

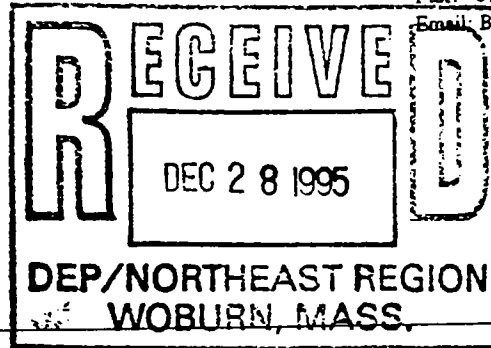
62 Whittemore Ave
CAMBRIDGE

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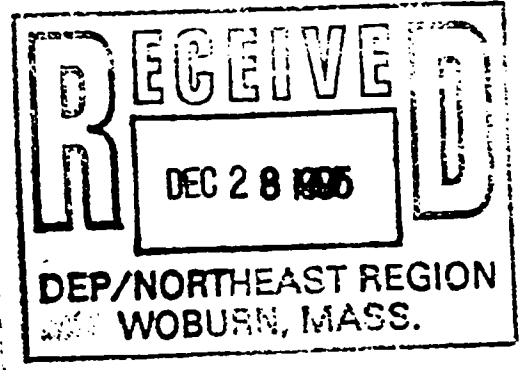
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PUBLIC INVOLVEMENT PLAN
DEP RTN 3-0277
W.R. GRACE & CO.-CONN.
62 WHITTEMORE AVENUE
CAMBRIDGE, MASSACHUSETTS

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, Dunningcliff & 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;

8. Evaluate the potential for contaminated groundwater from the site to enter basements of nearby residential buildings and conduct a long-term monitoring program using shallow wells along Whittemore Avenue;
9. Perform a human health risk assessment that evaluates all possible transport pathways and receptors under existing and developed conditions;
10. Prepare a Feasibility Study Report that evaluates and recommends remedial action alternatives;
11. Prepare a Remedial Action Plan that details soil and groundwater treatment;
12. Prepare a Hazardous Material Management Plan that proposes methods to monitor and control additional releases of oil or hazardous materials during excavation and construction activities;
13. Develop a monitoring and treatment plan if building design requires dewatering to be continued indefinitely or permanently.

As part of Grace's response to the NOR, groundwater, surface water, soil, and sediment samples were collected from various locations on and around the site. These are in addition to the extensive sampling which constituted the 1985 report.

In November 1986, a subsurface location program was conducted proximate to and within the four proposed building sites north of the MBTA subway tunnel (proposed building sites 2 to 5). The program consisted of 78 test pits, 8 test borings, and 8 groundwater observation well installations. The purpose was to evaluate the soil and groundwater quality in preparation for foundation construction. An additional subsurface exploration program was conducted in October 1987 to obtain environmental samples for the following purposes:

- to assess whether particular locations on site were continuing sources of contamination;
- to conduct a more extensive risk assessment;
- to evaluate the soil quality in the areas of proposed Building Nos. 6 and 7, and;
- to obtain chemical data on soil and water in areas that had not been previously evaluated.

Twenty-eight test pits, four test borings, four groundwater well installations, twelve surface water samples, seven sediment samples, and twelve surface soil samples were collected during these investigations.

Upon completion of this work, a health risk assessment was conducted for the site by the Environmental Health & Toxicology Group of Meta Systems, Inc. of Cambridge, Massachusetts. Meta Systems, Inc. is now known as Cambridge Environmental, Inc. This 1988 assessment stated that the site is characterized by concentrations of naphthalene and oil and grease (total petroleum products). The report states that although the odor threshold for naphthalene is low, the long term risk to health is negligible, and that no risk of acute effects on persons dwelling adjacent to the site or to casual users of the site existed. Because no standards for "oil and grease" and associated petroleum hydrocarbons existed at the time of the risk evaluation, Meta Systems evaluated the individual components of the total petroleum hydrocarbons found at the site. All components were found to present negligible long term or acute risks to health of workers, casual site users

or neighbors. The report also stated that "all other substances measured at the site pose negligible long term risk", and that environmental effects of the contamination on site were negligible.

