EPA-NEW ENGLAND

RECORD OF DECISION

RAYMARK INDUSTRIES, INC. SUPERFUND SITE
STRATFORD, CONNECTICUT

REMEDIAL ACTION FOR SOURCE CONTROL
RAYMARK INDUSTRIES, INC. FACILITY

OPERABLE UNIT #1

JUNE 1995

RECORD OF DECISION

RAYMARK INDUSTRIES, INC. FACILITY
STRATFORD, CONNECTICUT

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DECLARATION FOR THE RECORD OF DECISION

SITE NAME AND LOCATION

Raymark Industries, Inc. Superfund Site
75 East Main Street
Stratford, Connecticut

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for source control (operable unit #1) for the Raymark Industries, Inc. Superfund Site (the "Site"), in Stratford, Connecticut. This decision document was developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) and with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

The remedy selected in this document will address the following principal threats to human health and the environment posed by the Site: (1) direct exposures to the contaminated soil-waste materials, (2) leaching of contaminants to groundwater from on-site source areas, and (3) inhalation exposures to airborne asbestos and/or volatilized organic compounds.

This decision is based upon the contents of the Administrative Record for this Site. A copy of the Administrative Record is available at the Stratford Public Library, located at 2203 Main Street in Stratford, Connecticut and at the United States Environmental Protection Agency (EPA), Waste Management Division, Records Center, located at 90 Canal Street in Boston, MA.

The Connecticut Department of Environmental Protection (CT DEP) concurs with the first operable unit remedial action for source control at this Site.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substance from this Site, if not addressed by implementing the response action selected in this Record of Decision (ROD), may present a current or potential threat to human health and the environment.

DESCRIPTION OF SELECTED REMEDY

The selected remedy is the first operable unit for the Site. The selected remedy addresses the source(s) of contamination at Raymark Industries, Inc. Site by eliminating or reducing the risks posed by the Site, as set forth above.

The major components of EPA's selected source control remedial action include:

- Decontamination and demolition of all Raymark Facility buildings and structures.
- Backfilling low-lying areas within the Raymark Facility with demolition materials and/or with those materials placed on the Raymark Facility from the residential and Wooster Junior High School excavations.
- Compacting those materials noted above and grading the Raymark Facility to provide the appropriate slopes for the base of the cap.
- Removal of highly concentrated pockets of liquid (solvent) contamination from contact with groundwater from known areas of the Raymark Facility.
- Covering the entire Raymark Facility with an multi-layered, impermeable cap (barrier).
- Ensuring the long-term integrity of the cap through an adequate operation and maintenance program and institutional controls (deed restrictions).
- Conducting routine monitoring of groundwater and surface water, and air monitoring, at the facility.
- Five year reviews of this source control operable unit are also included as part of this selected remedy.

STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to this source control remedial action, and is cost-effective. This source control remedial action utilizes permanent solutions and alternative treatment or resource recovery technologies to the maximum extent practicable for this Site. However, because treatment of the principal threats at the Site was not found to be practicable, the selected remedy does not fully satisfy the statutory preference for remedies that employ treatment that reduce the toxicity, mobility, or volume as a principal element. The selected remedy will reduce mobility of contaminants through its containment and non-aqueous phase liquid removal features. Because this remedy will result in hazardous substances remaining at the Site, the source control remedial action will be reviewed to the extent required by law to ensure that it continues to provide adequate protection of human health and the environment.

FUTURE RESPONSE ACTIONS

In addition, EPA is currently undertaking investigations within Ferry Creek, the Housatonic River and several ecological areas within the Town of Stratford where Raymark contamination has come to be located. These investigations will allow EPA, in consultation with the CT DEP, to identify and evaluate potential cleanup options for these ecologically-sensitive areas. Currently, a second operable unit ROD is anticipated to be prepared which will address the selected remedy for these areas of the Site.

Finally, additional groundwater studies will be required to further evaluate the extent of the groundwater contamination on and migrating from the Raymark Facility. The purpose of these studies will be to determine whether this groundwater contamination is impacting or may in the future impact any human and/or environmental receptors. This information, in conjunction with the results of the groundwater monitoring required for the source control remedial action, will be used to identify and evaluate potential groundwater remedial alternatives for the Site. EPA, in consultation with CT DEP, anticipate that a third operable unit ROD for the Site will be prepared which will address, and will represent the final response action for the Site.

The following represents the selection of a remedial action for source control (operable unit #1) by the United States Environmental Protection Agency, Region I, with concurrence of the Connecticut Department of Environmental Protection, for the Raymark Industries, Inc. Superfund Site.

By: Linda M. Murphy

Linda M. Murphy, Director
Waste Management Division

Date: July 3, 1985

RECORD OF DECISION

REMEDIAL ACTION FOR SOURCE CONTROL
RAYMARK INDUSTRIES, INC. FACILITY

OPERABLE UNIT #1

I. SITE NAME, LOCATION, AND DESCRIPTION

The Raymark Industries, Inc. Facility is located at 75 East Main Street in Stratford, Fairfield County, Connecticut at latitude 41° 12'02.5"N, longitude 73° 07'14.0"W. The Facility is located approximately 1,200 feet west of the Housatonic River, outside the 100- and 500-year floodplains.

The Raymark Facility contains no wetland areas or areas of ecological concern; however, current Facility storm water and drainage ultimately discharges into Ferry Creek and eventually into the Housatonic River. Groundwater in and around the Raymark Facility is classified "GB" by the State of Connecticut which means that the designated uses are for industrial process water and cooling waters and presumed not suitable for direct human consumption without treatment. Based on a survey conducted by the CT DEP, there are no public wells and only one private water supply well located within 1-mile, upgradient of the Raymark Facility. Figures 1-1 and 1-2, attached hereto, depict the location of the Raymark Industries, Inc. Facility and its environs.

The Raymark Industries, Inc. Facility property consists of 33.4 acres of land upon which approximately 15 acres of primarily, inactive office and manufacturing buildings/structures exist, with much of the remainder of the Facility consisting of paved parking areas (see Figure 1-3 attached hereto). Two (2) of the buildings/structures on the property are currently occupied; one by Raymark Industries, Inc., and the other by the Connecticut Carting & Salvage Co. The property is zoned as commercial/light industrial, and is identified as Property #481400 on Tax Map F-2 within the Town of Stratford. The properties abutting the Raymark Facility are a mix of residential, commercial, industrial, and road and railroad rights-of-way. The Raymark Facility is bordered on the northwest by railroad tracks, a commercial metal plating company (a RCRA[1]-regulated facility), as well as the former Raybestos Memorial baseball field (a removal action under CERCLA[2] was conducted in 1993 at this location). The southern end of the property

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[1] RCRA means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. section 6901 et seq..

[2] CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986.

is bordered by Longbrook Avenue and a small commercial lot with several small retail stores. Barnum Avenue and Interstate 95 lie to the southeast; and on the northeastern end of the property is East Main Street (Connecticut Highway 110), with residential homes, a gasoline station, and another commercial lot with many retail stores. In addition, two other facilities (subject to RCRA regulations) are located within a quarter-mile of the Raymark Facility.

A more complete description of the Site can be found in the Remedial Investigation (RI) Report and Feasibility Study (FS) Report which are dated April 1995. These documents are part of the Administrative Record which is available at the EPA, Waste Management Division, Records Center, 90 Canal Street, Boston, MA, and the Stratford Public Library, 2203 Main Street, Stratford, CT.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

A. Land Use and Response History

Raymark Industries, Inc., was formerly named the Raybestos-Manhattan Company. The Raymark Industries, Inc. Facility manufactured automotive and heavy vehicle friction parts as well as adhesives and resins from approximately 1919 until September 1989 when operations ceased. The friction materials contained asbestos and non-asbestos materials, metals, and phenol-formaldehyde resins. The primary products were gasket material, sheet packing and friction materials including clutch facings, auto transmission plates, disc brakes, drum brakes, and brake linings. As a result of these activities, the Raymark Facility has become contaminated with asbestos, lead, copper, polychlorinated biphenyls (PCBs), volatile and semivolatile organic compounds, and other contaminants.

During the Raymark Facility's 70 years of operation, it was common practice for the company to dispose of manufacturing waste in several lagoons located on their 33.4-acre East Main Street property. As their property was filled and developed upon with additional buildings and paved parking areas, new lagoons were built in other areas of the property. Periodically, manufacturing waste from these lagoons was also dredged and used as "fill" throughout the Town of Stratford. In addition, "off-specification" material was taken directly from the Raymark manufacturing processes and also disposed of as "fill" in locations off the Raymark property. The four (4) existing lagoons on the Facility are located in the southern and southwestern parts along Barnum and Longbrook Avenues. These lagoons have been drained and temporarily covered with gravel and topsoil by Raymark in accordance with an administrative order issued by EPA under CERCLA.

A number of spills have also occurred on the Raymark Facility over the many years of operation. One of the largest spills was the release of an unknown quantity of toluene that leaked from a 10,000 gallon underground tank in 1984. The Connecticut Department of Environmental Protection (CT DEP) ordered Raymark to remove the tank and excavate the contaminated soil. Also in 1984, approximately 6,000 gallons of 1,1,1-trichloroethane (1,1,1-TCA) spilled from an aboveground tank.

Spent acids were also disposed of at three (3) unlined acid neutralization pits located in the southwestern part of the Raymark Facility. In the mid-1970's, an acid treatment plant was constructed, in the central portion of the Facility, to neutralize the spent acids generated and eliminate the need for the acid neutralization pits.

EPA is currently conducting response actions at a number of

locations off the Raymark property where Raymark's manufacturing waste has come to be located. Approximately 40 of these locations are residential properties which are being addressed by EPA through time-critical[3] removal actions (excavations) to abate the public health threat that may exist. The excavated material from these residential properties is currently being placed at the Raymark Facility. Additionally, "fill" from the Raymark Facility was also disposed of at several commercial and municipal properties, as well as in and along Ferry Creek and other wetlands areas within Stratford. Several of these properties are currently under investigation by EPA. One municipal property, the Wooster Junior High School, will be excavated by the CT DEP and the contaminated materials transported back to the Raymark Facility during the summer of 1995.

A more detailed description of the Site history can be found in subsection 1.3 of the Remedial Investigation (RI) Report, dated April 1995.

B. Enforcement History

Raymark was subject to many environmental enforcement actions throughout the 1980s for violations of RCRA, and the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) under the Clean Air Act (42 U.S.C. 7401 et seq.).

In July 1991, the Department of Justice (DOJ) filed a complaint in the U.S. District Court of Connecticut for numerous violations of RCRA including failure to perform an environmental study (RCRA Facility Investigation or RFI) under Section 3013 of RCRA. Raymark conducted the environmental investigation and submitted the RFI Report to EPA on February 15, 1995.

In September 1992, EPA issued Raymark a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 106 Removal Order to abate threats posed by hazardous substances and conditions at the Site in accordance with the National Contingency Plan (NCP, 40 CFR Part 300). Pursuant to the Removal Order, Raymark mitigated the imminent threats at the Site by; (1) cleaning, removing and abandoning approximately 70 aboveground and underground storage tanks, and removing thousands of 1 cubic yard bags of asbestos-contaminated materials; (2) covering the surface of the four currently remaining waste lagoons; (3) re-routing surface water drainage around Lagoon #4; (4) placing the toluene-contaminated soil pile in Lagoon #1 and covering the soil; and (5) enclosing the Facility with fencing,

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[3] "Time Critical" removal actions are implemented where EPA determines that there is an urgent need for rapid response in order to protect the public health, welfare and the environment.

boarding up the buildings, and installing an electric gate.

In May 1993, the Agency for Toxic Substances and Disease Registry (ATSDR) issued a Public Health Advisory for hazards associated with past, present and potential future exposures to waste from past operations and disposal practices of Raymark Industries, Inc. As a result of Raymark's past disposal practices at locations off the Raymark property, EPA has conducted time-critical removal actions at one commercial property -- Raybestos Memorial Field and, by July 1995, EPA will have excavated Raymark waste from approximately forty (40) residential properties and transported this material back to the Raymark Facility.

The CT DEP has worked with numerous commercial property owners to abate imminent threats posed by the presence of Raymark waste on their properties. These activities have included covering the Raymark waste with various types of materials and/or installing fences and warning signs. The two (2) largest municipal properties where Raymark waste has come to be located at levels of concern are Short Beach Park and an athletic field at the Wooster Junior High School. At these municipal properties, the CT DEP temporarily covered the Raymark waste with soil and geofabric to abate the imminent threat. The CT DEP is currently implementing a permanent response action at the Wooster Junior High School by excavating the Raymark waste and transporting it back to the Raymark Facility.

On April 3, 1995, EPA notified two (2) parties, Raymark Industries, Inc. and Raytech Corporation of their potential liability with respect to the Site.

Raymark Industries, Inc. has not been directly active in the remedy selection process. However, Raymark has completed the RCRA Facility Investigation (RFI) Report that EPA considered in evaluating the nature and extent of contamination associated with the Site. Raymark has also submitted technical comments during the recent public comment period regarding EPA's Proposed Plan for the Site. Those technical comments made by Raymark Industries, Inc. are included in the Administrative Record and are addressed in the Responsiveness Summary attached as Appendix A of this ROD.

III. COMMUNITY PARTICIPATION

Since the 1980's, community concern and involvement with the Site has been very high. Throughout this time period, EPA has kept the community and other interested parties apprised of the Site activities through neighborhood forums, informational meetings, fact sheets, press releases and public meetings.

