

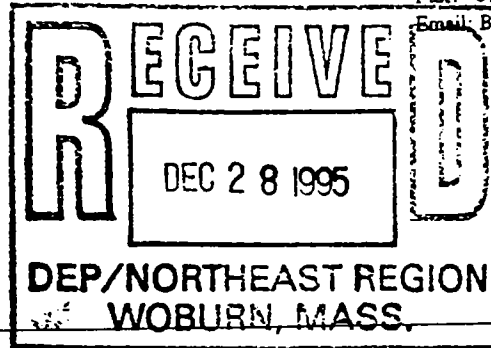
62 Whittemore Ave
CAMBRIDGE

UNDERGROUND
ENGINEERING &
ENVIRONMENTAL
SOLUTIONS

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Letter of Transmittal



Date 27 December 1995
File Number 10063-066
From Wesley E. Stimpson

To Department of Environmental Protection
10 Commerce Way
Woburn, MA 01801
Attention Mr. Richard Chalpin
Copy to Cambridge Main Library, North Cambridge Library, W.R. Grace & Co. - Conn.
Subject 62 Whittemore Avenue, Cambridge, MA

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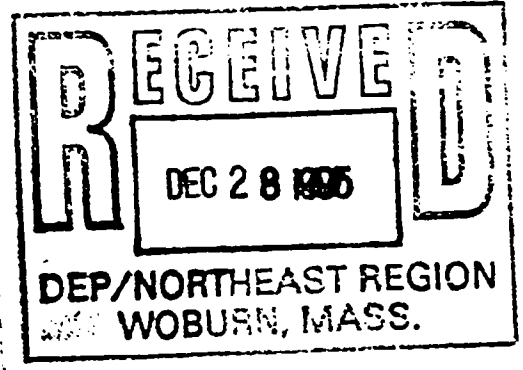
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PUBLIC INVOLVEMENT PLAN
DEP RTN 3-0277
W.R. GRACE & CO.-CONN.
62 WHITTEMORE AVENUE
CAMBRIDGE, MASSACHUSETTS

by

Haley & Aldrich, Inc.
Cambridge, Massachusetts

for

W.R. Grace & Co.-Conn.
Cambridge, Massachusetts

December 1995
File No. 10063-066



EXECUTIVE SUMMARY (Public Involvement Plan)

W.R. Grace & Co. - Conn.
Cambridge, Massachusetts
DEP RTN 3-0277

INTRODUCTION

The W.R. Grace facility, located at 62 Whittemore Avenue in Cambridge, Massachusetts, is a Tier II ~~II~~ ^{IC} (non-priority) Confirmed Disposal site in Phase IV, Implementation of the Selected Remedial Action Alternative, of the Massachusetts Contingency Plan (MCP) process. The site Release Tracking Number (RTN) is 3-0277. Being a Tier II site places the activities at the Grace facility under the direction of a Licensed Site Professional (LSP) and not under the direct oversight of the DEP. An LSP is licensed by the State based on education, experience, and the completion of a rigorous examination.

Extensive environmental investigations have been conducted at the Grace facility from 1984 to 1995. A total of approximately 120 test pits, 85 soil borings, 12 surficial soil samples, and 18 sediment samples. Thirty-five groundwater monitoring wells were also installed and twelve surface water sampling sites located. Several rounds of samples were collected from the observation wells and the surface water sampling locations.

The analytical results from these environmental investigations were used in the preparation of a May 1988 Risk Assessment, an August 1989 addendum to the Risk Assessment, and a 1994 Environmental Risk Evaluation. The results from all of these evaluations indicated that the Grace site does not pose harm to human health or the environment.

CURRENT INVESTIGATIONS

The most recent subsurface investigation, conducted in the summer of 1995, focused on areas of the site where Total Petroleum Hydrocarbon (TPH) contamination may have the potential to exceed the Upper Concentration Limits (UCLs) of 10,000 ppm established in the MCP. Although the risk evaluation determined that these areas did not pose risk to human health or the environment, they may be required to be remediated in order to file a permanent Release Action Outcome (RAO) Statement for the site. When the analytical results are received, they will be reviewed for possible exceedances of the UCLs. If the analytical results indicate that areas of the site exceed the UCL, a remedial plan will be designed to address those areas.