The site investigations conducted since the 1985 Alewife Master Plan Study included the excavation of 120 test pits. Ninety-two of the test pits were excavated to evaluate soil quality within the proposed Building Sites 2 through 7 for construction pre-characterization. Nineteen to twenty test pits were excavated within each of the proposed Building Sites 2 through 5. Nine test pits were excavated within the proposed footprint of Building No. 6. Five test pits were excavated within the footprint of Building No. 7.

Twenty-eight of these test pits were excavated at locations where soil quality data was required to determine if a source of contamination existed. Source identification test pits were excavated across the site according to historical research of the property and previous soil and water quality data.

Twenty-nine soil borings, completed as monitoring wells, have been installed on the property since the 1985 Alewife Master Plan Study. The monitoring wells were installed to provide information on shallow and deep groundwater quality in the area of the site, to evaluate potential sources of groundwater contamination at specific locations on the site, and to evaluate groundwater quality for construction dewatering operations.

Between 9 February 1987 and 24 January 1990, all elements of the NOR were investigated and reported to the DEP, the City of Cambridge, the USEPA, and the general public.

In August 1989, Meta Systems issued an addendum to their 1988 report which presented a reevaluation of the original 1988 risk evaluation based on newly promulgated MCP criteria. The reevaluation concluded that no exposure point concentration exceeded applicable analogous public health standards, no Hazard Index exceeded the Total Site Non-Carcinogenic Effects Risk of Limit of 0.2, and that the Total Site Cancer Risk estimate is not greater than the Total Site Cancer Risk Limit of 1.0×10^{-5} . These results indicated that the site continued to pose no significant threat to human health or the environment.

From 1989 through 1995, groundwater and surface water samples were periodically collected and chemically analyzed. Information regarding the groundwater and surface water quality is documented in the Long-Term Monitoring reports, Alewife Center, dated December 1989 through December 1994. These evaluations were conducted to record long-term monitoring of groundwater and surface water as requested by the DEP. The body of long-term monitoring report concluded that there continues to be no significant off-site impact due to contaminants found at the Grace property.

Based on the data obtained at the Grace site, only the "oil and grease" related contamination warranted further investigation. The need for this further evaluation stemmed from the establishment by the DEP, and found in the 1993 MCP, of criteria for Upper Concentration Limits (UCLs) to be used in the evaluation of remedial designs and Response Action Outcomes. The UCLs in soil and groundwater are concentrations of oil and/or hazardous materials which, if exceeded, indicate the potential for risk of harm to public welfare and the environment under future conditions. Because chemical analyses for TPH provides a more accurate indication of the extent of oil-related contamination, the DEP established TPH criteria in both the Risk Evaluation and UCL standards in the 1993 MCP, replacing the previously used "oil and grease" standards. The UCL for Total Petroleum Hydrocarbons (TPH) is 10,000 ppm. Because previously conducted risk evaluations concluded that there was no risk to human health or the environment from the compounds detected at the site, the only areas warranting further investigation were those where "oil and grease" contamination was previously detected at levels near the UCLs. The MCP states that a level of "no significant risk" exists if no concentration of oil and/or hazardous materials exceeds an applicable UCL.

Although the risk evaluation determined that these areas did not pose risk to human health or the environment, they had the potential to exceed the UCLs established in the MCP, possibly preventing the issuance of a permanent Release Action Outcome Statement. Therefore, in 1995, a subsurface exploration and chemical testing program was conducted in order to quantify the extent of soils containing Total Petroleum Hydrocarbons (TPH) above the Upper Concentration Limits (UCLs) of 10,000 ppm listed in the MCP. The locations of the borings were selected in an effort to assess both the horizontal and vertical extent of TPH contamination detected in areas of historical fuel oil storage and in areas where "oil and grease" concentrations greater than 10,000 ppm (UCLs), as reported in previous evaluations. Sixty-six borings were completed at the site during the period 12 July through 24 August 1995. The boring locations are found on Figure 3. Analytical results from the soil testing conducted for this evaluation are currently being assessed. MCP Phase IV remedial designs for the Grace property will be based on the final analyses of these results. The remedial design plan and implementation of the plan will be presented in a Remedy Implementation Plan (RIP) pursuant to 310 CMR 40.0874.