During February 1995, EPA released a community relations plan which outlined a program to address community concerns and keep citizens informed about and involved in activities during all removal and remedial activities at the Site.

EPA published a notice and brief analysis of the Proposed Plan for source control remedial action in the Stratford Bard on April 1, 1995, the Connecticut Post on April 4, 1995, and the Stratford Star on April 5, 1995. The Proposed Plan was also made available to the public through mailings to the over 1,200 individuals on EPA's Raymark Facility Site mailing list as of April 3, 1995. On April 8, 1995, EPA made the Administrative Record available for public review at EPA's offices in Boston and at the Stratford Public Library.

On April 8 and April 11, 1995, EPA held open houses/informational meetings to discuss the results in the RI report, the cleanup alternatives presented in the FS report, and to present the Agency's Proposed Plan. Also during this meeting, the Agency answered questions from the public. From April 8, 1995 to June 8, 1995 the Agency held a sixty day (60) public comment period to accept public comments on the cleanup alternatives presented in the FS report and the Proposed Plan, and on any other documents previously released to the public. On May 4, 1995, the Agency held a Public Hearing to accept any oral comments on the Proposed Plan. A transcript of this hearing and the Agency's response to comments made during the public comment period are included in the attached Responsiveness Summary at Appendix A.

IV. SCOPE AND ROLE OF THE OPERABLE UNIT

As with many Superfund sites, the problems at the Raymark Industries, Inc. Site are complex. As a result, the EPA has decided to phase the activities for the Site into several response actions, termed "operable units."

The selected remedy described in this ROD is the first operable unit which will address the source(s) of contamination at the Site. The NCP, at 40 CFR Part 300.5, defines a source control action as "the construction or installation and start-up of those actions necessary to prevent the continued release of hazardous substances or pollutants or contaminants ... into the environment."

In summary, key components of EPA's selected source control remedial action include: 1) decontamination and demolition of all Raymark Facility buildings and structures, 2) removal of highly concentrated pockets of liquid (solvent) contamination from contact with groundwater, 3) covering the entire Raymark Facility with an multi-layered, impermeable cap (barrier), 4) ensuring the long-term integrity of the cap through an adequate operation and maintenance program and institutional controls (deed restrictions), and 5) conducting routine monitoring of groundwater and surface water, and air monitoring, at the Facility. Five year reviews of this source control operable unit are also included as part of this selected remedy, as required by CERCLA.

This source control remedial action will address the following principal threats to human health and the environment posed by the Site: (1) direct exposures (incidental ingestion and dermal contact) to the contaminated soil-waste materials, (2) leaching of contaminants to groundwater from on-site source areas (i.e., soils and non-aqueous phase liquids-NAPLs), and (3) inhalation exposures to airborne asbestos and/or volatilized organic compounds.

EPA is also currently undertaking investigations within Ferry Creek, the Housatonic River and several ecological areas within the Town of Stratford where Raymark contamination has come to be located. These investigations will allow EPA to identify and evaluate potential cleanup options for these ecologically-sensitive areas. These potential cleanup options would be presented to the public in the form of a Proposed Plan for public comment. Currently, a second operable unit ROD is anticipated to be prepared between April 1 - June 30, 1996 which will address the selected remedy for these ecologically-sensitive areas of the Site.

Finally, additional studies will be required to further evaluate the extent of the groundwater contamination on and migrating from the Raymark Facility, and determine whether this groundwater contamination is impacting or may in the future impact any human and/or environmental receptors. These additional groundwater studies will also be used to evaluate the effectiveness of the selected source

control remedial action described in this ROD. All of this information will allow the EPA to better identify potential groundwater cleanup options in the future for the Raymark Facility. These groundwater cleanup options will also be presented to the public for comment in the form of a Proposed Plan. The selected groundwater cleanup remedy will be addressed in the third operable unit ROD for the Site, which is planned for approximately October 1 - December 31, 1998 and will represent the final response action for the Site.

V. SUMMARY OF SITE CHARACTERISTICS

Section 1.0 of the Feasibility Study (FS) report contains an overview of the Remedial Investigation (RI) findings. The significant findings of the RI are summarized below:

Environmental Investigations

Field investigations were conducted at the Raymark Facility to characterize the on-site materials and Facility setting. The investigations were conducted mainly by Raymark's contractor Environmental Laboratories, Inc. (ELI) and were supplemented by EPA investigations. The investigations focused on characterizing the geology and hydrogeology of the Site; sampling and analyzing air, surface water, sediment, soil, and groundwater; and evaluating potential continuing sources of contamination such as the buildings, waste piles, lagoons, spill areas, drainage systems, acid neutralization pits, and tanks.

Physical Characteristics

Numerous lagoons, located throughout the Facility were used for many years to settle the solids from the wastewater generated in the manufacturing operations. The settled material in the lagoons was used as fill on the Raymark property and periodically dredged and used as fill material off the property. As the Facility was filled and developed, old lagoons were filled in and new ones were built in other areas of the Facility. The buildings at the Facility currently occupy approximately 45% of the Raymark property. Most of these buildings were constructed on areas that have been filled, primarily with waste from past manufacturing operations. A number of solvent spills and the dumping of acids and solvents occurred on the Facility over the many years of operation.

Soil and Other Waste Materials

The on-site "process fill" layer, composed primarily of soil-waste materials that originated from the lagoons, is present under nearly all of the Raymark Facility, except the northeastern area. Numerous contaminants, including volatile and semi-volatile organic compounds, herbicides and pesticides, polychlorinated biphenyls (PCBs), dioxins and furans, metals, cyanide, and asbestos, have been identified in the "process fill" layer which ranges in thickness up to 24 feet. A total of approximately 480,000 cubic yards of fill is present on-site and, of that total, roughly 150,000 cubic yards is located below the water table.

With respect to contaminant distribution, the fill materials and underlying natural soils throughout the Facility are heterogeneous. This is likely the result of the irregular disposal/placement of the wastewater sludges, and leaks and spills of chemicals in several areas at the Facility. Table 1-1, attached to this ROD, lists the maximum

concentration of contaminants detected in the soils at the Facility.

While both organic and inorganic contaminants were detected in the fill and soil throughout the Facility, several areas within the property have been identified as containing higher contaminant concentrations than found in other areas of the Site. These areas all appear to be present in the vicinity of past solvent disposal and spill areas. The following areas were identified: the three former acid neutralization pits located in the southwestern portion of the Facility; the general area of a spill of 1,1,1-trichloroethane (1,1,1-TCA) from a tank located in the central portion of the Facility; and the toluene spill in the northern portion of the Facility.

Overall, these more highly contaminated areas combined with the past disposal/landfilling of wastewater sludges within the lagoons throughout the property results in a heterogeneous mixture of contaminants that are found throughout the entire 33.4 acres of the Raymark property.

Groundwater

Groundwater underlying the Facility is contaminated by a variety of organic and inorganic constituents. In particular, groundwater under the known solvent disposal/spill areas and at locations downgradient of these areas appears to be more contaminated than groundwater at other locations within the Facility. All contaminants detected in the groundwater have also been detected in the fill materials or in contaminated natural soils. Since the scope of the Raymark RFI was limited to investigating within the Facility boundaries, no monitoring wells off the Raymark property were installed as part of the RFI studies. Therefore, the available data cannot be used, at this time, to fully assess the extent of the groundwater contamination present upgradient and downgradient of the Raymark Facility. However, contaminants appear to be migrating between the fill/soil and groundwater throughout the Facility.

A non-aqueous phase liquid (NAPL) layer is currently known to be present in two well clusters located on the Facility. NAPL will act as a continuing source of dissolved contaminants to groundwater at the Facility.

Waste Excavated From Residential and Municipal Properties

As part of EPA's ongoing time-critical removal activities at approximately 40 residential properties in Stratford, soil-waste materials contaminated with Raymark waste are being excavated and transported to the Raymark Facility. The soil-waste materials excavated from these residential properties has been placed in buildings and covered piles in the parking lot at the Site. The total volume of soil-waste materials from the removal actions at residential properties is expected to be approximately 40,000 cubic yards. In addition, the soil-waste materials excavated from the Wooster Junior

High School will be transported to the Raymark Facility. The waste from the Wooster Junior High School is expected to total approximately 20,000-30,000 cubic yards.

Finally, drums of investigation-derived waste (IDW) are currently stored on- site in the former Raymark Facility drum storage area. These IDW drums contain drilled soil cuttings and purge/decontamination waters from the many investigations at the Raymark Facility and ongoing investigations by EPA in Stratford where Raymark waste has come to be located.

Surface Water and Sediments

Current Site conditions and analytical data indicate that contaminants may still discharge from the on-site drainage system into Ferry Creek during storm events. Sediment samples collected during the RFI investigations indicate that various contaminants, collected in the on-site drainage system, have been discharging from the Raymark Facility to Ferry Creek. Diversion of the on-site drainage system, during the CERCLA removal action at the Raymark Facility, has minimized the migration of contamination off the property, but the diversion was not completely effective in reducing all contaminants in the surface water. Sediment sampling conducted in Ferry Creek under a separate phase of this project indicates that Ferry Creek is contaminated with Raymark's waste.

Air

No information is available regarding air monitoring conducted while the Facility was in operation. Air monitoring performed during RCRA Facility investigations and cleanup activities conducted between 1992 and 1994 indicates that air quality standards were not exceeded.

A more complete discussion of Site characteristics can be found in the Remedial Investigation Report in Sections 3.0, 4.0, and 5.0.

VI. SUMMARY OF SITE RISKS

A Risk Assessment (RA) was performed to estimate the probability and magnitude of potential adverse human health effects from exposure to contaminants associated with the Site. Since current use of the Raymark Industries, Inc. property is zoned commercial/light-industrial and no substantial change in permitted uses is anticipated in the future, these conditions at the Raymark property were determined to provide no habitat and minimal potential for exposure for ecological receptors. Therefore, an environmental Risk Assessment, which is typically conducted together with the human health Risk Assessment, was not performed for the Raymark Industries, Inc. Facility as part of this operable unit.

The human health Risk Assessment followed a four step process: 1) contaminant identification, which identified those hazardous substances which, given the specifics of the Site, were of significant concern; 2) exposure assessment, which identified actual or potential exposure pathways, characterized the potentially exposed populations, and determined the extent of possible exposure; 3) toxicity assessment, which considered the types and magnitude of adverse health effects associated with exposure to hazardous substances, and 4) risk characterization, which integrated the three earlier steps to summarize the potential and actual risks posed by hazardous substances at the Site, including carcinogenic and non-carcinogenic risks. The results of the human health Risk Assessment for the Raymark Industries, Inc. Facility are discussed below. Section 6.0 of the RI report provides more thorough details regarding the Risk Assessment performed for the Raymark Facility.

Thirty-nine contaminants of concern, listed in Table 6-3 within the RI report, were selected for evaluation in the Risk Assessment. These contaminants constituted a representative subset of the more than one-hundred-forty contaminants identified at the Site during the Remedial Investigation (RI). The thirty-nine contaminants of concern were selected to represent potential Site related hazards based on toxicity, concentration, frequency of detection, and mobility and persistence in the environment.

Potential human health effects associated with exposure to these thirty-nine contaminants of concern were estimated quantitatively or qualitatively through the development of several hypothetical exposure pathways. These pathways were developed to reflect the potential for exposure to hazardous substances based on the present uses, potential future uses, and location of the Site. The Site is located in an urban/industrial/residential area of Stratford, Connecticut. Although the main process areas of the Facility are currently vacant, a few buildings in the southwestern portion of the Site are currently used for commercial work. The following is a brief summary of the exposure pathways evaluated.

EXPOSURE PATHWAYS EVALUATED

The incidental ingestion and dermal contact with contaminated surface and subsurface soils was evaluated assuming:

- a worker may contact soils 150 days per year for 25 years
- trespassers, aged 7 to 18, may contact soils 40 days per year for 12 years
- a construction worker (e.g, repairing the on-site sewer line) may have more intensive contact for a period of 5 days per week for 6 months

Additional, exposure parameters used in the Risk Assessment can be found in Table 6-5 of the RI report.

Three exposure areas were considered in the Risk Assessment based on the fact that the available soil sampling data suggested that the on-site contamination was distributed differently across the Site. Additionally, there currently exists an easement containing an active town sewer line which cuts through approximately the center of the Site which will require periodic maintenance/repair. The three exposure areas considered are as follows:

- the southwest portion of the Site
- the northeast portion of the Site
- the easement area in the central portion of the Site

The utility easement area was used only in conjunction with the construction worker exposure scenario described above.

For each exposure pathway evaluated, an average exposure and a reasonable maximum exposure estimate was generated corresponding to the average and the maximum concentration detected in that particular medium.

A qualitative discussion of risk was also presented for the potential inhalation of vapors and dusts from Site contaminants, including asbestos, to on-site workers and to individuals residing downwind of the Raymark Facility.

Excess lifetime cancer risks were determined for each exposure pathway by multiplying the exposure level with the chemical-specific cancer potency factor. Cancer potency factors have been developed by EPA from epidemiological or animal studies to reflect a conservative "upper bound" of the risk posed by potentially carcinogenic compounds. That is, the true risk is unlikely to be greater than the risk predicted. The resulting risk estimates are expressed in scientific notation as a probability (e.g. 1×10^{-6} for 1/1,000,000) and indicate (using this example), that an average individual is not likely to have greater that a one in a million chance of developing cancer over 70 years as a result of Site-related exposure as defined by the compound at the stated concentration. Current EPA practice considers

carcinogenic risks to be additive when assessing exposure to a mixture of hazardous substances.

