the sewer betterment district, including all of the Grace property fronting on Independence Road and much of the Grace property fronting on Parker Street. This land comprises most of the Grace Superfund Site.

The Town's sewer plant and the Town's sewer system have sufficient available capacity to accommodate the development of approximately 1.2 million square feet of office space and associated infrastructure on the portion of the Grace property which has been included in the sewer betterment district. The presence of the public sewer line to the Grace property makes possible the immediate redevelopment of the Grace property for Technology District uses. In addition, the presence of the public sewer line directly contributes to environmental protection and to protection of the aquifer restoration system by ensuring that substantial volumes of untreated sewage effluent are not discharged to the groundwater aquifers which feed the municipal drinking water wells and which are being remediated by the aquifer restoration system.

Accordingly, the Town believes that, as part of the Preliminary Reuse Assessment and any "Ready for Re-Use Determinations," EPA should determine and require as an enforceable reuse restriction that any redevelopment of the Grace property must discharge its sewage effluent to the public sewer system.

Communication Between the Town and Grace

One of the principal findings of the Preliminary Reuse Assessment is that "communication between Grace and the town of Acton will need to be strengthened to allow for redevelopment of the Grace-owned parcels in Acton" (at page 30). The Town calls to EPA's attention that, on September 19, 2002, representatives of the Town and the Acton Economic Development and Industrial Corporation ("EDIC")¹ met with representatives of Grace to discuss, *inter alia*, the redevelopment of the Grace property. Following that meeting, Town Counsel sent an email dated October 9, 2002 (copy attached) to Grace's representative MaryEllen Johns setting forth a list of questions which the Town and the EDIC would like to have answered to assist them in understanding Grace's redevelopment objectives, Grace's efforts (if any) to develop the property in accordance with the Town's Master Plan and Zoning Bylaw, and other information relevant to fostering the prompt and appropriate redevelopment of the property. To date, Grace has not responded to the Town's questions.

The Town remains ready, willing and able to communicate with Grace to foster the immediate and appropriate redevelopment of the Grace property. However, communication must be a dialog to succeed. Accordingly, the Town encourages EPA to request Grace to provide answers to the Town's questions within thirty days. In the alternative, the Town urges EPA to issue these questions to Grace as a formal information request under EPA's statutory authority.

¹ The Acton Economic Development and Industrial Corporation is a separate municipal entity established by Chapter 135 of the Acts of 2001 for the various purposes stated in the Act.

Grace's Claimed Impediments to Development are Unrealistic

Receiving Grace's answers to these questions is particularly important as the Preliminary Reuse Assessment (at pages 19-20) has attached and paraphrased at length from "an executive summary of the impediments to redevelopment of the Grace-owned parcels that was prepared by Grace's real estate counsel." Those impediments are said to include access, slopes, surface waters and wetlands, physical encumbrances, and zoning.

The Town vigorously disputes Grace's counsel's assertions (picked up by the Preliminary Reuse Assessment) that these issues constitute significant impediments to development of the Grace property in accordance with the Town's Master Plan and Zoning Bylaw. For example:

- Access

The Preliminary Reuse Assessment correctly indicates that the Grace property is currently served directly by two public ways, Parker Street and Independence Road (at page 19). Both Grace's Executive Summary and the Preliminary Reuse Assessment mistakenly indicate, however, that Grace lacks access to other public ways including Powder Mill Road (Route 62).²

By virtue of a Deed dated August 13, 1945 (copy enclosed), recorded in the Middlesex South Registry of Deeds at Book 6883, Page 387, from Eastern States Farmers' Exchange, Incorporated, to Grace's predecessor Dewey and Almy Chemical Company ("1945 Deed"), Grace has the following rights to Plant Road shown on a plan filed in Middlesex Registration Book 900, Page 101 (copy enclosed):

The premises (i.e. both parcels) are hereby conveyed with the benefit of the following perpetual rights and easements which shall be appurtenant to each of them and to any land adjoining either of them which is now or hereafter acquired by the Grantee: . . . The right and easement forever to pass and repass by foot or vehicular traffic over the road (commonly known as the Plant Road and the beginning of which is shown on [a Plan dated September 7, 1944, recorded as Plan No. 499 of 1944] along the Southerly course thereof where it runs in two courses to and from County Road so-called from and to the place where the Southerly course of Plant Road crosses the Acton-Concord town line at land included within the First Parcel hereby conveyed.