These extensive investigations concluded that no risk to human health or the environment is presented by current or proposed development conditions, and that an Excavated Soil Material Management Plan (ESMMP), required to be in place prior to construction activities, will ensure the health of workers and neighbors during construction activities.

2.3 Environmental Site Assessment History

The following reports have been prepared by Haley & Aldrich, Inc. (H&A) and others for W.R. Grace & Co.-Conn.

- "Report on Groundwater Investigation, W.R. Grace & Company"; Haley & Aldrich, Inc.; 6 April 1984.
- "Report on Geotechnical Engineering Studies and Foundation Design Recommendations, Proposed Alewife Center, Phase I, Cambridge, MA"; Haley & Aldrich, Inc.; 1 April 1985.
- "Report on Geotechnical Engineering Studies for Alewife Center Master Plan Study, Cambridge, MA"; Haley & Aldrich, Inc.; 22 October 1984.
- "Environmental Assessment Report for the Proposed Alewife Center Development at the W.R. Grace Property (Vols. 1, 2 and 3)"; Haley & Aldrich, Inc.; 16 April 1985.
- "Report on Subsurface and Hydrogeological Condition for the Alewife Center Master Plan Study (Vols. 1 and 2; and Appendices)"; Haley & Aldrich, Inc.; 16 April 1985.
- "Long-Term Monitoring Program Report No. 1, Alewife Center, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; 18 November 1987 (File No. 06118-01).
- "Long-Term Monitoring Program Report No. 2, Alewife Center, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; 2 March 1988 (File No. 06118-01).
- "Environmental Data Report, Vols. I-VII"; Haley & Aldrich, Inc.; April 1988.

- "Feasibility Study for the W.R. Grace Co. Property, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; May 1988.
- "Health Risk Assessment for W.R. Grace & Co. Property, Cambridge, Massachusetts"; Environmental Health & Toxicology Group, MetaSystems, Inc.; 16 May 1988.
- "Long-Term Monitoring Program Report No. 3, Alewife Center, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; 30 August 1988 (File No. 06118-01).
- "Addendum to: Health Risk Assessment for W.R. Grace & Co. Property, Cambridge, Massachusetts"; Environmental Health & Toxicology Group, Meta Systems, Inc.; 10 August 1989.
- "Work Plan: Building 5 Soil Sampling, Alewife Center, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; September 1989.
- "Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; December 1989 (File No. 10063-51).
- "Hazardous Material Management Plan, Alewife Center, Cambridge, Massachusetts;" Haley & Aldrich, Inc.; January 1990.
- "Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, April 1990"; Haley & Aldrich, Inc.; 23 August 1990 (File No. 10063-59).
- "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, September 1990"; Haley & Aldrich, Inc.; 29 November 1990 (File No. 10063-59).
- "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, March 1991"; Haley & Aldrich, Inc.; 12 August 1991 (File No. 10063-60).
- "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, September 1991"; Haley & Aldrich, Inc.; 5 December 1991 (File No. 10063-60).
- "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, March 1992"; by Haley & Aldrich, Inc.; 26 May 1992 (File No. 10063-61).
- "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, September 1992"; Haley & Aldrich, Inc.; 22 January 1993 (File No. 10063-61).
- "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, April 1993"; Haley & Aldrich, Inc.; 30 August 1993 (File No. 10063-63).
- "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, December 1994"; Haley & Aldrich, Inc.; 3 March 1995 (File No. 10063-64).
- "Environmental Risk Evaluation"; Cambridge Environmental Inc.; 16 November 1994.

- "Tier Classification and LSP Evaluation Opinion RTN 3-0277"; Haley & Aldrich, Inc.; 4 August 1995.

These reports have been previously submitted to DEP and exceed the requirements for Phase II Comprehensive Site Characterization studies and Phase III Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives. The Grace site is currently listed on the DEP "List of Confirmed Disposal Sites and Locations to be Investigated" as a Non-Priority Confirmed Site with Release Tracking Number (RTN) 3-0277, with a transition date into the revised MCP on or prior to 2 August 1995. Discussions regarding these reports is found in Section 2.2 Site History. The Grace site has been transitioned into the 1993 MCP as a Tier II site in Phase IV of the MCP.