The hazard quotient was also calculated for each pathway as EPA's measure of the potential for non-carcinogenic health effects. A hazard quotient is calculated by dividing the exposure level by the reference dose (RfD) or other suitable benchmark for non-carcinogenic health effects for an individual compound. Reference doses have been developed by EPA to protect sensitive individuals over the course of a lifetime and they reflect a daily exposure level that is likely to be without an appreciable risk of an adverse health effect. RfDs are derived from epidemiological or animal studies and incorporate uncertainty factors to help ensure that adverse health effects will not occur. The hazard quotient is often expressed as a single value (e.g. 0.3) indicating the ratio of the stated exposure as defined to the reference dose value (in this example, the exposure as characterized is approximately one third of an acceptable exposure level for the given compound). The hazard quotient is only considered additive for compounds that have the same or similar toxic endpoint and the sum is referred to as the hazard index (HI). (For example: the hazard quotient for a compound known to produce liver damage should not be added to a second compound whose toxic endpoint is kidney damage).

Tables 6-6a through 6-8b of the RI report depict the carcinogenic and noncarcinogenic risks for workers and trespassers exposed to the contaminants of concern in soils in the southwest portion of the Site and the northeast portion; and construction workers exposed to contaminated soils in the utility easement area. Risks were evaluated to reflect present and potential future risks corresponding to the average exposure and the reasonable maximum exposure scenarios.

SOUTHWEST PORTION OF SITE

Risk estimates for exposure to carcinogenic soil contaminants in the southwest portion of the Site are outside EPA's acceptable risk range (10^{-4} to 10^{-6}) for potential current and future exposures (average and reasonable maximum) to on-site workers exposed over a 25 year period and trespassers. The major contaminants contributing to the risk are polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), dioxins, arsenic, and trichloroethene. The risks are summarized in the table below:

	CARCINOGENIC RISK ESTIMATE	
	AVERAGE	REASONABLE MAXIMUM
WORKER	3.3×10^{-3}	1.3×10^{-2}
TRESPASSER	1.9×10^{-3}	9.7×10^{-3}

The potential for unacceptable risks via inhalation of asbestos also exists for both workers and trespassers if the contaminated soil-waste materials below the ground surface are disturbed. However, these risks were not quantified for the reasons specified in the Risk Assessment (Section 6.0 of the RI).

Hazard quotients developed for individual contaminants are below one for soil exposures in the southwest portion of the Site for both workers and trespassers.

NORTHEAST PORTION OF SITE

Risk estimates for exposure to carcinogenic soil contaminants in the northeast portion of the Site are also outside EPA's acceptable risk range for workers under the reasonable maximum exposure scenario. The major contaminants contributing to the risk are polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), dioxins and arsenic. The risks are summarized in the table below:

	CARCINOGENIC RISK ESTIMATE	
	AVERAGE	REASONABLE MAXIMUM
WORKER	4.8×10^{-4}	1.4×10^{-3}
TRESPASSER	3.2×10^{-5}	1.4×10^{-4}

The potential for unacceptable risks via inhalation of asbestos also exists for both workers and trespassers if the contaminated soil-waste materials below the ground surface are disturbed. However, these risks were not quantified for the reasons specified in the Risk Assessment (Section 6.0 of the RI).

Hazard quotients developed for individuals contaminant are below one for soil exposures in the northeast portion of the Site for both workers and trespassers.

EASEMENT AREA

Risk estimates for construction worker exposure to carcinogenic soil contaminants in the utility easement area are within EPA's acceptable risk range (10^{-4} to 10^{-6}). The major contaminants contributing to the risk are polychlorinated biphenyls(PCBs), polycyclic aromatic hydrocarbons(PAHs), dioxins and arsenic. The risks are summarized in the table below:

	CARCINOGENIC RISK ESTIMATE	
	AVERAGE	REASONABLE MAXIMUM
WORKER	4.4×10^{-5}	7.7×10^{-5}

The Hazard quotient exceeded one for copper as summarized below. All other Hazard quotients for individual contaminants are below one.

	NONCARCINOGENIC RISK ESTIMATE	
	AVERAGE	REASONABLE MAXIMUM
WORKER	1.8	1.8

In summary, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare, or the environment. Exposure to soils via incidental ingestion and dermal contact pose a potentially unacceptable risk to human health. In addition, the potential for unacceptable risks via inhalation of asbestos also exists for both workers and trespassers if the contaminated soil-waste materials below the ground surface are disturbed.

VII. DEVELOPMENT AND SCREENING OF ALTERNATIVES

A. Statutory Requirements/Response Objectives

Under its legal authorities, EPA's primary responsibility at Superfund sites is to undertake remedial actions that are protective of human health and the environment. In addition, Section 121 of CERCLA establishes several other statutory requirements and preferences, including: a requirement that EPA's remedial action, when complete, must comply with all federal and more stringent state environmental standards, requirements, criteria or limitations, unless a waiver is invoked; a requirement that EPA select a remedial action that is cost-effective and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and a preference for remedies in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances is a principal element over remedies not involving such treatment. Response alternatives were developed to be consistent with these Congressional mandates.

Based on the information provided in the RI relating to the types of contaminants, environmental media of concern, and potential exposure pathways, EPA identified several source control remedial action objectives to aid in the development and screening of alternatives. These source control remedial action objectives were developed to mitigate existing and future potential threats to public health and the environment. These source control response objectives were: (1) prevent human exposure (incidental ingestion and dermal contact) to the contaminated soil-waste materials, (2) minimize leaching of contaminants to groundwater from on-site source areas, and (3) prevent human exposure to contaminants in the buildings, process equipment, and subsurface drains.

B. Technology and Alternative Development and Screening

CERCLA and the NCP set forth the process by which remedial actions are evaluated and selected. In accordance with these requirements, a range of alternatives were developed for the Site.

The RI/FS developed a range of alternatives in which treatment that reduces the toxicity, mobility, or volume of the hazardous substances is a principal element. This range included an alternative that removes or destroys hazardous substances to the maximum extent feasible, eliminating or minimizing to the degree possible the need for long term management. This range also included alternatives that treat the principal threats posed by the Site but vary in the degree of treatment employed and the quantities and characteristics of the treatment residuals and

untreated waste that must be managed; alternative(s) that involve little or no treatment but provide protection through engineering or institutional controls; and a no action alternative.

As discussed in Section 2.0 of the Feasibility Study, the RI/FS identified, assessed and screened technologies based on implementability, effectiveness, and cost. These technologies were combined into source control (SC) alternatives. Section 3.0 of the Feasibility Study presented the remedial alternatives developed by combining the technologies identified in the previous screening process in the categories identified in Section 300.430(e) (3) of the NCP. The purpose of the initial screening was to narrow the number of potential remedial actions for further detailed analysis while preserving a range of options. Each alternative was then evaluated and screened in Section 3.0 of the Feasibility Study.

In summary, of the five (5) source control remedial alternatives screened in Section 3.0 of the FS, all five (5) were retained for detailed analysis. A description of the five (5) source control alternatives that underwent a detailed analysis is provided in the next section of this ROD.

VIII. DESCRIPTION OF SOURCE CONTROL ALTERNATIVES

This Section provides a brief narrative summary of each source control (SC) remedial alternative evaluated for the Site, as presented in the FS and Proposed Plan.

Alternative SC-1 - No Action

The No Action Alternative was developed to serve as a baseline case for comparison with the other remedial alternatives under consideration, as required by the NCP. The only activities conducted under this alternative are long-term monitoring of groundwater and storm water to evaluate contaminant migration, and a review of Site conditions and risks every five years. The purpose of this alternative is to evaluate the overall human health and environmental protection provided by the Site in its present condition. Key components of Alternative SC-1 are identified on Figure 3-1 within the FS.

ESTIMATED TIME FOR DESIGN AND CONSTRUCTION: 0 Years
ESTIMATED TIME FOR OPERATION: Not applicable
ESTIMATED CAPITAL COST: $0
ESTIMATED O & M (Present Worth): $5,989,569
ESTIMATED TOTAL COST (Present worth): $5,989,569

Alternative SC-2 - Decontamination, Demolition, NAPL Removal, Capping, and Institutional Controls

Alternative SC-2 is a containment option that utilizes a multi-layered, impermeable cap to prevent potential human contact with the on-site soil-waste contaminants and prevent further contaminant leaching into groundwater from precipitation, thereby significantly reducing migration. Decontamination and demolition of all the on-site buildings and structures would be required to facilitate capping. The subsurface drains on-site would be plugged to prevent continued contaminant movement. Soil-waste materials (from the Facility, from residential properties, and the Wooster Junior High School) would be consolidated and graded to achieve the desired slopes prior to cap placement. A vapor control layer would be installed as part of the cap over all the soil-waste materials to capture and channel potential gas-phase VOCs to an off-gas treatment system. Highly concentrated pockets of solvent (NAPL) currently found near the former acid neutralization pits and former toluene spill area would be removed, to the reasonable extent practicable, and sent off-site for recycling, treatment or disposal. Institutional controls, e.g., deed restrictions, would be required to prevent damage or intrusion into the cap system. Since contaminants would remain on-site, long-term groundwater and storm water monitoring and five-year reviews would be required.

The key features of Alternative SC-2 are identified on Figure 3-2 within the FS.

ESTIMATED TIME FOR DESIGN AND CONSTRUCTION: 1 to 4 Years
ESTIMATED TIME FOR OPERATION: 30 Years
ESTIMATED CAPITAL COST: $35,926,000
ESTIMATED O & M (Present Worth): $5,780,430
ESTIMATED TOTAL COST (Present worth): $41,706,430

Alternative SC-3 - Decontamination, Demolition, Limited Excavation and Off-Site Treatment/Disposal, NAPL Removal, Capping, and Institutional Controls

This alternative is similar to Alternative SC-2; however, it differs in that limited excavation of highly contaminated soils (primarily, soils in excess of 500 ppm PCBs) above the water table would be performed in the former acid neutralization pits area and in the area of soil boring #30 (SB-30). The area encompassed by the former acid neutralization pits has high concentrations of VOCs, SVOCs, PCBs, and metals in both the saturated and unsaturated soils. The area around SB-30 primarily has high concentrations of PCBs. The excavated soil-waste materials found above the water table (estimated to be 21,000 cubic yards) would be sent off-site for treatment (incineration) and disposal.

Decontamination and demolition of the buildings would be required to facilitate capping and the limited excavation. The subsurface drains would be plugged to prevent continued contaminant migration. Soil-waste materials (from the Facility, residential properties, and the Wooster Junior High School) would be consolidated and graded to achieve desired slopes prior to placement of a multi-layered, impermeable cap system. A vapor control layer would be installed as part of the cap over all the soil-waste materials to capture and channel potential gas-phase VOCs to an off-gas treatment system. Highly concentrated pockets of solvent (NAPL) currently found near the former acid neutralization pits and former toluene spill area would be removed, to the reasonable extent practicable, and sent off-site for recycling, treatment or disposal. Institutional controls, e.g., deed restrictions, would be required to prevent damage or intrusion into the cap system. Since contaminants remain on-site, long-term groundwater and storm water monitoring and five-year reviews would be required. Key components of this alternative are identified on Figure 3-5 within the FS.

ESTIMATED TIME FOR DESIGN AND CONSTRUCTION: 2 To 4 Years
ESTIMATED TIME FOR OPERATION: 30 Years
ESTIMATED CAPITAL COST: $107,768,000
ESTIMATED O & M (Present Worth): $5,338,650
ESTIMATED TOTAL COST (Present worth): $111,106,650

Alternative SC-4 - Decontamination, Demolition, Excavation, NAPL Removal, Off-Site Treatment/Disposal, Backfilling, and Institutional Controls

Alternative SC-4 features excavation and the use of off-site incineration to treat the organic-contaminated soil-waste materials, and solidification to treat the inorganic-contaminated soil-waste materials. All contaminated materials present above the water table would be excavated (totalling approximately 330,000 cubic yards) and combined with the approximately 80,000 cubic yards of residential/Wooster Junior High School contaminated materials. The treated materials would be ultimately landfilled off-site and the excavated areas on-site would be backfilled with clean fill and regraded. The on-site buildings and other structures would be decontaminated and demolished to facilitate implementation of the excavation component of this alternative. All subsurface drains would be removed during excavation and the sewer line bisecting the property would also need to be addressed. NAPL would be removed as described under Alternative SC-2. Since contaminated soil-waste materials would remain below the water table, deed restrictions would still be required to limit activities that may result in disturbance of the contaminated materials; long-term monitoring and five-year reviews would be required. The main components of Alternative SC-4 are identified on Figure 3-6 within the FS.