PUBLIC INVOLVEMENT PLAN (PIP)

This document is the Public Involvement Plan (PIP). The draft PIP was prepared for Grace by Haley & Aldrich, Inc. (H&A) in accordance with the requirements of the MCP 310 CMR 40.000, and was presented at a public meeting on 2 November 1995 at the Grace facility. Copies of the draft PIP were made available at the Public Information Repositories established pursuant to found in Section 4.1 of this PIP. The intent of the PIP is to provide a vehicle for parties interested in activities being conducted at a disposal site to participate in the MCP process. The PIP establishes Public Information Repositories, site notification mailing lists, and information concerning Technical Assistance Grants. A 20-day public comment period was held on the draft PIP, ending on 27 November 1995. Comments were forwarded to Veronica Wancho



O'Donnell, Haley & Aldrich, Inc., 58 Charles Street, Cambridge, Massachusetts 02141 prior to the close of business on 27 November 1995. This document is the final PIP. It has been placed in the Information Repositories.

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PUBLIC INVOLVEMENT PLAN

W.R. Grace & Co.-Conn. Site
RTN 3-0277
62 Whittemore Avenue
Cambridge, Massachusetts

1.0 INTRODUCTION

This document is the Public Involvement Plan (PIP) for the W.R. Grace facility located at 62 Whittemore Avenue in Cambridge, Massachusetts, listed as a Tier II (non-priority) site with the Massachusetts Department of Environmental Protection (DEP) (Figure 1: Project Locus).

A petition was received by W.R. Grace & Co.-Conn. (Grace) on 5 September 1995, requesting that the Cambridge site of Grace be designated as a Public Involvement Plan (PIP) site. The petition requested a public meeting under Section 14(b) of Massachusetts General Laws Chapter 21E (MGL c. 21E), the State "Superfund" Law, to enable Cambridge residents to participate in decisions relative to response actions at the Grace site. Grace designated the site as a PIP site on 25 September 1995 by responding to the petitioners by mail and by publishing a Legal Notice in the 19 October 1995 Cambridge Chronicle. The Public Involvement activities outlined in the Massachusetts Contingency Plan (MCP) at 310 CMR 40.1400 are designed primarily to provide the public with information regarding disposal sites. This PIP was written in conformance with these regulations and outlines the procedures by which the public can be informed of the status of remedial response actions at the Grace site, and the availability of technical assistance grants.

Prior to the 1992 amendments to MGL c. 21E, DEP was responsible for overseeing remedial response actions at sites where oil or hazardous materials have been released to the environment, except for non-priority sites with Waivers of Approvals granted by the DEP under the MCP. The 1992 amendments and the 1993 and 1995 revisions to the MCP (310 CMR 40.0000) privatized the oversight of non-priority disposal sites. Non-priority sites are those, which based on their low numerical score on the Numerical Ranking System (developed by the DEP and found in 310 CMR 40.1500), qualify as Tier II (non-priority) sites and do not require direct DEP oversight of site activities. Under the new MCP, response actions at non-priority sites may be handled by private parties under the direction of a Licensed Site Professional (LSP). An LSP is licensed by the State based on education, experience, and the completion of a rigorous examination. An LSP certification on an outcome for a disposal site is similar to the certification give by a Professional Engineer on engineering projects. Additional information regarding LSPs is provided in Appendix A.

Response actions at a disposal site can include assessing the nature, source and extent of the contamination; identifying risks posed by the site; evaluating the need for cleanup actions and, if necessary, selecting and implementing appropriate actions. In addition, the remedial response action process provides opportunities for public involvement throughout the process. The remedial response action process is established by the MCP, 310 CMR 40.0000).

The Grace site is currently listed as a Tier II, Non-Priority Confirmed Site with Release Tracking Number (RTN) 3-0277. The site had a transition date of on or before August 1995 by which time the site was to be transitioned from the "old" MCP into the revised MCP. A Tier Classification Form (BWSC-107A), Numerical Ranking System Scoresheet (310 CMR 40.1511) indicating that the site is classified as a Tier II



site, and an LSP Evaluation Opinion Transmittal Form (BWSC-110), were submitted to DEP in August 1995. The site is currently in Phase IV: Implementation of the Selected Remedial Action Alternative of the MCP process.