Plant Road is also shown on Subdivision Plan 25398D, registered in the Middlesex South Registry District of the Land Court on October 2, 1974 in Book 844, Page 89 (Certificate

² Grace's Executive Summary indicates (at page 1) that:

"A major obstacle to the successful redevelopment of the Site is its limited access. Area I can only be accessed from Parker Street, and Areas II and III can only be accessed from Independence Road. Neither Parker Street nor Independence Road is a primary transportation roadway, nor does either have a primary roadway in close proximity. While the southernmost portions of Area III are close to Knox Trail, and while much of Area III is close to Powder Mill Road (Route 62), the intervening land between each such roadway and Area III is not owned by Grace. Therefore, access to the Site is limited in location and, where it can occur, it must occur by secondary roadways through residentially zoned districts."

The Preliminary Reuse Assessment picks up on this assertion (at page 19) as follows:

"The two current access roads, Parker Street and Independence Road, were cited as being limited because they are secondary roadways through residential areas. Access via Powder Mill Road (Route 62) or Knox Trail would require access to be opened through land that is not owned by Grace."

142839) and on Subdivision Plan 25398I, registered in the Middlesex South Registry District of the Land Court on April 7, 1977 in Book 900, Page 101 (Certificate 15405).

In addition, by virtue of a Deed dated December 20, 1948 (copy enclosed), recorded in the Middlesex South Registry of Deeds at Book 7380, Page 182, from Eastern States Farmers' Exchange, Incorporated, to Grace's predecessor Dewey and Almy Chemical Company, Grace has "a perpetual right and easement (which shall be appurtenant to the parcel hereby conveyed, to Grantee's existing right and easement in Plant Road, so called, and to any adjoining land which now belongs to or is hereafter acquired by the Grantee) to pass and repass by foot or vehicular traffic from Plant Road, so called, to other land of Grantee lying West of said Plant Road, along a passageway 20 feet wide... ."

Plant Road is shown on numerous recorded plans³ as running from what is now Route 62 into what is now the Grace property over Knox Trail and across intervening property.⁴

Despite this perpetual easement over Plant Road and despite being asked by the Town to evaluate gaining access to the Grace property for development over Knox Trail in this vicinity, Grace has failed to report the existence of this access to EPA, has failed to provide the current state of title as to its rights thereto, and has failed to respond to the Town's inquiries in this regard. The Town's straightforward research at the Registry uncovered the easement fairly easily. Indeed, it appears that further research might even disclose one or more additional means of access. The 1945 Deed also conveys the right to pass and repass by foot or vehicular traffic "from Old Stow Road so-called and the Second Parcel hereby conveyed." According to maps, Old Stow Road appears to correspond to Independence Road, but extend into West Concord. Grace does not discuss the potential availability of this access from the Grace parcels through West Concord to a public way.

As a result, Grace's claim to have only two means of access appears incomplete. In any event, Grace operated a substantial chemical manufacturing plant for decades using Independence Road as its primary means of access. There is no reason to believe that Grace cannot now redevelop its property in an appropriate way with the means of access readily available to it.

The Town believes that, particularly if Grace were truly interested in developing the property to its highest and best use, Grace would aggressively attempt to resolve what Grace perceives are access issues. Grace has apparently taken no steps to do so.

Finally, the Town is willing to consider the use of its eminent domain powers, if necessary to improve public infrastructure in the area of Route 62 and Knox Trail, which would also remedy any access problem claimed by Grace from Route 62 into the Grace property.