ESTIMATED TIME FOR DESIGN AND CONSTRUCTION: 5 To 7 Years
ESTIMATED TIME FOR OPERATION: 30 Years
ESTIMATED CAPITAL COST: $1,088,076,000
ESTIMATED O & M (Present Worth): $4,024,754
ESTIMATED TOTAL COST (Present worth): $1,092,100,754

Alternative SC-5 - Decontamination, Demolition, Excavation, NAPL Removal, On-Site Thermal Desorption and Solidification, Backfilling, and Institutional Controls

Alternative SC-5 features excavation of all contaminated materials present above the water table (totalling approximately 330,000 cubic yards), the use of thermal desorption for on-site treatment of all organic-contaminated soil-waste materials from the on-site excavation, residential properties and the Wooster Junior High School (totalling 410,000 cubic yards), and on-site solidification for immobilizing the inorganics and asbestos. All treated soils would be backfilled on-site. Materials resistant to treatment would be landfilled off-site. Organic treatment residues would be recycled or incinerated off-site. The on-site buildings and other structures would be decontaminated and demolished to allow for the excavation component of this alternative to be implemented. All subsurface drains would be removed during excavation and the sewer line bisecting the property would also need to be addressed. The NAPL would be removed as noted previously in Alternative SC-2. Since contaminants would still remain on-site, long-term monitoring and five-year reviews would be required. The main components of Alternative SC-5 are identified on Figure 3-7 within the FS.

ESTIMATED TIME FOR DESIGN AND CONSTRUCTION: 5 To 7 Years
ESTIMATED TIME FOR OPERATION: 30 Years
ESTIMATED CAPITAL COST: $326,860,000
ESTIMATED O & M (Present Worth): $4,041,372
ESTIMATED TOTAL COST (Present worth): $330,901,372

IX. SUMMARY OF THE COMPARATIVE ANALYSIS OF ALTERNATIVES

Section 121(b)(1) of CERCLA presents several factors that, at a minimum, EPA is required to consider in its assessment of alternative remedial actions. Building upon these specific statutory mandates, the National Contingency Plan (NCP) at Section 300.430(e)(9)(iii) articulates nine evaluation criteria to be used in assessing the individual remedial alternatives. These nine criteria are summarized as follows:

Threshold Criteria

The two threshold criteria described below must be met in order for the alternatives to be eligible for selection in accordance with the NCP.

1. **Overall protection of human health and the environment** addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced or controlled through treatment, engineering controls, or institutional controls.

2. **Compliance with applicable or relevant and appropriate requirements (ARARS)** addresses whether or not a remedy will meet all of the ARARs of other Federal and State environmental laws and/or provide grounds for invoking a waiver.

Primary Balancing Criteria

The following five criteria are utilized to compare and evaluate the elements of one alternative to another that meet the threshold criteria.

3. **Long-term effectiveness and permanence** addresses the criteria that are utilized to assess alternatives for the long-term effectiveness and permanence they afford, along with the degree of certainty that they will prove successful.

4. **Reduction of toxicity, mobility, or volume through treatment** addresses the degree to which alternatives employ recycling or treatment that reduces toxicity, mobility, or volume, including how treatment is used to address the principal threats posed by the Site.

5. **Short term effectiveness** addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period, until cleanup goals are achieved.

6. **Implementability** addresses the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.

7. **Cost** includes estimated capital and Operation Maintenance (O&M) costs, as well as present-worth costs.

Modifying Criteria

The modifying criteria are used on the final evaluation of remedial alternatives generally after EPA has received public comment on the RI/FS and Proposed Plan.

8. **State acceptance** addresses the State's position and key concerns related to the preferred alternative and other alternatives, and the State's comments on ARARs or the proposed use of waivers.

9. **Community acceptance** addresses the public's general response to the alternatives described in the Proposed Plan and RI/FS report.

Following the detailed analysis of each individual remedial alternative, a comparative analysis, focusing on the relative performance of each alternative against the nine criteria, was conducted. This comparative analysis is summarized in Table 4-6 of the Feasibility Study (FS) and discussed below.

NINE CRITERIA FOR EVALUATION

The following presents the nine evaluation criteria, and a narrative summary of the strengths and weaknesses of each alternative according to the detailed and comparative analysis.

Overall Protection of Human Health and the Environment

Alternative SC-1 would not be protective of human health and the environment since no risk reduction is anticipated. All other source control alternatives evaluated are considered protective of human health and the environment as discussed herein.

Alternatives SC-2 and SC-3 would offer significantly greater protection than SC-1 since all the soil-waste materials would be capped to prevent exposure, further leaching of chemicals by precipitation would be eliminated, leaching of the highly concentrated pockets of solvents (NAPL) by groundwater would be greatly reduced, and discharge of contaminants from the Facility drainage system would be eliminated. Alternatives SC-2 and SC-3 would reduce human health risks to within the EPA's acceptable range (less than 1×10^{-6} carcinogenic risk, and non-carcinogenic

risks to less than a hazard quotient of 1.0). The overall protectiveness of Alternatives SC-2 and SC-3 depends largely on maintenance of the cap system to ensure its integrity and to prevent potential future exposures. If the cap system is penetrated in those on-site areas where high concentrations of PCBs are currently present below the ground surface, Alternative SC-3 (during cap repair) would offer added, though limited, short-term protection than Alternative SC-2 because these high concentration contaminants would no longer be present under Alternative SC-3, but would remain under Alternative SC-2. Alternative SC-2 and SC-3 both include deed restrictions which, if implemented and enforced, will maintain the effectiveness of the cap system over the long-term.

Alternative SC-4 would be protective of human health and the environment since all contaminated soil-waste materials above the water table and the residential and Wooster Junior High School materials would be transported off-site for treatment/disposal. Groundwater contamination would be significantly reduced by preventing additional leaching from the contaminated materials residing above the water table, since they would no longer be present on the Site. No long-term maintenance actions are needed to provide the overall protectiveness of this alternative as is the case with Alternatives SC-2 and SC-3.

Alternative SC-5 would be protective of human health and the environment since all soil-waste materials above the water table and the residential and Wooster Junior High School materials would be thermally desorbed on-site to remove organics and solidified with cement on-site to stabilize metals and asbestos. Under Alternative SC-5, exposure is prevented through treating and covering the treated residues with soil on-site. Leaching of organics from above the water table to groundwater is eliminated. Leaching of metals would be greatly reduced. All organics in the excavated soils would be addressed; all metals and asbestos would be stabilized. Long-term maintenance of the soil cover would be required to prevent potential exposure to the stabilized metals and asbestos present in the treatment residues left on-site.

Alternatives SC-2 through SC-5 would require institutional controls to prevent future activities that result in intrusion into contaminated materials remaining at the Site.

Under all alternatives, approximately 30 percent of the contaminated soil-waste materials resides below the mean low water table. Even under Alternatives SC-4 and SC-5, where all the contaminated soil-waste materials above the water table are to be excavated, organic and inorganic contaminants below the water table would continue to migrate with the groundwater off the Raymark property.

Compliance with ARARs

Alternative SC-1 would not comply with the RCRA Subtitle C closure requirements for the surface impoundments (lagoons), buried materials (landfill) or tanks, and would also not comply with the general closure and post-closure RCRA requirements. However, Alternative SC-1 would comply with the long-term groundwater monitoring requirements of RCRA (40 CFR 265.90-265.93).

Alternatives SC-2 and SC-3 would comply with the RCRA Subtitle C ARARs for closure of existing units (i.e., surface impoundments, buried materials-landfill and tanks) and the long-term groundwater monitoring requirements. Alternatives SC-2 and SC-3 would also comply with the TSCA disposal and landfill requirements as specified in 40 CFR 761.60 and 40 CFR 761.75, respectively, with the exception of subsections 761.75 (b)(1), (b)(2), (b)(3) and (b)(7). Both Alternatives SC-2 and SC-3 would require waivers pursuant to the TSCA regulations at 40 CFR 761.75 (c)(4). (Refer to the FS - Section 4.0 for further details regarding the TSCA waivers noted herein.) Alternatives SC-2 and SC-3 would comply with the NESHAPs (40 CFR 61, Subpart M) and State of CT Asbestos Abatement and Licensing and Training requirements for building demolition, and the handling, management and disposal of asbestos-containing materials. Both alternatives would comply with the State's requirements for discharge of stormwater associated with industrial activity, the Connecticut Water Quality Standards, and the Connecticut's air pollution control regulations for stationary sources, fugitive dust, hazardous air pollutants and odors.

Alternatives SC-4 and SC-5 would comply with RCRA Subtitle C ARARs for closure of existing units and the long-term groundwater monitoring requirements. Alternative SC-5 would also comply with RCRA Subtitle C land treatment, incineration and miscellaneous treatment unit requirements, and the TSCA storage and disposal requirements. Alternatives SC-4 and SC-5 would comply with the NESHAPs and State of CT requirements, noted above for SC-2 and SC-3, for building demolition, and the handling, management and disposal of asbestos-containing materials. Both alternatives would comply with the State's requirements for stormwater discharges, the Connecticut Water Quality Standards, and the Connecticut's air pollution control regulations for stationary sources, fugitive dust, hazardous air pollutants and odors.

Long-Term Effectiveness and Permanence

Alternative SC-1 would not provide any risk reduction or protection of human health or the environment over the long-term.

Alternatives SC-2 and SC-3 would reduce the magnitude of the risk to within EPA's acceptable risk range (carcinogenic risk to below

10^{-6} and a hazard index less than 1.0) through capping, and limited excavation (SC-3 only). With long-term maintenance of the cap systems firmly established, Alternatives SC-2 and SC-3 will provide long-term protectiveness.

Under Alternatives SC-4 and SC-5, risks would also be reduced to within EPA's acceptable risk range through excavation and off-site treatment/disposal (SC-4), or excavation and on-site treatment of contaminated materials (SC-5). Long-term maintenance/monitoring measures under SC-4 would be similar to those required under SC-5.

All contaminated materials would be left in place under Alternative SC-1, and existing Site features (e.g., pavement and foundations) and natural contaminant attenuation mechanisms would provide marginal controls of the contaminated materials. The capping system proposed for Alternatives SC-2 and SC-3 would prevent direct exposures and prevent leaching of contaminants into the groundwater from the soil-waste materials above the water table. For Alternatives SC-2 and SC-3, their reliability of controls is considered to be equivalent, but much more reliable than SC-1. The reliability of Alternatives SC-2 and SC-3 is considered very high if the cap is properly maintained and deed restrictions are enforced to prevent intrusion into or damage of the cap system. All contaminated soils above the water table would be removed for off-site treatment/disposal under Alternative SC-4, and therefore reliability would also be very high over the long term. Alternative SC-5 would actively remove all organics from the soils excavated from above the water table and would leave treated materials (metals and asbestos) on-site; the reliability of this alternative would also be very high. While the reliability of Alternatives SC-4 and SC-5 is fairly similar, the adequacy and reliability of controls for Alternatives SC-4 and SC-5 in comparison to Alternatives SC-2 and SC-3 is much better, and even greater in comparison to Alternative SC-1.

Alternative SC-1 would not protect the groundwater from future leaching of organics and metal contaminants since degradation of the existing pavement and foundations would result in increased leaching over time. Alternatives SC-2 and SC-3 would eliminate contaminant leaching through reduction of infiltration using a cap and removal of NAPL. Alternative SC-3 would, in addition, provide for removal of some additional highly contaminated soils, and would, thereby, provide slightly greater reduction in leaching than Alternative SC-2 from these highly contaminated soil areas. Both Alternatives SC-4 and SC-5 would prevent the leaching of organic contaminants to groundwater; SC-4 would also prevent the leaching of metals while SC-5 would minimize leaching since metals and asbestos are stabilized on-site. However, none of the alternatives would reduce or eliminate the leaching of contaminants from soil-waste materials present below the water

table.

Reviews every five years will be required for all source control alternatives evaluated since contaminated soil-waste materials will remain below the water table. These five-year reviews would be required to assess contaminant presence and potential leaching and migration in groundwater.

Reduction of Toxicity, Mobility, or Volume Through Treatment

There is no reduction in toxicity, mobility, or volume through treatment under Alternative SC-1.

Alternative SC-2 offers limited reduction of toxicity, mobility, or volume through treatment. Specifically, the NAPLs that can be effectively removed from known locations on the Site and recycled/treated off-site, and/or the VOCs captured by the vapor control system component of the cap that are recovered and the condensate that is recycled/treated off-site, will provide some reduction of contaminant toxicity, mobility, and volume through treatment.

Under Alternative SC-3, approximately 21,000 cubic yards (or only approximately 5%) of the total amount of contaminated materials above the water table would be sent off-site for treatment to reduce toxicity, mobility and volume prior to off-site disposal, in addition to the NAPL and vapor collection/treatment.

Alternatives SC-4 and SC-5 would both result in the treatment (off-site or on-site, respectively) of approximately 410,000 cubic yards of contaminated soil-waste materials found above the water table.

Overall, Alternatives SC-4 and SC-5 would provide the greatest reduction of toxicity, mobility, and volume through treatment of all the alternatives considered.

Short-Term Effectiveness

The use of appropriate engineering controls and personal protective equipment is expected to minimize adverse impacts to the community and workers, respectively. Earth moving activities (consolidation and backfilling) associated with Alternative SC-2 are expected to generate some limited amounts of fugitive dust and vapor-phase VOCs, but would be easily managed through engineering controls (such as wetting or use of dust suppressants). Alternative SC-3 would likely result in greater short-term impacts (e.g., generation of increased dust and vehicular traffic) than SC-2 because of the excavation, handling, and off-site transport of 21,000 cubic yards of highly contaminated material contemplated under SC-3. Alternatives SC-4 and SC-5 would involve much more excavation and materials

handling and would likely result in much greater fugitive dust and vapor-phase VOCs generation than Alternatives SC-2 and SC-3. The control of fugitive dust and/or vapor-phase VOCs for alternatives SC-3 through SC-5 through common practices such as wetting or use of dust suppressants becomes increasing more difficult as more contaminated materials are excavated. This would result in added risks to workers and nearby residents.