Public involvement during the remedial response action process is undertaken to ensure that the public is both informed of and, if interested, involved in planning for remedial response actions. For disposal sites at which the public indicates interest in becoming involved in this process by filing a PIP petition, the party conducting response actions designates the site as a PIP site, and prepares a plan which identifies specific activities that will be undertaken to address public concerns to the extent possible. Due to public concern about the W.R. Grace site, Grace has designated this site a PIP site, pursuant to the MCP.

This PIP has been prepared for Grace by H&A in accordance with the requirements of the MCP 310 CMR 40.0000. The final PIP will be implemented in conjunction with the design and implementation of remedial response actions for the disposal site. H&A will implement public involvement activities at the Grace site.

Information within the PIP is presented as follows:

- Section 1.0: Introduction to the site and PIP process;
- Section 2.0: Background information on the site; including site, environmental assessment, and public involvement histories;
- Section 3.0: Discussions concerning how the remedial response action process addresses community concerns raised during the development of the PIP;
- Section 4.0: Proposed public involvement activities;
- Section 5.0: Schedule for PIP activities;
- Section 6.0: Roles and responsibilities of those involved in implementing the PIP, including procedures the Grace will use to address situations brought to their attention regarding the PIP;
- Section 7.0: Revisions to the PIP.

The draft PIP was presented by H&A and Grace at a Public Meeting on 2 November 1995 at the Grace facility at 62 Whittemore Avenue, Cambridge, Massachusetts. Comments on the draft PIP were received during the Public Meeting as well as during the 20-day comment period (2 through 22 November 1995; extended to 27 November 1995) and have been addressed in the final PIP, which has been completed 30 days after the cessation of the public comment. Figure 2 presents the Public Involvement Plan Time Line. Public comments/questions received on the draft PIP are presented in Appendix F. Responses to those questions/comments pertinent to the PIP are provided in Appendix G of this final PIP. The final PIP will be available at the designated Public Information Repositories. Section 4.1 of this document provides a list of all Public Information Repositories.

2.0 SITE BACKGROUND

2.1 Site Description

The Grace site consists of an approximately 27-acre irregularly shaped parcel of land directly east of the Alewife Brook Parkway/Route 2 Interchange in Cambridge, Massachusetts. The site is bounded on the north by Whittemore Avenue, on the east by residences and Russell Field Park, and on the south by Rindge

Avenue. Wetlands exist on the southwestern portion of the site, as indicated on Figure 3A-E: Site Plan. Prior site usage has been chemical manufacturing, administrative offices, and shipping and receiving.

The site is listed with the DEP as a result of volatile and semi-volatile organics, petroleum products, and metals found to exist in the environment during evaluations of subsurface and hydrogeological conditions for the Alewife Center Master Plan Study conducted in 1984 and 1985. A Notice of Responsibility (NOR) was issued for the site on 9 February 1987. The site is intermittently paved, and access to the majority of the exposed ground surface is restricted by fencing; however, access to some open areas is unrestricted.

The redesign of the MCP allowed for the transitioning of disposal sites listed in the "old" system to the "new" system within a timeframe set forth in the regulations. In compliance with the Transitions Provisions of the MCP, a Tier Classification Form (BWSC-107A), Numerical Ranking System Scoresheet (310 CMR 40.1511), LSP Evaluation Opinion Transmittal Form (BWSC-110), and supporting documentation for the W.R. Grace & Co. property were submitted to DEP on 4 August 1995. Based on the available data presented, the site was judged to be classified as a Tier II (non-priority) site, indicating that continued work at the site could be conducted under the direction of a Licensed Site Professional (LSP), and did not require oversight by the DEP. The site is currently listed with DEP as a Non-Priority Confirmed disposal site in Phase IV of the MCP. The site has been assigned Release Tracking Number (RTN) 3-0277, with a transition date into the revised MCP on or prior to August 1995.

2.2 Site History

Prior to Dewey and Almy Chemical Company

The site was once located at the edge of an area known as the Great Swamp. By 1691, the land had been cleared and was being used as an ox pasture. In the early to mid-1800s, extensive clay deposits were discovered in the vicinity of the site.