- Slopes

Grace asserts that all land with "steep slopes" greater than 15% (said to be about 72 acres of its property) is undevelopable (Executive Summary, p. 2). A slope of 15% translates to a grade with

³ See, e.g. Plan filed in Middlesex Registration Book 900, Page 101; Middlesex Registration Plan 19583 of 1947; Plan 62 of 1949; Plan 15 of 1952; Plan 25398(A-D) of 1954; Plan 25398(E-G) of 1976; and Plan 25398(H-I) of 1977.

⁴ The main intervening property is owned by William A. Lawrence, II, by Transfer Certificate of Title No. 178806, in Middlesex Registration Book 1024, Page 56. That Certificate of Title expressly notes that, "So much of the above-described land as is included within the limits of Plant Road approximately shown on [a plan filed in Middlesex Registration Book 900, Page 101] ..., is subject to a right of way as set forth in a deed given by said Eastern States Farmers' Exchange, Incorporated, to Grace's predecessor Dewey and Almy Chemical Company, dated August 13, 1945, duly recorded in Book 6883, Page 387,"

2 inches of rise per foot of run. Development can and does regularly occur on land with such a slope. In fact, it is only twice as steep as the State allows for handicapped access ramps for disabled individuals to negotiate in wheelchairs. To imply that this minor grade is too steep to allow for construction is unfounded, especially when the underlying soils are some of the easiest soils to grade (cut and fill).

- Wetlands

Grace asserts that surface waters and wetlands are impediments to development. While the presence of regulated wetlands may restrict development at and within their immediate vicinity, such wetlands comprise only a relatively small portion of the 185+ acres Grace owns in Acton.

- Physical Encumbrances

Grace points to the presence of the MBTA commuter line and a gas transmission line, which cross the property, as major impediments to development. If Grace were really interested in development of the property, following Smart Growth principles espoused by the Governor and others for their environmental benefits, Grace would view the presence of the active commuter railroad line as a potential benefit to redevelopment. There is nothing preventing Grace from working with the MBTA to develop an appropriate commuter rail station at the property to serve the redevelopment of the property. Such a station could provide for a "reverse commute" by public transportation to the Grace property and a desirable complement to the existing commuter railroad stations in Acton and Concord for commuters into Boston.

In addition, the presence of the gas line can easily be designed around or, if necessary (as was the case in a recent subdivision in Town) relocated by the developer in a way that meets its needs.

- Zoning

As for zoning, Grace has more than enough "Net Usable Land Area" - even by its own highly conservative calculation - to accommodate 1,190,000 square feet of office buildings (including the building footprints, parking spaces, and maneuvering aisles) with more than 50% of its "Net Usable Land Area" left over for additional driveways, inefficient parking layouts, landscaping, pedestrian amenities, etc.² Thus, the land area needed to build 1,190,000 square feet of office space in the Technology District under the Acton Zoning Bylaw is approximately 40.0127 acres, calculated as follows:

- 1,190,000 square feet of office building net floor area requires approximately 10.0168 acres of land in building footprints assuming gross floor area at 10% over net floor area and 3-story buildings.
- 1,190,000 square feet of office building net floor area requires 4,760 parking spaces based on the zoning requirement of 1 space per 250 sq. ft. of building net floor area.
- Based on zoning requirements of 9' x 18.5' for each parking space plus 9' x 12' for half the width of a maneuvering aisle, one parking space requires 274.5 square feet of land area.

² Grace asserts that the "Net Usable Land Area" of its Acton property (after taking into account all of the alleged limiting factors and environmental constraints on the property) is 119 acres (with 27 Acres in Area 1 and 92 acres in Area 2)(Executive Summary, p. 3). The 92 acres in Area 2 alone is more than double the 40.0127 acre figure in the calculation in the text.

- The total acreage needed for surface parking, including maneuvering aisles and driveways is approximately 29.9959 acres (4,760 x 274.5).