Substantial management of construction activities under Alternatives SC-4 and SC-5 would be necessary to minimize increased short-term risks during implementation. Under Alternative SC-4, a twenty-fold (i.e., totalling approximately 20,000 truck loads) increase in truck traffic, than would be required in Alternative SC-3 (the only other alternative requiring substantial excavation and transport of contaminated materials off-site) could result in added risks and greater nuisances for nearby residents and businesses. Alternatives SC-2 and SC-5 would result in no additional increases in truck traffic due to the off-site transport of contaminated materials; however, Alternative SC-5 would require substantial mitigative measures to prevent potential impacts from occurring due to the large excavation activities involved with this alternative.

Alternative SC-1 would not achieve any of the remedial action objectives previous identified in Section VII (A) of this ROD. The time to complete each alternative is also the time required to attain the remedial action objectives. Alternative SC-2 could be completed within 1 to 4 years. Alternative SC-3 could be completed within 2 to 4 years. Both Alternatives SC-4 and SC-5 would require approximately 5 to 7 years to complete.

Implementability

Each of the alternatives would be implementable since companies with the appropriate personnel, equipment, and resources are available. Alternative SC-1 is the most easily implemented since no actions (other than long-term monitoring) are required. Alternative SC-2 is the most readily implementable of all alternatives that employ a response action since common construction techniques are required to demolish the buildings and install the capping system components. Alternative SC-3 is less implementable than SC-2 because of inherent technical difficulties and unknowns associated with the excavation, materials handling and off-site treatment and ultimate disposal of 21,000 cubic yards of highly contaminated soil-waste materials. Alternative SC-4 is much more difficult to implement than either SC-2 or SC-3 because of the very large volume of materials to be excavated, handled, staged, and transported off-site for treatment and disposal. In addition, the large volume of contaminated materials requiring off-site treatment and disposal capacities may pose difficulties in coordinating with other offices and agencies such a large effort. Alternative SC-5

would also be extremely difficult to implement because of the large volume of contaminated materials that must be excavated, handled, staged, treated, and backfilled all within the 33 acre property.

Deed restrictions would be required for all alternatives except No Action. These deed restrictions will require significant coordination among all parties involved with the Site in order for them to be implemented and enforced.

Alternatives SC-2 through SC-5 require common construction techniques and equipment for decontamination, demolition, excavation, consolidation, backfilling, or capping activities. Thermal desorption and solidification (Alternative SC-5) have been successfully applied at a number of sites, and a number of firms are available to implement them. Extensive pilot-scale testing would still be necessary on the Site under Alternative SC-5.

Alternatives SC-3 and SC-4 include off-site treatment and disposal (assumed to be incineration/solidification with landfilling) of contaminated soil-waste materials. However, limited nationwide treatment and landfill capacity may pose difficulty in implementing Alternative SC-4 because of the disposal volume required (approximately 410,000 cubic yards). SC-3 would require 21,000 cubic yards of treatment and landfill capacity; a volume that can be more easily accommodated than the volume envisioned under Alternative SC-4.

Cost

The costs associated with each of the source control alternatives are provided in Table 4-6 of the FS. For the containment (capping) alternatives (SC-2 and SC-3), Alternative SC-2 would cost approximately $70 Million less than SC-3. This cost differential is primarily due to the added costs estimated to excavate, transport off-site, and incinerate the 21,000 cubic yards of materials containing high concentrations of PCBs (greater than 500 ppm) and other contaminants also found on-site. Alternative SC-4, which involves excavation and off-site treatment/disposal of all soil-waste materials above water table (and the residential and Wooster Junior High School materials), would cost the most of all alternatives since the transport and off-site treatment of such large quantities of contaminated materials would be very expensive (estimated at over $1 Billion). Alternative SC-5, on-site treatment and backfilling, would cost approximately $650 Million less than Alternative SC-4, but significantly more than either Alternatives SC-2 or SC-3.

State Acceptance

The State's comments on the Proposed Plan are provided in the Responsiveness Summary included in Appendix A of this ROD. The State concurs with the Selected Remedy. The State's letter of concurrence, documenting it's position on the Selected Remedy is provided in Appendix B of this ROD.

Community Acceptance

The comments received from the community on the RI/FS and the Proposed Plan during the public comment period are included as an attachment to the Responsiveness Summary found in Appendix A of this ROD.

Based upon the written and oral comments received during the public comment period, there were both supporting and opposing views with respect to the Proposed Plan and the other source control remedial alternatives evaluated in the RI/FS. EPA responses to all public comments are summarized in the Responsiveness Summary included in Appendix A of this ROD.

X. THE SELECTED SOURCE CONTROL REMEDY

The source control remedy selected from the five (5) remedial alternatives evaluated for this Site is **Alternative SC-2** which essentially involves: decontamination, demolition, NAPL removal, capping, and institutional controls. The specific components of this source control remedy are described in further detail below:

A. Description of Remedial Components

Decontamination/Demolition - The on-site buildings and other structures will be decontaminated and demolished to facilitate effective implementation of the capping component of this alternative. EPA will conduct a comprehensive environmental assessment of these buildings and structures and define specific decontamination and handling procedures during the remedial design stage. Likely actions to be conducted for the buildings and structures include: surface cleaning for metals; removal of remaining process equipment; demolition; recycling or reusing the uncontaminated materials (as feasible); and disposing of contaminated debris on-site (under the cap) and/or off-site. If possible, salvageable materials such as steel and copper piping, or structural steel will be recovered. Uncontaminated debris, e.g., bricks, cinder blocks, will be crushed and used as cover or fill materials to decrease the volume of clean fill material that will need to be brought on-site to establish proper cap grades. The foundations are expected to remain in place under Alternative SC-2. The subsurface drainage system will be left in place; however, all subsurface drains will be plugged to prevent continuing discharges to Ferry Creek.

Engineering controls will be implemented during building demolition to prevent airborne emissions of asbestos, fugitive dusts or vapor-phase VOCs. For example, engineering controls such as dust suppressants (foam) and/or water will be applied to wet the building materials, as appropriate, to minimize potential airborne emissions from being generated.

Consolidation/Backfilling - The residential and Wooster Junior High School soil-waste materials and some of the building demolition debris will be used to backfill low-lying areas within the Facility and to achieve proper grades for the cap. As necessary, contaminated fill immediately outside of and contiguous to the Raymark Facility's property boundary may need to be consolidated, where practicable, to facilitate the placement of the cap.

Engineering controls will be implemented during consolidation and backfilling to prevent airborne emissions of fugitive dusts contaminated by SVOCs, PCBs, metals, or asbestos, or emissions of vapor-phase VOCs. For example, engineering controls such as moveable enclosed structures (domes), dust suppressants (foam),

and/or water will be applied to wet the soil-waste materials, as appropriate, to minimize potential airborne emissions from being generated.

Geotechnical Engineering Investigation and Design - A geotechnical engineering investigation will be conducted preceding the design of the cap system.

Site Grading - After consolidation/placement of all the residential and Wooster Junior High School contaminated soil-waste materials on the Site, grading will be required prior to placement of the cap system. Compaction of the soil-waste materials/building debris will be performed as needed. The appropriate slopes for the base of the cap will be determined as part of the cap system design.

Cap System - A multi-layered, impermeable cap system, designed in accordance with RCRA Subtitle C requirements and consistent with the TSCA chemical waste landfill regulations will be installed to prevent risks to human health from direct contact or incidental ingestion of soil contaminants. The cap will also minimize infiltration and resulting organics and metals leaching into groundwater. The cap system will be installed over the area where Raymark waste is located, and where necessary to maintain the appropriate slopes/grades for the cap. This area is currently bounded by East Main Street (Connecticut Highway 110) on the northeast, Barnum Avenue and U.S. Route 1 on the south-southeast, Longbrook Ave on the southwest, and the railroad embankment/tracks on the northwest.

The conceptual cap system design, subject to modification during the remedial design, will be based on the requirements of 40 CFR 265.310 and consistent with the Technical Guidance Document: Final Covers on Hazardous Waste Landfills and Surface Impoundments (EPA/530-SW-89-047, July 1989). A cross section of the conceptual cap system is presented on Figure 3-4 within the FS. Descriptions of the individual cap layers are summarized as follows:

> Cover Layer - The objective of this layer of the cap is to provide protection from erosion and frost of the lower layers of the cap. A minimum of 2 feet of soil may be required to sustain growth of a vegetative cover, or the surface layer (5 to 10 inches) may be comprised of hardened or armored material (such as stones or cobbles) if vegetative growth is not desired for future site-use. If a building or parking lot were to be constructed on top of the cap, the suitability of other materials for the cover layer will need to be evaluated. The thickness of the top layer will be determined during the design in order to prevent freezing and thawing that could damage the underlying drainage layer or the impermeable layer. A surface slope of

3 to 5 percent will be needed to promote runoff while inhibiting erosion. The final surface slope, to be determined by EPA during remedial design, will be dependent on the actual use of the property, the type of surface materials used, and how runoff will be managed. Surface runoff will be diverted to newly installed surface drains, which will then be discharged to the storm drains present near the Site.

Drainage Layer - This layer is used to reduce the potential for infiltrated water to pond over the impermeable layer. The drainage layer promotes the removal of water to areas outside of the cap, such as a drain to the existing storm water sewer. The drainage layer will be either a geosynthetic material or coarse sand/gravel (less than 3/8") with a minimum hydraulic conductivity of $1x10^{-2}$ cm/sec or transmissivity of $3.5x10^{-5}$ m^2/sec. A geotextile filter fabric will be placed over the drainage layer to prevent the entry of fine-grained particles into the drainage layer. Infiltrating water that reaches this layer will be channeled to internal drains, and will ultimately be discharged to the storm water drains present near the Site.

Impermeable Layer - This layer will be designed to minimize, to the extent practicable, the potential for infiltration of precipitation into the underlying soil-waste materials. A double barrier will be required to be consistent with the guidance for design of RCRA hazardous waste covers. Two barriers will be used so that in the event one barrier is damaged or fails, the second barrier will still be intact. A maximum 3 percent slope is recommended by the RCRA/CERCLA cover guidance document.

The top barrier may be a flexible membrane layer (FML) of at least 60 mil thickness. The FML will be of sufficient thickness to withstand any future use of the cap surface.

The bottom barrier will have a maximum permeability of 1 x 10^{-7} cm/sec and may consist of a geosynthetic clay layer (GCL) (which typically has a permeability $1x10^{-9}$ cm/sec or lower), or 2 feet of clay compacted to the target permeability. GCLs can be installed more efficiently than clay.

Vapor Control Layer - The purpose of this layer is to capture and channel potential gas-phase VOCs to an off-gas treatment system, e.g., activated carbon. Because VOCs are present in the soil-waste materials below grade, the placement of a multi-layered, impermeable barrier over the these materials could cause accumulation of undesirable soil gases that could permeate upward through, or otherwise disturb, the cap system. The gas collection layer will be

made of either gravel, coarse sand, or geosynthetic materials. A geotextile material will be used to separate the gravel from the low permeability GCL. Treatability testing will be required in order for EPA to evaluate and optimize the effectiveness of VOCs treatment. The recovered VOCs and condensates will be sent off-site for recycling, treatment, or disposal.

Subgrade - The base layer of the cap system will be a well compacted and smooth surface that has sufficient subgrade material to prevent puncture of the barrier layer. The subgrade will likely be sand or crushed building materials (concrete, brick, etc.). A geotextile material will be placed above the subgrade to prevent fines from entering the vapor control layer.

The actual materials for the cap system will be determined during the engineering design and will depend on the likely future land use of the Raymark Facility property.

Since the capped area will encompass, at a minimum, all organic- and inorganic-contaminated Raymark soil-waste materials (the 33-plus acres of the Facility), surface run-on and run-off controls will be required given the large surface area the cap system is anticipated to cover.

NAPL Removal - By performing NAPL removal at the Site, the contaminant mass can be reduced that will significantly limit VOC migration into groundwater. The presence of NAPL on-site has currently been identified near the former acid neutralization pits and the former toluene spill area. However, the full lateral and vertical extent of the NAPLs at the Site is presently unknown and will require further investigation.

To further evaluate the extent of NAPL contamination and to quickly initiate removal, NAPLs will be measured and removed from the two (2) existing on-site monitoring well clusters. These remedial design activities will be used to evaluate how quickly or not the NAPL recovers in the existing wells. If NAPL recovery is minimal, then further evaluation of the feasibility of NAPL removal will be required. If the NAPL removal yields substantial quantities and NAPL recovery from the existing wells is rapid, this approach will be continued until such time that the existing monitoring wells will need to be decommissioned because of the building demolition/capping activities. If NAPL removal is successful, new wells, more specifically designed for NAPL removal, will be installed, if and to the extent practicable, prior to cap installation and incorporated into the cap design to continue with the mass removal of NAPL. These new wells will be installed in a manner that is not inconsistent with the potential Site re-use possibilities.

All recovered NAPL will be sent off-site for recycling, treatment, or disposal.

