

SUPERFUND

W.R. Grace (Acton Plant) Site Acton, MA

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND



THE SUPERFUND PROGRAM protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.

SITE DESCRIPTION:

The W. R. Grace (Acton Plant) Superfund site is located in the towns of Acton and Concord, Massachusetts and has been used for industrial purposes since the 1800's. The W. R. Grace property is composed of approximately 260 acres of land including several surface water bodies and various wetlands. Grace produced a variety of latex and rubber-based products as well as cellulose battery separators. All production ceased at the Grace site in 1991.

IS THE DRINKING WATER SAFE?

Yes. The Acton Water District (AWD) continues to closely monitor, sample and treat the towns' drinking water to ensure that safe drinking water standards are maintained. The AWD will continue providing oversight during the groundwater and sediment cleanup actions.

REMEDY DESIGN ACTIVITIES

Since the decision on the cleanup approach for the W. R. Grace site, formally known as a Record of Decision (ROD), was signed by EPA in 2005, EPA and MassDEP project managers in coordination with stakeholders from ACES, the Town of Acton Health Department and the Acton Water District have worked with W. R. Grace on the design of the remedy. EPA has regularly held conference calls to discuss design details with community stakeholders. In addition, community stakeholders have had an opportunity to review and provide comments on technical reports, well locations and work plans related to the design of the site remedies. Stakeholder comments were communicated and/or discussed with W.R. Grace's contractors and incorporated into the remedy designs.

WHERE ARE WE NOW?

There are three major areas where cleanup work is now required at the W. R. Grace site: groundwater at the Northeast Area; groundwater at the Landfill Area; and sediment at Sinking Pond and the North Lagoon Wetland area. Below is a summary of actions that have been taken in each area, as well as descriptions of the work remaining at each of these three areas. In addition, we have included information on what residents can expect during the upcoming 2011 continued >

INFORMATION SESSION

On May 18th, 2011, 7:00 pm, EPA will hold a Public Information Session at the Acton Memorial Library to update residents about upcoming activities at the WR Grace Superfund site. The public is welcome to come beforehand to gather information, preview exhibits and talk informally to representatives from the EPA, MassDEP and the community. The meeting space is fully accessible. For more information, contact: Sarah White, EPA Community Involvement Coordinator (at right).

KEY CONTACTS:

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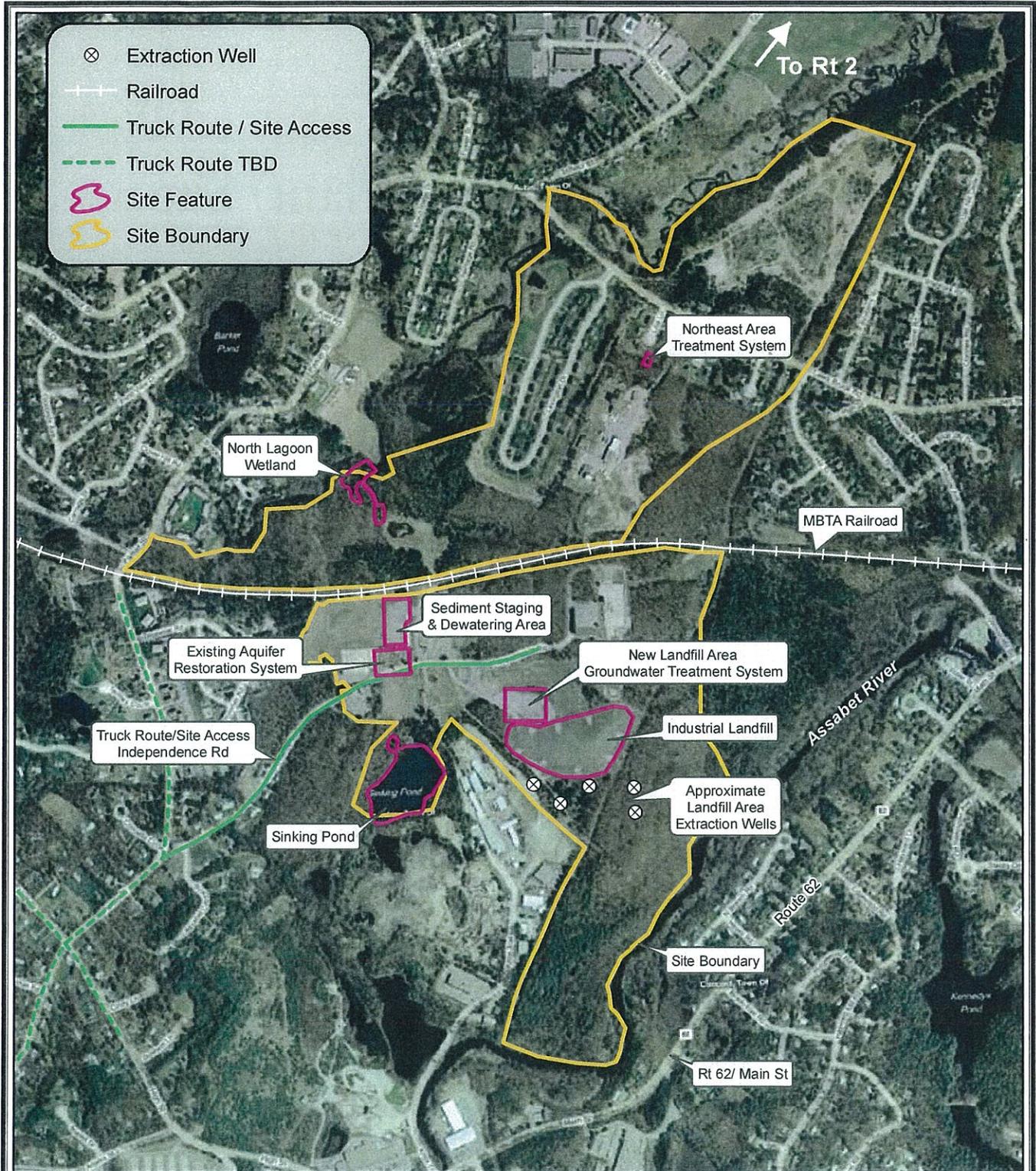


Figure 1
W.R. Grace Superfund Site
 Acton, Massachusetts



Map created by EPA Region 1 GIS
 April 13, 2011 Data Sources: Aerial
 Photo / Base Map - Bing Maps;



**EPA TO HONOR OF
MARY MICHELMAN WITH A LIFE-
TIME ACHIEVEMENT AWARD**

EPA will honor Mary Michelman with a Lifetime Achievement Award for her work during the environmental cleanup of the W.R. Grace site at EPA's Environmental Merit awards ceremony to be held on Wednesday, May 11 from 1 to 3:00 pm at Faneuil Hall in Boston. While serving as President of ACES, Mary committed herself to promoting the safety of Acton's citizens. She was a dedicated environmentalist and community activist who made a tremendous difference. She had a positive impact on all who worked with her. EPA would like to extend an invitation to those who knew and worked with Mary to this event.

construction season. EPA is providing oversight to ensure that measures are taken to protect public health and the environment are in place during construction.

NORTHEAST AREA

Construction of the Northeast Area groundwater pump and treatment system began in June 2009 and was completed in March 2010. This system extracts approximately 20 gallons per minute (gpm) of contaminated groundwater from 140 to 210 feet below the ground surface (fbgs), it then treats this contaminated water to remove Volatile Organic Compounds (VOCs) and arsenic and then re-injects the clean water back into the aquifer. This system began operation on April 5, 2010 and it continues to pump and treat groundwater from this area. To date, the Northeast Area treatment system has pumped over 7.2 million gallons of contaminated groundwater and has removed approximately 5.9 pounds of total VOCs. See Figure 1 for a site map depicting the location of the system and see Figure 2 to view the components of the Northeast Area groundwater pump and treatment system.