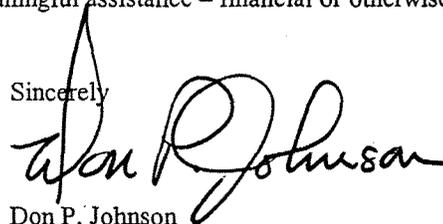
Other Comments

The Town has the following additional specific comments on the Preliminary Reuse Assessment:

1. On page 9, ¶ 2, final sentence, the Preliminary Reuse Assessment indicates that residential uses are not allowed in the PM district. In fact, single-family residences (with or without an apartment) are allowed in the PM district.
2. On page 23, ¶ 1, final sentence, the Preliminary Reuse Assessment indicates that the EDIC plans to solicit funding to perform a market study of the Grace-owned property. In Town Counsel's email of 10/9/02 (enclosed), EDIC asked if Grace was willing to fund such a study (see ¶¶ 11, 12). Grace has not responded to that request. If the EDIC seeks grant funding from other sources, it is likely to do so for a broader spectrum of properties and issues than just Grace.
3. On page 26, ¶ 3, the Town supports ACES's suggestion that vapor barriers be used for any new buildings on the Grace property.

Finally, throughout the Preliminary Reuse Assessment are suggestions that EPA can provide assistance to the Town and to Grace with respect to redevelopment of the property. The Town welcomes any assistance from EPA in this regard and asks EPA to be as specific as possible in the Preliminary Reuse Assessment as to the availability, timing and likelihood of meaningful assistance – financial or otherwise – being brought forward to the parties in this matter.

Sincerely



Don P. Johnson
Town Manager

Cc: MaryEllen Johns – Remedium Group
Jay Naparstek - MADEP
Mike LeBlanc - MADEP
Dan Keefe - MADEP
Andy Cohen - MADEP
Doug Halley - Acton Board of Health
Jane Ceraso - Acton Water District
Jim Deming - Acton Water District
Jim Okun – O'Reilly, Talbot & Okun
Barbara Weir – Metcalf & Eddy
Mary Michelman – ACES
Marcia Rasmussen – Concord Planning Department
John Podgriski - EPA

Weir, Barbara

----- Forwarded by Derrick Golden/R1/USEPA/US on 10/21/2005 09:53 AM

MSMichelman@cs.c
om

To
11/15/2004 03:55 PM Derrick Golden/R1/USEPA/US@EPA
cc
Daniel.Keefe@state.ma.us
Subject
ACES comments on Reuse Assessment

Hi Derrick,

Thank you for sending me a copy of the Sept. 2004 Draft of the "Preliminary Reuse Assessment", for the WR Grace Site in Acton. Here are my comments on behalf of ACES.

Re: Page 26, "Interview with ACES"

1. In the first paragraph, the fifth sentence currently ends:

"...no use should be allowed that could potentially result in additional contamination of groundwater." After the word "groundwater", please

add: ", (or
soils, surface water, or sediment)."

2. Please change the last sentence in the first paragraph so that it reads:

"ACES also requests that any redevelopment be designed so that it does not interfere with site remediation, expose individuals to existing contamination before remediation is complete, or adversely impact Sinking Pond, or other environmental resources."

3. Second paragraph, fifth sentence: Please add the words ", but not eliminate", after "would mitigate", so that the sentence reads: "Site cleanup to residential standards would mitigate, but not eliminate, this concern."

4. Third paragraph: The architect mentioned is female, so please change "he" to "she", etc.

5. Please add the following comment to ACES comments:

ACES has serious concerns about the possibility of WRG-3, (a former WR Grace production well), being proposed as a public water supply well. In its current condition WRG-3 cannot be sampled for water quality, but just east of WRG-3, (in the B-09 monitoring wells), metals and other contaminants, including

cadmium, chromium, lead, MTBE, nickel, and vanadium have been found at levels exceeding toxicity screening values. Lead was detected at a level almost ten times the drinking water standard (144ppb versus 15ppb.) In another nearby monitoring well, (B-05B4), north of WRG-3, a high level of arsenic was detected, (37.9ppb). ACES does not favor pursuing WRG-3 as a public water supply well, both because of water quality concerns for consumers, and because of the

possibility that reactivation of this well may interfere with site remediation.

Thank you!

Mary Michelman