2.4 Public Involvement History

Between November 1984 and November 1989, twenty-two public meetings were held to inform the public of the progress of the environmental site assessment process and the results of the ongoing investigations. Grace sponsored fifteen of the twenty-two meetings. All the data developed during the site investigations was shared with the public during these meetings. Copies of the reports were sent to the North Cambridge Public Library as a reference for the public. A listing of these public meetings is provided as Appendix B.

A petition was received by W.R. Grace & Co.-Conn. (Grace) on 5 September 1995, designating the Cambridge facility of Grace as a PIP site. The petition requested a public meeting under Section 14(b) of Massachusetts General Laws Chapter 21E (M.G.L. c. 21E), the State "Superfund" Law, to enable Cambridge residents to participate in decisions relative to response actions at the Grace site at 62 Whittemore Avenue, Cambridge, Massachusetts. Grace designated the site as a PIP site on 25 September 1995 by responding to the petitioners by mail and publishing a Legal Notice in the Cambridge Chronicle on 19 October 1995.

In developing the both the draft and final PIP, H&A revisited the site and reviewed available files. Copies of the files are located at the previously established Information Repository at the **North Cambridge Public Library**. Based in part on this information and based on conversations with community members, H&A developed a summary of community concerns presented in Appendix C.

An announcement of an initial public meeting was completed and sent to the mailing list by H&A on 16 October 1995. A Legal Notice was published in the Cambridge Chronicle on 19 October 1995. The Public Meeting presenting the PIP was held on 2 November 1995 at the W.R. Grace facility at 62 Whittemore Avenue in Cambridge, Massachusetts. Public comments/questions on the draft PIP were submitted to Haley & Aldrich on behalf of W.R. Grace. The public comment period for the draft PIP ended on 27 November 1995.

3.0 ADDRESSING PUBLIC CONCERNS

The process for assessing and cleaning up disposal sites as set forth in the MCP (310 CMR 40.0000), is designed to address the effects of the site on health, safety, public welfare, and the environment. Once a release of oil or hazardous materials has been confirmed at a disposal site (Phase I of the remedial response action process), the process proceeds to:

- Comprehensive field investigation of the nature and extent of the contamination, and an evaluation of any risks posed to the public and the environment from the site (these phases of the MCP have been completed at the Grace site);
- Identification and evaluation of remedial response action plans and where appropriate or deemed necessary, selection of feasible Release Abatement Measures (RAMs) that will aid in achievement of a permanent cleanup at the site; preparation of completion statements, and;
- Implementation of the selected remedial response actions, including issuing Activity and Use Limitations (AULs) if necessary.

Physical work at a disposal site includes sampling and other environmental field testing, and the implementation of the selected response actions. It may also include the implementation of measures designed to stabilize conditions at the site (Immediate Response Actions or IRAs, and RAMs) to prevent the continued migration of, and/or exposure to, contaminants until planning for remedial response is underway. IRAs may be undertaken at sites where an imminent threat of risk to human health or the environment exists. RAMs are intended to reduce risks at a disposal site and/or increase the cost effectiveness of response actions by implementation of accelerated remedial actions.

At each step of the remedial response action process, remedial action plans for work are developed, the work is conducted, and Status Reports and Completion Statements and/or reports describing results and recommendations for the next step are prepared. The documents which describe each of these steps are the cornerstone of the remedial response action planning process, since they provide the information necessary to make decisions about a site.

As noted in Appendix C, the public has raised some concerns about the Grace site. The remedial response action planning process is designed to address the concerns about the nature and extent of contamination; risks posed by the site to health, safety, public welfare, and the environment, and the adequacy of proposed cleanup measures where appropriate or deemed necessary. These concerns will primarily be addressed in remedial response measures under the MCP. For example, the assessment of off-site contamination was considered in Phase II, as was the impact of the disposal site on public health and the environment. The Phase III evaluation resulted in the selection of remedial action alternatives which will result in a permanent solution with the issuance of a Response Action Outcome (RAO) for the site.

The site is currently in Phase IV (Implementation of the Selected Remedial Action Alternative) of the MCP compliance process. RAO Statements may be issued, and unless specifically exempted by DEP, must include the Opinion of a Licensed Site Professional (LSP) as to whether the requirements of the applicable class of RAO have been met. Following completion of such measures, either an RAO is issued or additional remedial response or Comprehensive Response Actions may be required to achieve a level of No Significant Risk.