Interim Monitoring - Groundwater, storm water, and air monitoring will be conducted during implementation of this alternative to assess whether or not any contaminant migration is resulting from the response activities envisioned according to the selected source control remedy. Groundwater will be sampled from existing and newly installed wells. Storm water will also be sampled to evaluate the quality of runoff discharging to the existing storm water system and eventually into Ferry Creek. Air samples will be collected and analyzed as required by federal and state air pollution control regulations.

Institutional Controls and Long-Term Considerations - Groundwater and storm water monitoring, cap maintenance, and deed restrictions will be long-term components of the selected remedy. After the cap has been constructed, deed restrictions will be used to limit the future activities that could result in accidental intrusion into the cap, accidental exposures to the wastes, and damage of the cap system. Routine maintenance of the cap will be required to ensure its long-term effectiveness.

The groundwater will be sampled and analyzed to monitor the cap effectiveness, the quality of groundwater leaving the Facility, and potential impacts to downgradient groundwater. Existing monitoring wells will be used to the extent possible; however, several wells will likely be decommissioned during implementation of the remedial action. Some of these wells will need to be replaced to facilitate monitoring. Surface water run-off that drains from the cover of the cap and infiltration channeled by the drainage layer within the cap will also be sampled to assess the quality of the water discharging to the storm drain.

Five-Year Reviews - Since hazardous substances, pollutants or contaminants will remain on-site, a review of Site conditions and risks will be conducted at least once every five years after the initiation of the source control remedial action at the Site (i.e., award of the contract for remedial action), as required by CERCLA. This is required by law to assure that the remedial action continues to protect human health and the environment.

XI. STATUTORY DETERMINATIONS

The source control remedial action selected for implementation at the Raymark Industries, Inc. Facility is consistent with CERCLA and the NCP. The selected remedy is protective of human health and the environment, attains ARARs and is cost-effective. The selected remedy utilizes permanent solutions and alternate treatment or resource recovery technologies to the maximum extent practicable for this Site. However, the selected remedy does not fully satisfy the statutory preference for treatment which permanently and significantly reduces the mobility, toxicity or volume of hazardous substances as a principal element. This is because EPA has determined that the risks and costs attendant with treatment of a discrete portion or of the substantial volumes of contaminated soil-waste materials on-site outweigh the limited increase in protectiveness afforded and, therefore, treatment of the principal threats was not found to be practicable.

A. The Selected Remedy is Protective of Human Health and the Environment

The source control remedial action selected for this Site will significantly reduce the risks posed to human health and the environment by eliminating, reducing or controlling exposures to human and environmental receptors through engineering controls (capping) and institutional controls (deed restrictions).

More specifically, the cap will provide short-term and long-term protection from direct exposures (dermal contact, incidental ingestion, and inhalation) to the contaminated soil-waste materials. Leaching of organic and inorganic contaminants from precipitation through the soil-waste materials to groundwater will also be virtually eliminated by the cap system. Removal of NAPLs will further reduce contaminant leaching into groundwater, while plugging of the on-site subsurface drainage system will also prevent the continued discharge of contaminated storm water to Ferry Creek. Deed restrictions will restrict activities that could damage or intrude into the cap system.

The selected remedy will achieve potential human health risk levels that attain the 10^{-4} to 10^{-6} incremental cancer risk range and a level protective of noncarcinogenic endpoints, and will comply with ARARs.

B. The Selected Remedy Attains ARARs

This source control remedial action will attain all applicable or relevant and appropriate federal and state requirements (ARARs) that apply to the Site. Environmental laws from which ARARs for the selected source control remedial action are derived, and the

specific regulations are included in the Tables attached to this ROD. These tables provide a brief synopsis of the ARARs and an explanation of whether the requirements are applicable or relevant and appropriate to the actions to be taken at the Site.

No federal or state chemical-specific ARARs were identified for the selected source control remedial action. A discussion of the selected remedy ARARs is presented below:

Action-Specific ARARs

Under the selected source control remedial action, capping of the on-site lagoons (surface impoundments) and the on-site buried materials (landfill) will comply with the RCRA closure requirements specified in 40 CFR 265.228 and 265.310 [excluding 40 CFR 265.310(b)(2), which is not an ARAR], respectively. All tanks that remain on-site will be closed in compliance with 40 CFR 265.197. The general closure and post-closure requirements under 40 CFR 265.110-120 will be complied with during and following implementation of the selected remedy. The selected remedy will also comply with the federal RCRA requirements for post-closure long-term monitoring of groundwater (40 CFR 265.90 - 265.93). Compliance with the federal requirements stated above also constitutes compliance with the closure regulations of the State's Hazardous Waste Site Management Regulations which incorporate by reference substantial portions of the federal hazardous waste regulations.

The selected remedy will also comply with the asbestos NESHAPs requirements (40 CFR 61, Subpart M; specifically, Sections 61.145, 61.150-151, and 61.154), and the State Asbestos Abatement and Licensing and Training regulations (Sections 19a-332a-1 through 19a-332a-16, and Sections 19a-332a-17 through 19a-332a-23, respectively) during the building demolition, handling, management, and disposal of the asbestos on the Site.

This remedy will be consistent with the Connecticut Water Quality Standards (issued pursuant to Section 22a-426, CGS) since actions are taken to reduce further degradation of the groundwater through capping and NAPL removal.

The selected remedy will comply with the TSCA regulations (40 CFR 761.60) applicable to the disposal of PCBs (at concentrations greater than 50 ppm), with the exception of several of the requirements under 40 CFR 761.75 which EPA waives consistent with 40 CFR 761.75(c)(4). These requirements, which EPA waives, include: construction in low permeable clay conditions [40 CFR 761.75 (b)(1)]; use of a synthetic membrane liner [40 CFR 761.75 (b)(2)]; no hydraulic connection between the Site and flowing surface

water and that the bottom of the landfill be 50 feet above the historic high water table [40 CFR 761.75 (b)(3)]; and a leachate collection system be installed [40 CFR 761.75 (b)(7)].

Finally, the selected remedy will comply with the state Discharge of Stormwater requirements for monitoring storm water discharges from the drainage system, and will also comply with the state air pollution control regulations for fugitive dust and odors.

Location-Specific ARARs

The only location-specific ARAR that is applicable to the Site is the State's Coastal Management Act at Section 22a-92, CGS. This Act applies to the "coastal area" defined in Section 22a-94(a), CGS to encompass the entire Town of Stratford. EPA will, therefore, determine whether the remedial action will be consistent, to the maximum extent practicable, with the policies set forth in the Coastal Management Act.

Chemical-specific and action-specific policies, criteria, and guidances (TBCs) that are not ARARs but that EPA deemed appropriate to consider, as identified in Tables 4-2A and 4-2B of the FS report and attached to this ROD, were also considered in selecting the selected source control remedial action. In particular, the selected remedy will be consistent with the proposed Connecticut Cleanup Standard Regulations, the TSCA PCB Spill Clean-up Policy, and OSWER Directive No. 9355.4-01 for PCB contamination. Finally, the cap will be consistent with the technical specifications contained in the EPA guidance for Final Covers on Hazardous Waste Landfills and Surface Impoundments (EPA/530-SW-89-047, July 1989).

Finally, EPA has determined that the RCRA land disposal requirements ("LDRs") are not triggered for the selected source control remedial action so long as the soil-waste remains within the area of contamination.

C. The Selected Remedy is Cost-Effective

The selected remedy is cost-effective, i.e., the remedy affords overall effectiveness proportional to its costs. In selecting this remedy, once EPA identified alternatives that are protective of human health and the environment and that attain, or, as appropriate, waive ARARs, EPA evaluated the overall effectiveness of each alternative by assessing the three additional criteria -- long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness, in combination. The relationship of the overall

effectiveness of this remedial alternative was determined to be proportional to its costs. The estimated costs of the selected source control remedial action, based upon the assumptions contained in the FS, are:

ESTIMATED CAPITAL COST: $35,926,000
ESTIMATED O & M (Present Worth): $5,780,430
ESTIMATED TOTAL COST (Present worth): $41,706,430

In comparing the overall effectiveness of SC-2 with that of SC-3, EPA believes that SC-3, while only partially satisfying the statutory preference for treatment, does not provide any significant added protection of human health or the environment. The excavation and treatment of 21,000 cubic yards under SC-3 involves significantly greater short-term impacts than SC-2 which involves little or no excavation. Because SC-3 would address only 5-10% of the total contaminated soil-waste materials on the Site, it would provide only a marginal increase in the long-term effectiveness over capping and NAPL removal at more than twice the cost of SC-2. Therefore, EPA believes that the costs for SC-3 (an additional $70 Million in comparison to SC-2) are not proportional to its overall effectiveness.

EPA, therefore, believes that the cost of the selected Alternative SC-2 is clearly proportional to its overall effectiveness when considering this alternative against all other alternatives evaluated for cost-effectiveness.

D. The Selected Remedy Utilizes Permanent Solutions and Alternative Treatment or Resource Recovery Technologies to the Maximum Extent Practicable

Once EPA identified those source control remedial alternatives that attain or, as appropriate, waive ARARs and that are protective of human health and the environment, EPA then considered which alternative(s) utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. This determination was made by deciding which one of the identified alternatives provides the best balance of trade-offs among all the alternatives in terms of: 1) long-term effectiveness and permanence; 2) reduction of toxicity, mobility or volume through treatment; 3) short-term effectiveness; 4) implementability; and 5) cost. The balancing test emphasized long-term effectiveness and permanence and the reduction of toxicity, mobility or volume through treatment; and considered the preference for treatment as a principal element, the bias against off-site land disposal of untreated waste, and community and state acceptance.

The selected source control remedial action (Alternative SC-2) was determined to provide the best balance of trade-offs among

all the alternatives evaluated for the following reasons: (1) while only Alternatives SC-4 and SC-5 were determined to best satisfy the criteria of long-term effectiveness and permanence and reduction of toxicity, mobility or volume through treatment, these two alternatives were also determined to result in significantly greater short-term impacts, additional difficulties and unknowns associated with excavating, transporting and treating large quantities of contaminated materials, and vastly greater costs than SC-2, (2) the excavation, transportation and treatment of 21,000 cubic yards under Alternative SC-3, while nominally satisfying the preference for treatment, would involve significantly more short-term impacts, additional implementability considerations, and significantly more costs, while only providing a marginal increase in the long-term effectiveness and permanence, than SC-2, and (3) state acceptance of and community input into the selected source control remedial action was largely favorable.

E. The Selected Remedy Does Not Fully Satisfy the Preference for Treatment Which Permanently and Significantly Reduces the Toxicity, Mobility or Volume of the Hazardous Substances as a Principal Element

CERCLA and the NCP set forth the process by which remedial actions are evaluated and selected. The Raymark Industries, Inc. Site contains a large volume of contaminated soil-waste materials. The excavation, transportation and treatment of such volumes (including the 21,000 cubic yards considered in SC-3) would involve unacceptable short-term impacts and would not be cost-effective. Therefore, the Alternative SC-2, which does not fully satisfy the preference for treatment, was selected in this ROD.

XII. DOCUMENTATION OF SIGNIFICANT CHANGES

EPA presented a proposed plan (preferred Source Control Remedial Alternative) to the public for remediation of the Raymark Industries, Inc. Site and solicited public comments from April 8 through June 8, 1995.

The preferred Source Control Remedial Alternative involved: (1) containment, which consisted of a multi-layered, impermeable barrier (cap) together with institutional controls (e.g., deed restrictions); (2) decontamination and demolition of all on-site buildings and structures; (3) plugging of all existing on-site subsurface drains; (4) consolidation of contaminated soil-waste materials from residential properties and the Wooster Junior High School on the Site; (5) NAPL removal, to the reasonable extent practicable, found currently in wells near the former acid neutralization pits and former toluene spill area; and (6) long-term groundwater monitoring (using existing and new monitoring wells) and storm water monitoring and five-year reviews.