LANDFILL AREA

Construction of the building for the Landfill Area groundwater treatment system began in October 2010, and the installation of the treatment equipment is ongoing. This treatment system is scheduled to begin operating in early May



Fig.2 - Components of Northeast Area treatment system



(Fig.3a - above) Landfill Area treatment system (Fig.3b - below) UV Oxidation unit destroys contamination

2011, and operation will continue operation until cleanup levels are met and groundwater does not present an unacceptable risk. This treatment system will extract 50-55 gpm of contaminated groundwater from five extraction wells located in the vicinity of the Industrial Landfill at various depths. See site map (Figure 1) for the approximate location of the Landfill Area treatment system and extraction wells.

LANDFILL AREA GROUND-WATER TREATMENT SYSTEM

Inorganics (metals) will be removed from the extracted groundwater via a microfiltration unit. Other contaminants (VOCs and 1,4 Dioxane) are destroyed by using ultraviolet light to activate a titanium dioxide (TiO₂) slurry catalyst. The clean water will then be discharged to Sinking Pond. Figure 3a and 3b shows the interior equipment for the Landfill Area treatment system.

SEDIMENT REMEDIATION-SINKING POND & NORTH LAGOON WETLANDS

Numerous studies and sampling events have identified unacceptable human health and ecological risks from prolonged exposure to sediment in Sinking Pond and the North Lagoon Wetland. Beginning in the summer of 2011, approximately 9,000 cubic yards of sediments contaminated with arsenic and manganese will be excavated. After the contaminated sediments are removed, post excavation sampling and analysis will be performed in Sinking Pond to determine if the appropriate and protective cleanup levels have been met within the remaining sediment. Excavated sediment will be dewatered and dried onsite. The sediments will then be transported via trucks and disposed of at an appropriate offsite disposal facility. After the cleanup activities are completed, these areas will re-vegetated and monitored to ensure the wetland areas are properly restored.

CONSTRUCTION SCHEDULE

Hauling in of equipment and excavation at the Sinking Pond-North Lagoon area will begin in June 2011, and trucks will be accessing the site from Independence Road. See site map Figure 1 to view the sediment removal locations and staging area. Residents who live on Independence Road should expect an increase in truck traffic when the dried sediments are taken off the property for disposal. The schedule will be Monday through Friday, during the hours of 7:00 am – 6:00 pm. The entire construction period is expected to last 16 weeks. The trucks are expected to begin transporting equipment from May until mid June. Sediment removal and transport will take place in August and September. The speed limit of 30 miles per hour on Independence Road will be strictly enforced while the trucks enter and leave the W.R. Grace site. The truck route is depicted on the site map (Figure 1).

ENVIRONMENTAL & PUBLIC HEALTH SAFETY PRECAUTIONS

The trucks will be required to be free of dust and dirt prior to exiting the site. Sediments contained inside the trucks will be covered during transport to prevent dust generation. Air quality monitoring in the work areas will be conducted to ensure that protective air levels are maintained. Measures will be taken to control dust on site.

NEXT STEPS

Upon completion of excavation and disposal of contaminated sediments, the wetland areas in Sinking Pond and the North Lagoon Wetland will be restored and monitored. Long term groundwater monitoring will also continue.

ADDITIONAL CONTACTS

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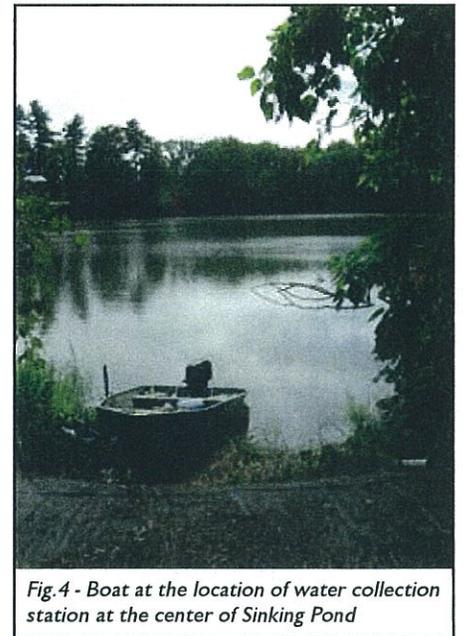