4.0 PUBLIC INVOLVEMENT ACTIVITIES

In accordance with 310 CMR 40.1401 of the MCP, activities undertaken to involve the public in response actions serve two purposes:

- to inform the public about the risks posed by the disposal site, the status of remedial response actions, and the opportunities for public involvement (i.e., participation in public hearings and comment periods); and
- to solicit the concerns of the public about the disposal site and remedial response actions so that, to the extent possible, these concerns can be addressed and incorporated in planning remedial response actions.

To meet each of these objectives, Grace proposes to undertake specific activities to inform the public during Phase IV of the remedial process at the Grace site. The activities are described below.

INFORMING THE PUBLIC

Grace will provide site-specific information to the public by establishing additional Information Repositories; developing and maintaining a site mailing list to distribute information about the site; and providing advance notification to local officials and residents about site activities. Grace has provided and will continue to provide bound copies of reports and other documents relevant to the Grace site, along with a reference list, to the previously established Information Repository at the North Cambridge Library and the additional Information Repositories listed below. The reference list will be updated as additional documents become available, and these items will be submitted to the Information Repositories as they become available.

4.1. Information Repositories

Publicly Available Site Files - A file on the Grace site is maintained at the DEP Northeast Regional Office in Woburn, Massachusetts. The file will contain documents pertaining to the site. Appointments to view the site files can be made by contacting Ms. Holly Migliacci at the DEP Northeast Regional Office, 10 Commerce Way, Woburn, MA 01801; telephone (617) 932-7600; DEP business hours: 8:00 AM to 4:00 PM. The Release Tracking Number (RTN) for the Grace site is RTN 3-0277.

Local Public Information Repositories - Grace has established Information Repositories to provide Cambridge residents and other interested individuals with easy access to information about the site MCP process and results of site investigations. The site Information Repositories contain previous reports prepared for the Grace site; work plans; sampling and field testing plans; technical reports and documents summarizing results and recommendations; and will have relevant future correspondence; the PIP; public meeting summaries; summaries of response to comments received, and; copies of public notices about the disposal site. Information will be sent to the DEP and each repository by Grace as it is developed.

Public Information Repositories for the Grace site are located at:

Department of Environmental Protection
 Northeast Regional Office
 10 Commerce Way
 Woburn, Massachusetts



Contact: Ms. Holly Migliacci
Telephone: (617) 935-2160
File Review Hours: Monday through Friday, 9:00 a.m. to 12:00 p.m.

Cambridge Main Library
494 Broadway
Cambridge, Massachusetts
Telephone: (617) 349-4044
Hours: Monday through Friday, 9:00 a.m. to 9:00 p.m.
Saturday, 9:00 a.m. to 5:00 p.m.
Sunday, 1:00 p.m. to 5:00 p.m.

North Cambridge Library
60 Rindge Avenue
Cambridge, Massachusetts
Telephone: (617) 349-4023
Hours: Monday, Tuesday and Thursday, 8:30 a.m. to 8:00 p.m.
Wednesday and Friday, 8:30 a.m. to 5:30 p.m.

W.R. Grace & Co.-Conn.
62 Whittemore Avenue
Cambridge, Massachusetts
Contact: David Wightman
Telephone: (617) 498-4983

4.2. Site Notification List and Mailing List

H&A has established a site notification list and a site mailing list. The site notification list includes municipal officials (specifically the Chief Municipal Officer and the Chairperson of the Board of Health), State Legislators, and the key petitioners. The notification list is provided in Appendix D. Individuals on the notification list will be notified prior to events listed in Section 4.3 of the PIP.

The site mailing list includes petitioners, other interested residents, and anyone else indicating an interest in receiving information about the site, who requested to be notified of the availability of site information and documentation. The mailing list is found in Appendix E. The mailing list will be used to distribute fact sheets, notices of public comment periods, provide information regarding the availability of documents in the information repositories, and other information about the Grace disposal site. H&A will maintain the mailing list and update it as necessary. H&A will provide DEP with a copy of the mailing list.