The entire area has been previously occupied by companies associated with mining clay. Two areas of extensive clay mining exist within the general vicinity of the site: Jerry's Pond and Yates Pond. Clay was mined from Jerry's Pit by Hubbell from 1860 to 1863. Bay State Brick Company owned the pit from 1864 to 1900. Due to a high groundwater table, mining at the pit was abandoned some time in the 1880s, and the pit subsequently filled with water. For the past 100 years, the pond has been used both officially and unofficially as a bathing area during the summer.

The other majority clay mining area was located in the vicinity of the MBTA parking garage. The North Cambridge Brick Company, owned by Alfred Yates, started operation in 1884 and closed in 1893. Its principal mining operation was located where Yates Pond is today. Like Jerry's Pit, it filled up with water when abandoned.

Dewey and Almy

The Dewey and Almy Chemical Company was founded in 1919 for the manufacture of rubber products. By 1930, Buildings 1 to 11 had been erected. At this time, residences and possibly the Sawyer woodworking shops were located along Whittemore Avenue. Across the railroad tracks, south of Dewey and Almy, land was owned by the Boston & Maine Railroad and Dix Lumber Company.



The Dewey and Almy facility originally manufactured materials used as can sealing compounds, drum and pail cover gaskets, and bottle cap gaskets. The primary raw material was processed rubber. To assist in dispersing the rubber in water, naphthalene sulfonate (trade name DAXAD) was manufactured on-site. Due to Dewey and Almy's research and development in dispersants, they began manufacturing and selling various dispersants to other companies. DAXAD was used in the production of paints and other water-based materials. Another dispersant (trade name TDA) was used in the manufacture of cement. Its raw material was calcium lignosulfonate, a by-product of the paper-making industry.

Dewey and Almy also manufactured Sodaorb, a material used by hospitals to allow the reuse of anesthetics during an operation for which the primary raw material was processed lime.

During the time DAXAD was manufactured in Buildings 26 and 27, several lagoons were used as settling ponds and sources of cooling water. Building 28 served as an ice cream manufacturing plant prior to W.R. Grace ownership. The date of construction of the building is not known. Grace purchased the building between 1942 and 1946. From the date of Grace's ownership until 1973, the building was used as a research facility for printing blankets and battery separators, which are specialty paper products. The building was vacant from 1973 to mid-1980, and was at that time converted into the Thermal Measurement Laboratory for the recording of thermal gradients for building components. The building served as a Thermal Measurement Laboratory for approximately five years, and was subsequently used for the long term storage of concrete samples.

During 1981, in compliance with the then recently-enacted Superfund statute, W.R. Grace & Co. reported to EPA that it had disposed of wastes on the Cambridge property. In 1983, as part of its routine follow up procedure for all such filings, EPA conducted an initial site assessment and requested information which was to be used as part of the EPA's procedure to develop a listing of potential sites for further Superfund site assessment. Based on the information provided and other data available at the time, the Dewey and Almy site was not included on any list as a potential Superfund site.

MBTA Construction

As part of the extension of the MBTA Red Line in the early 1970s, various alignment alternatives were evaluated. The selected alternative provided for the construction of a rapid transit station and parking structure west of the site. To connect the station to the existing system, an easement was obtained from W.R. Grace & Co. for construction of line tunnels and an entrance structure. Initial subsurface investigations for design of these structures, conducted by Goldberg, Zoino, Dunicliff & Associates, Inc. (currently Goldberg, Zoino and Associates (GZA), indicated that the path of the tunnel was through an area used for DAXAD waste disposal on the Grace property. The DAXAD materials contained high levels of sulfate and naphthalene, and in certain locations, low pH. These conditions were of concern because of the potential to impact the integrity of the tunnel structure.

In 1979, Haley & Aldrich, Inc., a Cambridge-based environmental and geotechnical engineering firm, was retained by W.R. Grace & Co. through Camp Dresser & McKee, Inc. to investigate the extent and nature of waste materials in the vicinity of the proposed construction and elsewhere on the site. During this investigation old plans and photographs were reviewed, and supplemental subsurface explorations to identify the limits of the waste materials were conducted. Based upon the assembled information, an agreement was reached with the MBTA, with the approval of the Massachusetts Department of Environmental Quality Engineering (DEQE, currently DEP), for the MBTA to excavate, stabilize, and dispose of the waste off-site. All waste materials were removed from the site. The work was monitored by GZA for the MBTA.—

Grace was informed by the MBTA that the stabilized sludge was disposed of in Kingston, Rhode Island, in the Fall of 1981 and Spring of 1982 under the direction of the MBTA. As part of an agreement with the Cambridge Conservation Commission, groundwater quality monitoring wells were installed by representatives of the MBTA.