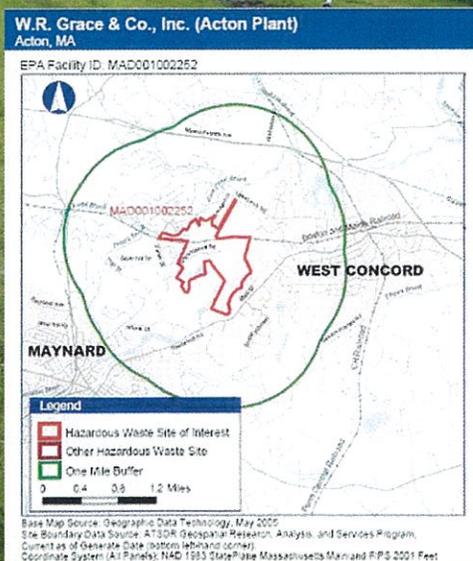
Fig. 4 - Boat at the location of water collection station at the center of Sinking Pond

Final Public Health Assessment Report W.R. Grace & Company, Inc. Site Acton, Middlesex County, MA

Overview

The Agency for Toxic Substances and Disease Registry (ATSDR) is a federal public health agency of the U.S. Department of Health and Human Services. ATSDR has released its final public health assessment (PHA) document on groundwater, soil, sediment, and surface water at the W.R. Grace & Company, Inc., Site in Acton, Middlesex County, MA.

In September 2008, ATSDR released to the community the public comment version of the document. The final PHA addressed and summarized all comments received.



ATSDR's recommendations

- The Acton Water District should continue to monitor the Assabet, Scribner, Lawsbrook, and Christofferson wells to make sure that the air strippers are adequately removing VOC contamination and that the municipal drinking water supply meets all Safe Drinking Water Act requirements.
- Consistent with U.S. EPA's cleanup plan in the site's 2005 Record of Decision, address site areas with elevated levels of arsenic and manganese in sediment (i.e., Sinking Pond, North Lagoon Wetland) in a way that is protective of public health.
- W.R. Grace or an appropriate public health agency should check periodically the nonmunicipal wells used for nondrinking water purposes in the area of the W.R. Grace site. This will ensure that the wells are still used only for nondrinking water purposes and that contaminant levels do not pose a public health risk.
- Massachusetts Department of Environmental Protection should check periodically the TNC public water system at the sports arena.
- Do not build or install any new private wells near the groundwater plume emanating from the W.R. Grace site. Enact institutional controls, local town ordinances, or deed restrictions to accomplish this prohibition. An "administrative hold" currently prevents issuance of new permits for private wells in this area. The "administrative hold" should become legally permanent.
- If in the future land uses change for the W.R. Grace property, any property owner or owners should assess the effect of any such potential reuse on public health. Especially, the owner or owners should assess how such reuse might affect children.

Whom do I contact for more information?

Community members can call any of the following ATSDR team members for more information:

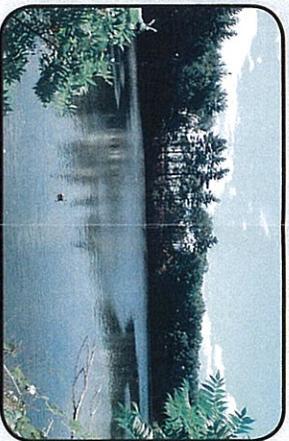
- William Sweet, Senior Regional Representative at 617-918-1490
- Robert Knowles, Lead Health Assessor at 415-947-4317
- Loretta Asbury, Senior Health Communications Specialist at 770-488-0718, or
- Toll-free at 1-800-CDC-INFO (232-4636), and ask to speak with someone about the W.R. Grace Inc. Site in Acton, Massachusetts.