Anyone wishing to be added to the mailing list can call or write to:

Veronica Wancho O'Donnell
Haley & Aldrich, Inc.
58 Charles Street
Cambridge, MA 02141
Telephone: (617) 494-4910 Ext. 738
Hours: Monday through Friday, 8:00 a.m. to 5:00 p.m.

4.3 Notification to Local Officials and Residents of Specific Milestones and Events

The MCP requires community notification of specific planning and implementation milestones at disposal sites. Specific milestones include: 1) any field work related to the response action involving the implementation of Phase IV remedial actions under 310 CMR 40.0870; the use of respirators and other protective clothes above Level D; and sampling of off-site media on residential property; 2) implementation of Immediate Response Actions (IRAs) and availability of IRA Completion Statements on Imminent Hazards; implementation of Release Abatement Measures (RAMs); and 3) the availability of Phase reports and Response Action Outcome (RAO) Statements.

Notification of field work at the Grace site will include information on the type of work and its approximate duration. Notification will be made by Grace to the people on the Notification Mailing List orally or in writing at least three days before activity is scheduled to begin. Notification times for implementation of other remedial actions will be conducted in accordance with 310 CMR 40.1403 (3). Notification at the end of a remedial phase will include a summary of the phase report or completion statement and information on where the report/completion statement can be reviewed. The mailing notification list of those to be notified is included in Appendix D. In addition, the City of Cambridge Fire and Police Departments will be notified if situations exist where public safety is a concern.

SOLICITING PUBLIC INPUT

Grace will provide opportunities for public input regarding site decisions by holding public comment periods to provide additional opportunities for oral and written input regarding site decisions and preparing summaries of all comments received during the public comment period and responses to them.

4.4 Public Comment Period

Grace will provide specific opportunities for the public to submit comments about documents concerning the site. When key documents are available in draft form, copies of these documents will be placed in the Information Repositories, and a notice of their availability will be sent to individuals identified on the site mailing list. The notice will include the title of the document, where it is available for review, information about how to submit comments to Grace, and the length of the comment period, which will normally be 20 calendar days, but may be longer if warranted by the complexity of a particular document, or if requested by the public. H&A will be responsible for providing copies to the Information Repositories and to the DEP site file, as well as sending out notices of availability of any documents Grace prepares.



Documents available for public comment may include the following, as appropriate:

- Draft PIP
- Major plans concerning the operation and maintenance of response actions;
- Release Abatement Measures (RAMs);
- Immediate Response Actions (IRAs);
- Remedial Implementation Plans (RIP), and;
- Response Action Outcome (RAO) Statements and Activity and Use Limitations (AULs).

The above listing are those documents which may be prepared for a specific site depending on the conditions at the site. Not all of these documents will be prepared for the Grace site; however, if the document is prepared for the Grace site, it will be made available for public review. It is anticipated that a RIP and a RAO Statement with an AUL will be developed for the site. **Public meetings, as requested, can be held for the presentation of any of these documents.**

4.5 Response to Comments

H&A will prepare a summary of all comments received from the public and the responses provided by Grace to these comments. A copy of the response summary will be sent to those who submitted comments, and will be placed in the Information Repositories and the DEP site file. H&A will also send a notice of availability of the response summary to individuals identified on the mailing list.

4.6 Public Meetings

H&A will brief the public about the status of the site during the MCP process. A public meetings was held on 2 November 1995 to present the draft PIP.

The public meetings will serve two purposes: 1) to provide community officials and the general public with a progress report regarding remedial response actions at the site, and 2) to provide an opportunity for the public to question and comment on remedial action plans for the site.

H&A will send notices announcing any public meeting to individuals on the site mailing list. H&A will prepare meeting minutes, submit the minutes to DEP, and place a copy of the minutes in the Public Information Repositories. No additional public meetings are anticipated at this time.