Following the public comment period noted above, the following significant change is to be included in the selected source control remedial action:

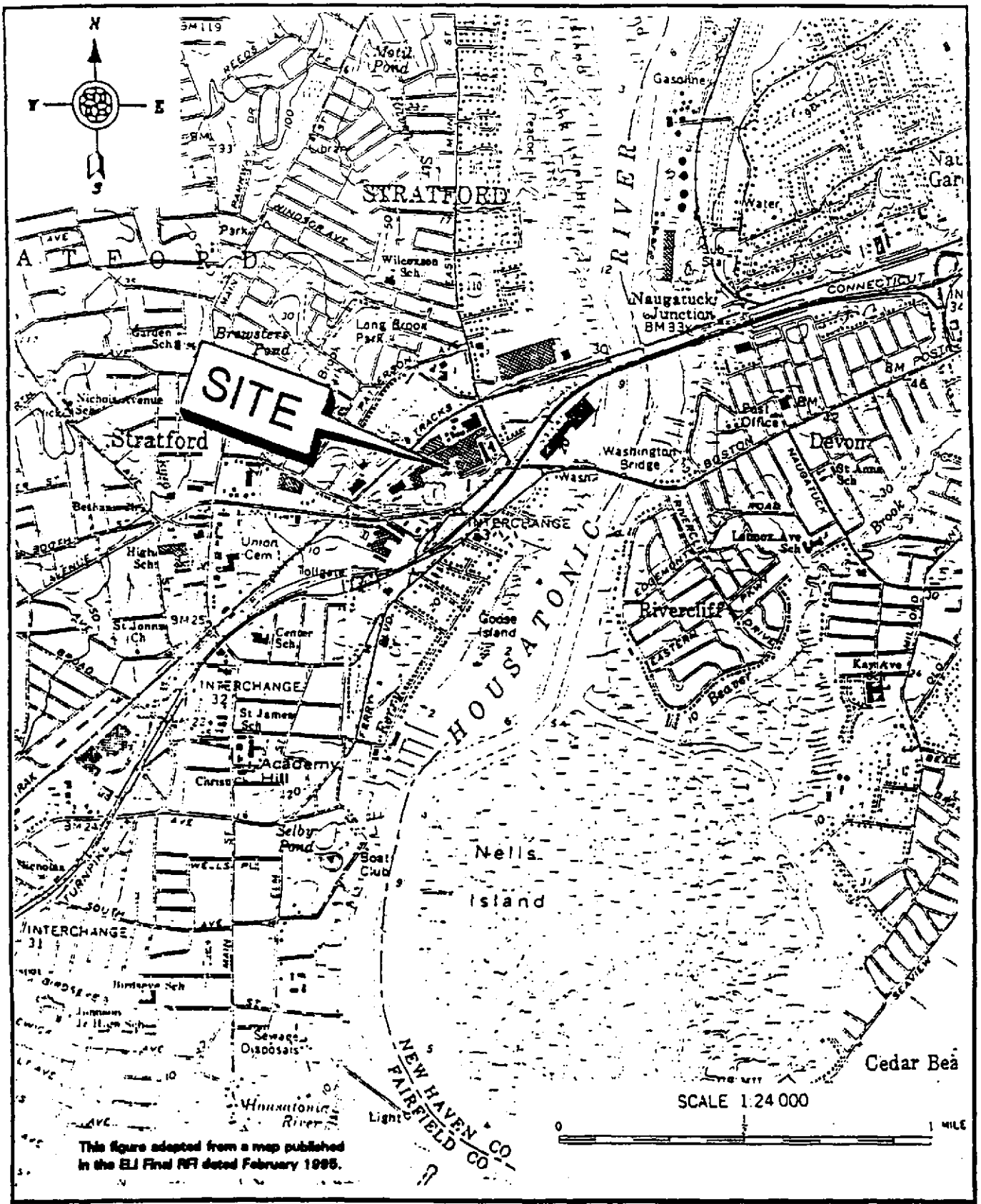
(1) projected decontamination/demolition costs have increased.

In particular, Based upon information available at the time of the Proposed Plan and contained in the Administrative Record, EPA considered the capital cost estimate provided by Raymark Industries, Inc. to be fair and reasonable relative to building decontamination/demolition. However, a more recent, independent evaluation of the capital costs associated with building decontamination/demolition indicates that the projected costs will increase from the original estimate of $10 Million to approximately $30 Million. It should be noted, also, that this projected increase in costs would effect the costs associated with all the alternatives evaluated for the Site, except the No-Action alternative.

XIII. STATE ROLE

The State of Connecticut, Department of Environmental Protection has reviewed the various source control remedial alternatives and has indicated its support for the selected remedy. The State has also reviewed the Remedial Investigation, Risk Assessment and Feasibility Study to determine if the selected remedy is in compliance with applicable or relevant and appropriate State Environmental laws and regulations. The State of Connecticut concurs with the selected source control remedy outlined in this ROD for the Raymark Industries, Inc. Site. A copy of the declaration of concurrence is attached as Appendix B.

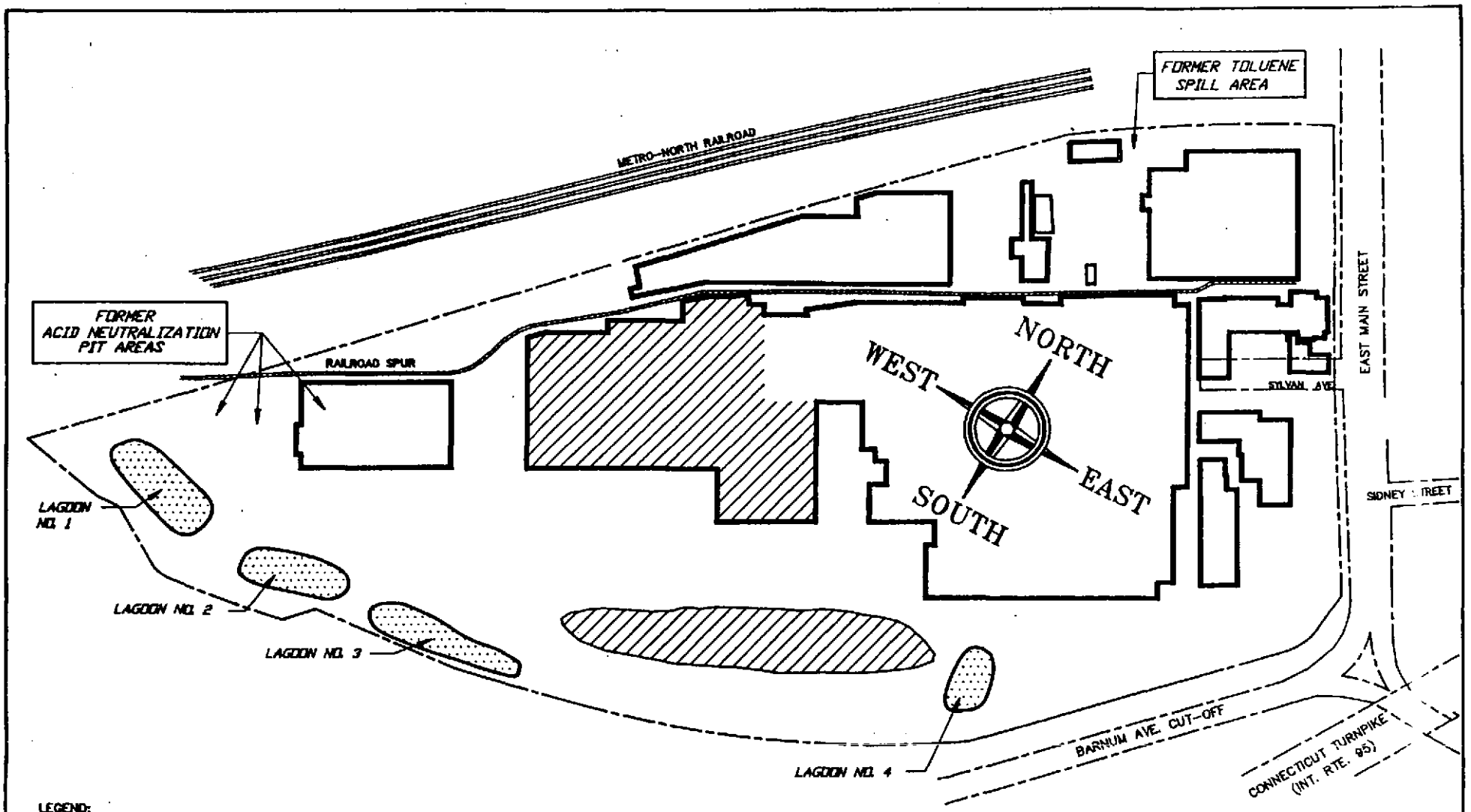
FIGURES



FACILITY LOCATION MAP
RAYMARK INDUSTRIES, INC.
REMEDIAL INVESTIGATION
STRATFORD, CONNECTICUT

Halliburton NUS CORPORATION

FIGURE 1-1



LEGEND:

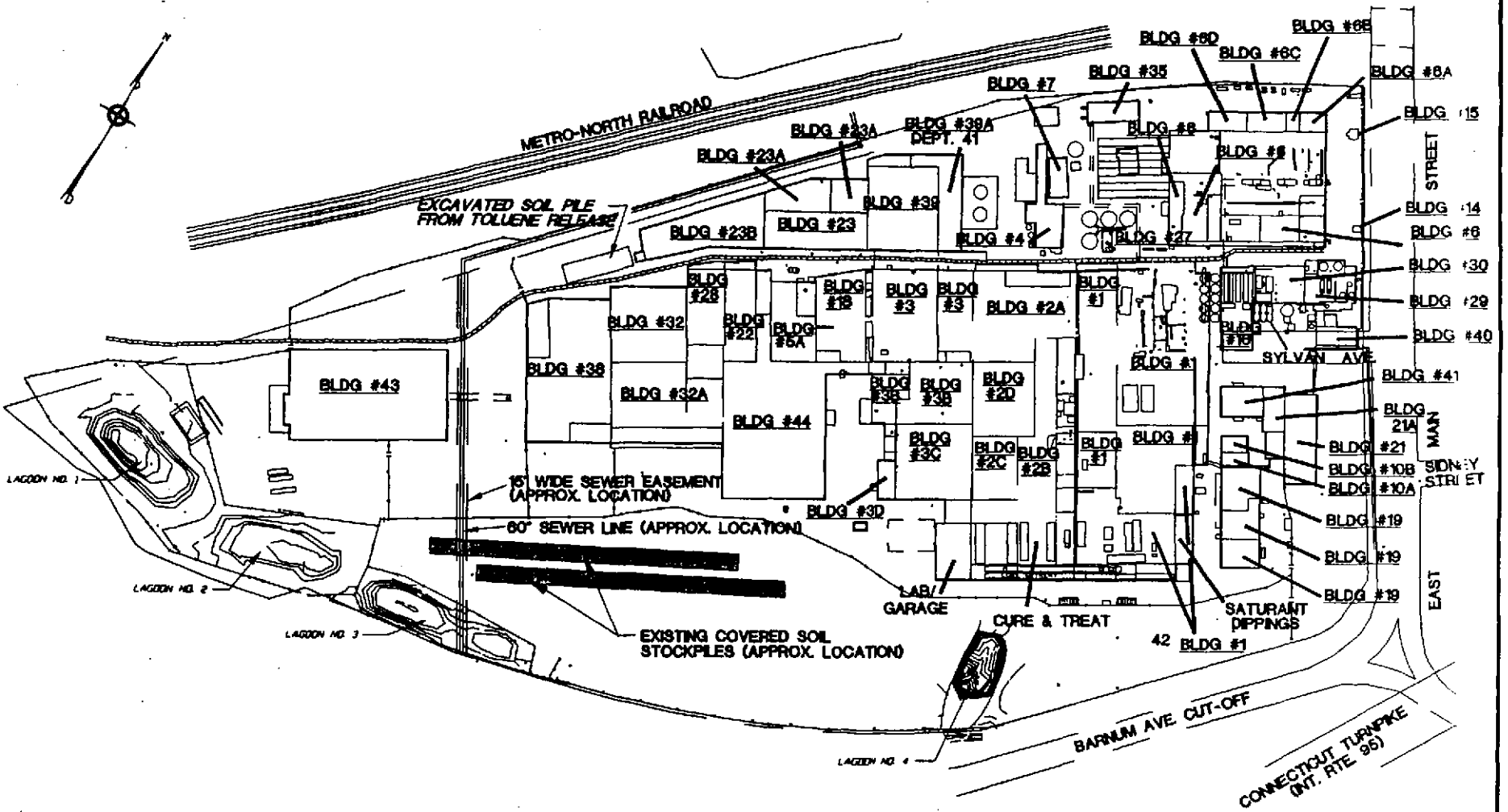
- APPROXIMATE PROPERTY LINE
- BUILDING OUTLINE
- FORMER COVERED LAGOONS
- TEMPORARILY STORED RESIDENTIAL WASTE

NOTE:
NOT TO SCALE – ALL LOCATIONS APPROXIMATE

FACILITY ORIENTATION
RAYMARK INDUSTRIES, INC.
REMEDIAL INVESTIGATION
STRATFORD, CONNECTICUT

Halliburton NUS CORPORATION

FIGURE 1-2



GENERAL NOTES:

1) BASE PLAN WAS PROVIDED BY HALLIBURTON NUS CORPORATION, 55 JONSPIN ROAD, WILMINGTON, MA (508) 656-7899, WHICH WAS BASED ON A PLAN PREPARED BY ENVIRONMENTAL LABORATORIES, INC., HARTFORD, CT., UNDER PROJECT NO. 91-545-10, PLAN NO. MSP-1, DATED: OCTOBER 1994. FEATURES DEPICTED ON THIS DRAWING ARE APPROXIMATE AND SHOULD NOT BE USED FOR DESIGN PURPOSES. THIS DRAWING IS NOT FOR DESIGN.

2) SANITARY SEWER RIGHT-OF-WAY FROM TOWN OF STRATFORD, DEPARTMENT OF ENGINEERING, R.O.W. AT RAYBESTOS & RAILROAD", DATED: 1-26-77.

3) LOCATIONS OF POTENTIAL AND KNOWN RELEASES ARE APPROXIMATE.

120 0 60 120
SCALE IN FEET

Source: Final Investigation Report, Vol. III, Prepared by Halliburton NUS Corporation

DWG: FAC001

FIGURE 1-3

SITE FACILITIES LAYOUT
RAYMARK INDUSTRIES, INC. FACILITY
STRATFORD, CT.