To learn more about ATSDR, visit our Web site at www.atsdr.cdc.gov.

ATSDR's conclusions

After a review of the historical data for Volatile Organic Compounds (VOCs) and metals, ATSDR concludes in the final PHA that:

- **Due to data limitations and gaps, past levels of VOCs in the Assabetz wells pose an indeterminate public health hazard.** In the past, TCE levels might have exceeded current health guidelines. Nevertheless, any exposure time was short (about 9 years) and the levels were relatively low when compared with those associated with potential effects in health studies. Consequently, adverse health effects have probably not occurred.
 - **Past contact to arsenic and manganese in the municipal drinking water supply is an indeterminate public health hazard.** This is because for this period, no historical data are available for manganese or arsenic in the Assabetz wells.
 - **Current and future contact with VOCs, arsenic, and manganese in the municipal drinking supply poses no apparent public health hazard.** Since the early 1980s the Acton Water District (AWD) has treated groundwater through an air stripper to remove VOC contamination from active water supply wells. Thus, we do not anticipate current or future exposure to VOCs in the municipal drinking water supply. And given the concentrations of arsenic and manganese reported in the wells, we do not anticipate current or future adverse health effects from them.
 - **Exposure to groundwater from non-municipal wells for non-drinking water uses poses no apparent public health hazard.** Six non-municipal wells were identified in the area of the W.R. Grace Site groundwater plume that were used for non-drinking water purposes:
 - a. One well contained vinyl chloride above the Comparison Value (CV). W.R. Grace converted it to a monitoring well.
 - b. Four wells show no present VOC contamination.
 - c. Although one well was not sampled, at the owner's request, it was properly sealed.
- Potential past exposure was limited to possible dermal contact from swimming in pools filled with well water or from irrigation activities. Because of the concentrations reported and the toxicological evaluation results, adverse health effects from these activities are not likely to occur.



- The Transient non-community (TNC) water supply well at the sports arena poses no public health hazard. One non-municipal well was identified in the area of the W.R. Grace Site groundwater plume that is used for drinking water purposes at a sports arena. The Massachusetts Department of Public Health classified the well as a transient non-community (TNC) public water system. It was sampled in May 2002 and again in July 2006. No VOCs were detected.
- Trespasers exposed to the highest levels of arsenic in sediment and surface water from Sinking Pond and the North Lagoon Wetland may have a slightly elevated risk for adverse health effects. Trespasers who frequent the site and come into contact with or incidentally ingest the highest levels of contaminated sediment over a lifetime face a moderately elevated, excess lifetime theoretical cancer risk. A review of the data shows that trespasers accessing the W.R. Grace site may have been exposed in the past to contaminants in soil, sediment, and surface water. Trespasers may also be exposed to such contaminants presently and in the future. Still, of the contaminants evaluated in sediment and surface water, only arsenic shows elevated risk. Note, however, that in this final PHA's evaluation of potential health effects from exposure to contaminants in sediment and surface water, ATSDR used conservative health effects assumptions. This could have resulted in an overestimation of potential contact to people.
- **VOCs present in shallow groundwater pose no apparent public health hazard.** The VOC concentrations at the W.R. Grace site were elevated. Thus thinking about possible health effects from any groundwater-related migration of contaminants is appropriate. That migration could occur through the soil and enter indoor air in residences and other buildings overlying the plume near the W.R. Grace Site. But modeled concentrations of those contaminants show that no adverse health effects are likely to take place.
- **Fish consumption from Sinking Pond poses no apparent public health hazard.** Based on the information provided to ATSDR, edible-size fish from Sinking Pond could not be caught after many tries. Because edible size fish could not be caught for evaluation, it is unlikely that others accessing the W.R. Grace site could regularly catch and consume fish from Sinking Pond on a regular basis. Even if an occasional edible size fish were caught and eaten, such irregular contact would most likely not result in adverse health effects.