4.7 Technical Assistance Grants

As authorized under Section 14 of M.G.L. c.21E and implemented under 310 CMR 40.1453, DEP may annually issue to eligible groups a limited number of Technical Assistance Grants for Tier I and Tier II disposal sites. These grants may be used to provide assistance to citizens who wish to obtain or develop information about a site. This information could pertain to the assessment and cleanup of a site, and other issues of public concern. The eligible group must complete a two-part application and submit it to DEP. DEP's review of the application and selection of the grantee is based in part on evaluation criteria under 310 CMR 40.1457, and establishment of a grant funding priority list. The grant is considered awarded when the grantee and DEP have entered into a Grant Agreement. Under this agreement, the grantee must maintain a separate bank account and records which must be retained for at least three years from the date of the final grant payment. DEP also may conduct inspections at



any location where the grantee's project is being carried out. Application packages may be obtained from DEP's Northeast Regional Service Center, 10 Commerce Way, Woburn, Massachusetts 01801.

4.8 Other Public Involvement Activities

Fact sheets will be developed as necessary, to summarize for the public, technical information concerning the status and findings of MCP Comprehensive Response Actions. The goal of the fact sheet is to assist citizens in better understanding the issues associated with the remedial response program. It is anticipated that fact sheets will be prepared at key points in the MCP process, as appropriate.

5.0 SCHEDULE FOR PUBLIC INVOLVEMENT ACTIVITIES

Figure 2 provides a schedule of the public involvement activities involved in the PIP process. The schedule specifies the dates for the receipt of public comments and the issuance of the final PIP.

6.0 RESPONSIBILITY FOR IMPLEMENTING THE PUBLIC INVOLVEMENT

W.R. Grace has charged H&A with the responsibility for conducting both remedial actions and public involvement activities at the Grace site. H&A has developed this PIP and is responsible for carrying out the activities listed in the PIP during the site MCP process.

7.0 REVISIONS TO THIS PIP

This PIP may be revised as necessary during the course of the remedial response action process. If revisions are proposed, H&A will place copies of any proposed changes in the information repositories, and will send a notice of the availability of recommended changes to the mailing list. Pursuant to the MCP, H&A will hold a 20-day public comment period on the proposed revised PIP. H&A will review any comments received and revise the PIP, as appropriate. The final PIP will be issued 30 days from the end of the comment period and will be placed in the Information Repositories.

REFERENCES

1. "Report on Subsurface and Hydrogeological Conditions for the Alewife Center Master Plan Study, (Vols. 1 and 2, and Appendicies)"; Haley & Aldrich, Inc.; 1 April 1985.
2. "Environmental Data Report, Vols. I-VII"; Haley & Aldrich, Inc.; April 1988.
3. "Feasibility Study for the W.R. Grace Co. Property, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; May 1988.
4. "Long-Term Monitoring Program Report No. 3, Alewife Center, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; 30 August 1988 (File No. 06118-01).
5. "Work Plan: Building 5 Soil Sampling, Alewife Center, Cambridge, Massachusetts"; Haley & Aldrich, Inc.; September 1989.
6. "Hazardous Material Management Plan, Alewife Center, Cambridge, Massachusetts;" Haley & Aldrich, Inc.; January 1990.
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9. "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, March 1991"; Haley & Aldrich, Inc.; 12 August 1991 (File No. 10063-60).
10. "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, September 1991"; Haley & Aldrich, Inc.; 5 December 1991 (File No. 10063-60).
11. "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, March 1992"; by Haley & Aldrich, Inc.; 26 May 1992 (File No. 10063-61).
12. "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, September 1992"; Haley & Aldrich, Inc.; 22 January 1993 (File No. 10063-61).
13. "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, April 1993"; Haley & Aldrich, Inc.; 30 August 1993 (File No. 10063-63).
14. "Report on Long-Term Monitoring, Alewife Center, Cambridge, Massachusetts, December 1994"; Haley & Aldrich, Inc.; 3 March 1995 (File No. 10063-64).
15. "Tier Classification and LSP Evaluation Opinion RTN 3-0277"; Haley & Aldrich, Inc.; 4 August 1995.
16. "Environmental Risk Evaluation"; Cambridge Environmental Inc.; 16 November 1994.

REFERENCES

(Continued)

17. Department of Environmental Protection, Notice of Responsibility letter to W.R. Grace & Co.-Conn., dated 9 February 1987.
18. Citizen petition to the W.R. Grace & Co.-Conn., dated 5 September 1995.
19. Commonwealth of Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, "Public Involvement Plan Interim Guidance for Waiver Sites," June 1990.
20. Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, "Massachusetts Contingency Plan," 310 CMR 40.0000, dated 13 January 1995.

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