In the period 1984-85, Grace voluntarily conducted an environmental assessment of the site. Haley & Aldrich and Dr. Raymond Harbison, Director of the Division of Interdisciplinary Toxicology and Professor of Pharmacology at the University of Arkansas, collaborated in the study of the site (Alewife Master Plan Study). The report, submitted in April 1985, presented the following conclusions and recommendation:

Environmental Assessment Conclusions

1. All wastes disposed of at the site have been removed from the site. All above-ground storage tanks have been removed from the property. With one exception, all underground storage tanks have either been removed or certified as empty and filled with sand. The one remaining underground tank was installed in 1984 for the storage of heating oil. Chemicals detected in analyses during the recent studies represent residues leached from former waste disposal activities and/or incidental spills.
2. The following EPA-listed priority pollutants were not detected in any samples taken during the course of the study: PCBs, dioxin, and pesticides.
3. The chemical compounds identified as being present in the environment at the site are consistent with its previously known industrial history.
4. The most significant chemical components identified in the soil are naphthalene and other polycyclic aromatic hydrocarbons (PAHs). PAHs are a component of total petroleum hydrocarbons (TPH).
5. The highest concentrations of naphthalene have been found north of the new MBTA tunnel and headhouse in the general area of the former Grace manufacturing process which used naphthalene as a raw material.
6. The highest concentrations of PAHs are also to the north of the MBTA tunnel and headhouse in the general area of past oil storage and use.
7. The most prevalent chemical constituents in on-site groundwater are naphthalene and acetone, the highest concentrations of which are found along the western boundary of the property, downgradient from the previous manufacturing operations. The PAHs, although present in the soil, are not migrating with the groundwater.
8. Acetone was used as a raw material by Grace. The highest concentrations of acetone are located in the former tank farm area where acetone was stored. The acetone is expected to degrade quickly as it moves away from this area.
9. Groundwater moving through the area of the existing Grace buildings towards the Whittemore Avenue area is not contaminated.

10. Water contained in Jerry's Pond contains none of the priority pollutants. Sediments in the pond contain low levels of naphthalene and PAHs, which are not being released into the water in detectable concentrations.
11. Parkway Pond contains none of the substances tested for, except acetone. The cause of the occasional orange-brown color of the water in the pond is iron oxide.
12. With the exception of trace amounts of formaldehyde and metals found in samples taken both upstream and downstream of Alewife Circle, no detectable levels of chemicals were found in Alewife Brook.

Risk Assessment Conclusion

1. Based upon the levels of chemicals present at the site, a review of toxicity data, and the potential routes for exposure, no actual or potential hazard to human health is presented by current or proposed development conditions.

The DEQE reviewed the 1985 report and other available information and concluded that further information was necessary to address concerns regarding contaminants present on-site. The City of Cambridge and W.R. Grace & Co. also requested that the DEQE be actively involved in the redevelopment studies for the site. Therefore, on February 9, 1987, the DEQE issued a Notice of Responsibility (NOR) notifying W.R. Grace & Co. that the DEQE had determined a release of oil or hazardous materials had occurred at the Grace facility on Whitmore Avenue in Cambridge, Massachusetts. The NOR requested additional investigations and assessment to define the impact of the release on the public health and environment and to determine what, if any, remedial or cleanup measures would be necessary.

The NOR required W.R. Grace & Co. to take actions to define the nature and extent of any oil or hazardous materials that might exist on site and determine how they would be treated if they presented a hazard to the environment. The NOR listed the following required actions to be taken by W.R. Grace & Co.:

1. Locate and evaluate possible sources of contamination;
2. Develop "worst case" concentration estimates where sampling data do not exist;
3. Prepare a sampling plan that documents sampling locations, sampling procedures, and chemical analyses to be performed;
4. Validate all available chemical analysis data;
5. Implement a long-term monitoring program to characterize groundwater quality on-site on a quarterly basis for one year;
6. Predict the groundwater flow direction and rate after construction of Alewife Center;
7. Evaluate the effect of underground utilities on contaminant transport;