SCALE: AS SHOWN

TABLES

TABLE

Raymark Industries Docket No. 1-87-1057

Phase IIB Soil Summary Statistics

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
Total Asbestos, high	%	63	69	91			25	9.6	5.9	10.8	SB 41	4	6
Total Asbestos, low	%	63	69	91			20	5.7	4.8	6.7	SB 41	4	6
Actinolite	%	0	68	0									
Amosite	%	0	68	0									
Anthropholite	%	0	68	0									
Cellulose	%	0	1	0									
Cellulose, high	%	68	68	100			40	9.7	8.7	11.4	SB 1	4	6
Cellulose, high	%	68	68	100			40	9.7	8.7	11.4	SB 8	8	10
Cellulose, high	%	68	68	100			40	9.7	8.7	11.4	SB 12	6	8
Cellulose, low	%	68	68	100			35	5.9	8.0	7.5	SB 1	4	6
Cellulose, low	%	68	68	100			35	5.9	8.0	7.5	SB 12	6	8
Cellulose, low	%	68	68	100			35	5.9	8.0	7.5	SB 8	8	10
Chrysotile	%	0	6	0									
Chrysotile, high	%	63	63	100			25	10.6	5.3	11.7	SB 41	4	6
Chrysotile, low	%	63	63	100			20	6.3	4.6	7.2	SB 41	4	6
Crocidilite	%	0	68	0									
Glass	%	0	64	0									
Glass, high	%	5	5	100			10	5.4	2.9	8.1	MW L4	4	6
Glass, low	%	5	5	100			5	2.4	1.5	3.8	MW L4	4	6
Matrix (Soil), high	%	69	69	100			98	85.8	10.8	87.9	SB 49	2	4
Matrix (Soil), high	%	69	69	100			98	85.8	10.8	87.9	SB 75	5	6
Matrix (Soil), low	%	69	69	100			95	76.8	12.1	79.2	SB 75	5	6
Matrix (Soil), low	%	69	69	100			95	76.8	12.1	79.2	SB 49	2	4
Synthetic	%	0	63	0									
Tremolite	%	0	68	0									
Vermiculite, high	%	17	17	100			60	13.2	13.2	18.8	SB 7	4	6
Vermiculite, low	%	17	17	100			55	8.8	12.9	14.3	SB 7	4	6

TABLE [illegible] con't

Raymark Industries [illegible] Docket No. 1-87-1057

Phase IIB Soil Summary Statistics

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
Inorganics/pH/TPH													
Antimony	mg/kg	18	135	13	0.55	27.1	14.1	2.8	2.5	3.2	SB 30	5	7
Arsenic	mg/kg	126	143	88	2.3	51.2	*189*	*10.3*	*19.6*	*13.0*	*SB 43*	*6*	*8*
Barium	mg/kg	143	143	100			12600	1,089.7	2,271.1	1,404.2	SB 13	2	6
Beryllium	mg/kg	87	143	61	0.02	41.4	0.88	1.2	2.9	1.6	SB 44	10	12
Cadmium	mg/kg	31	143	22	0.18	41.4	8	1.4	3.0	1.9	SB 38	3	7.5
Chromium	mg/kg	142	143	99	55.5	55.5	684	50.2	90.5	62.7	SB 38	3	7.5
Cobalt	mg/kg	113	143	79	5.7	414	130	17.5	30.2	21.7	MW 1.4	2	8
Copper	mg/kg	137	143	96	32.2	139	56900	2,858.0	7,282.2	3,866.4	SB 20	6	8
Lead	mg/kg	143	143	100			52700	3,986.5	9,546.8	5,308.3	MW 1.4	2	8
Mercury	mg/kg	9	143	6	0.25	1.5	15.1	0.4	1.4	0.6	SB 4	8	8.5
Nickel	mg/kg	138	143	97	0.4	222	957	104.5	196.6	131.8	SB 44	10	12
Selenium	mg/kg	36	142	25	0.06	27.5	8.8	1.7	2.3	2.1	SB 43	6	8
Silver	mg/kg	12	86	14	0.37	3.4	25.9	0.8	2.8	1.3	MW 1.4	2	8
Thallium	mg/kg	13	143	9	0.06	27.5	8.2	1.2	2.0	1.4	SB 43	6	8
Tin	mg/kg	40	84	48	5.6	51.3	219	19.5	31.5	25.2	SB 68	4	8
Vanadium	mg/kg	122	143	85	6	414	114	26.9	26.8	30.6	SB 52-1	2	4
Zinc	mg/kg	140	143	98	0.3	45.9	8700	611.9	1,302.9	792.3	MW W4	2	8
pH	pH	143	143	100			9.5	7.5	0.8	7.6	SB 44	1.5	4
Cyanide, Total (DW)	mg/kg	27	130	21	0.07	3.5	57.3	1.3	6.2	2.2	SB 52-1	2	6
Sulfide (DW)	mg/kg	3	124	2	0.49	290	5400	77.2	482.5	149.0	SB 44	10	12
Total Organic Carbon	mg/kg	57	57	100			44	8.4	12.0	11.1	MW G4	10	14
TPH	mg/kg	22	36	61	87	220	55000	6,191.6	14,880.6	10,382.3	SB 10	4	6
Fuel Oil #2	mg/kg	11	20	55	86	110	16000	1,750.5	4,552.5	3,510.8	SB 7	8	12
Fuel Oil #4	mg/kg	0	56	0	86	4900		203.9	448.2	304.1			
Fuel Oil #6	mg/kg	0	56	0	86	4900		203.9	448.2	304.1			
Gasoline	mg/kg	0	56	0	86	4900		203.9	448.2	304.1			

TABLE con't

Raymark Industries . Docket No. I-87-1057

Phase IIB Soil Summary Statistics

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
Semivolatile Organics													
1,2,4,5-Tetrachlorobenzene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
1,2,4-Trichlorobenzene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
1,4-Naphthoquinone	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
1-Naphthylamine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
2,3,4,6-Tetrachlorophenol	ug/kg	0	135	0	1300	140000		2,137.0	6,886.7	3,118.8			
2,4,5-Trichlorophenol	ug/kg	5	135	4	3100	320000	6400	4,760.1	15,780.7	7,009.9	SB 4	8	8.5
2,4,6-Trichlorophenol	ug/kg	5	135	4	680	71000	6600	1,100.7	3,512.4	1,601.4	SB 4	8	8.5
2,4-Dichlorophenol	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
2,4-Dimethylphenol	ug/kg	36	138	26	680	15000	2500000	23,909.8	218,224.7	54,676.2	SB 10	2	6
2,4-Dinitrophenol	ug/kg	1	135	1	3100	180000	140000	4,778.5	14,387.1	6,829.6	SB 10	2	6
2,4-Dinitrotoluene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
2,6-Dichlorophenol	ug/kg	0	135	0	680	71000		1,092.0	3,490.8	1,589.7			
2,6-Dinitrotoluene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
2-Acetylaminofluorene	ug/kg	1	136	1	1300	140000	270	2,173.7	6,864.7	3,148.7	MW K4	6	12
2-Chloronaphthalene	ug/kg	1	136	1	680	71000	100	1,113.9	3,490.0	1,609.6	SB 9-1	0	2
2-Chlorophenol	ug/kg	0	135	0	680	71000		1,092.0	3,490.8	1,589.7			
2-Methylnaphthalene	ug/kg	45	138	33	680	8800	75000	2,423.1	9,351.9	3,741.5	SB 43	6	8
2-Naphthylamine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
2-Nitroaniline	ug/kg	0	136	0	3100	320000		5,033.8	15,812.1	7,279.7			
2-Nitrophenol	ug/kg	1	135	1	680	39000	160000	2,014.3	13,818.1	3,984.2	SB 10	2	6
2-Picoline	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
3,3'-Dichlorobenzidine	ug/kg	1	136	1	1300	140000	71	2,174.1	6,864.8	3,149.1	MW O4	18	26
3,3'-Dimethylbenzidine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
3-Methylcholanthrene	ug/kg	1	136	1	250	71000	750	1,107.6	3,489.6	1,603.3	SB 77	5.25	8
3-Methylcholanthrene	ug/kg	1	136	1	250	71000	750	1,107.6	3,489.6	1,603.3	MW J4	2	8
3-Methylcholanthrene	ug/kg	1	136	1	250	71000	750	1,107.6	3,489.6	1,603.3	MW V4	4	8
3-Nitroaniline	ug/kg	0	136	0	3100	320000		5,033.8	15,812.1	7,279.7			
4,6-Dinitro-2-methylphenol	ug/kg	1	135	1	3100	180000	83000	4,356.3	10,771.1	5,891.9	SB 10	2	6
4-Aminobiphenyl	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
4-Bromophenyl-phenylether	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
4-Chloro-3-methylphenol	ug/kg	6	135	4	680	71000	6700	1,097.9	3,514.3	1,598.9	SB 4	8	8.5
4-Chloroaniline	ug/kg	0	136	0	1300	140000		2,178.7	6,863.5	3,153.5			
4-Chlorophenyl-phenylether	ug/kg	3	136	2	680	71000	110	1,109.8	3,491.0	1,605.7	MW I4	44	48
4-Nitroaniline	ug/kg	0	136	0	3100	320000		5,033.8	15,812.1	7,279.7			
4-Nitrophenol	ug/kg	1	134	1	3100	180000	830000	9,948.9	71,863.1	20,232.7	SB 10	2	6
4-Nitroquinoline-1-oxide	ug/kg	0	124	0	680	71000		1,149.9	3,637.3	1,691.3			
5-Nitro-o-toluidine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
7,12-Dimethylbenz(a)anthracene	ug/kg	0	136	0	390	71000		1,114.2	3,489.9	1,609.9			
a,a-Dimethylphenethylamine	ug/kg	0	136	0	1300	140000		2,178.7	6,863.5	3,153.5			
Acenaphthene	ug/kg	27	138	20	680	71000	19000	1,293.7	3,820.9	1,832.4	SB 44	10	12
Acenaphthylene	ug/kg	15	136	11	680	71000	2500	1,078.1	3,495.8	1,574.6	SB 60	1	4
Acetophenone	ug/kg	13	137	9	680	71000	3400	1,110.0	3,476.2	1,601.9	MW K4	6	12
Aniline	ug/kg	1	136	1	680	71000	340	1,115.2	3,489.6	1,610.8	SB 8	4	10
Aniline	ug/kg	1	136	1	680	71000	340	1,115.2	3,489.6	1,610.8	MW O4	2	8
Anthracene	ug/kg	30	137	22	680	71000	13000	1,287.7	3,729.0	1,815.4	MW J4	2	8
Aramite	ug/kg	0	136	0	1300	140000		2,178.7	6,863.5	3,153.5			
Benzo(a)anthracene	ug/kg	34	138	25	380	71000	24000	1,488.5	4,197.8	2,080.4	MW J4	2	8
Benzo(a)pyrene	ug/kg	32	137	23	440	71000	18000	1,367.5	3,857.8	1,913.4	MW J4	2	8
Benzo(b)fluoranthene	ug/kg	27	136	20	450	71000	20000	1,398.4	3,973.0	1,962.7	MW J4	2	8
Benzo(g,h,i)perylene	ug/kg	24	137	18	690	71000	6700	1,156.9	3,535.1	1,657.2	MW J4	2	8
Benzo(k)fluoranthene	ug/kg	23	136	17	560	71000	11000	1,281.6	3,636.9	1,798.2	MW J4	2	8
Benzyl alcohol	ug/kg	0	135	0	1300	140000		2,131.9	6,867.3	3,110.9			
bis (2-chloro-1-methylethyl)ether	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Bis(2-chloroethoxy)methane	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Bis(2-chloroethyl)ether	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Bis(2-ethylhexyl)phthalate	ug/kg	58	138	42	690	71000	24000	1,185.6	3,795.2	1,720.7	SB 52-1	2	6
Butylbenzylphthalate	ug/kg	2	136	1	680	71000	260	1,114.2	3,489.9	1,609.9	SB 10	16	18
Carbazole	ug/kg	17	136	13	680	71000	7100	1,151.4	3,550.3	1,655.6	MW J4	2	8
Chlorobenzilate	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Chrysene	ug/kg	49	139	35	460	71000	21000	1,479.8	4,103.2	2,056.2	MW J4	2	8
Creosote (calculated)	ug/kg	3	3	100			4.7	3.6	1.5	6.1	SB 68	4	8
Di-n-butylphthalate	ug/kg	38	141	27	680	39000	300000	2,925.8	25,262.9	6,448.8	SB 10	2	6
Di-n-octylphthalate	ug/kg	1	136	1	680	71000	120	1,114.6	3,489.8	1,610.3	SB 55	2	6
Diallate	ug/kg	0	136	0	1300	140000		2,178.7	6,863.5	3,153.5			
Dibenzo(a,h)anthracene	ug/kg	21	136	15	690	71000	5000	1,111.0	3,514.7	1,610.2	MW J4	2	8
Dibenzofuran	ug/kg	27	138	20	680	71000	18000	1,220.6	3,754.2	1,749.8	SB 44	10	12
Diethylphthalate	ug/kg	2	136	1	680	71000	91	1,111.7	3,490.5	1,607.5	MW I4	44	48
Dimethylphthalate	ug/kg	2	136	1	680	71000	93	1,111.7	3,490.5	1,607.4	SB 9-1	0	2
Diphenylamine	ug/kg	15	136	11	680	71000	1800	1,110.2	3,492.4	1,606.2	SB 20	8	10
Ethyl methanesulfonate	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Fluoranthene	ug/kg	60	140	43	690	71000	48000	2,023.9	6,317.8	2,908.2	MW J4	2	8
Fluorene	ug/kg	34	138	25	680	71000	12000	1,363.1	3,782.0	1,896.3	SB 44	10	12
Hexachlorobenzene	ug/kg	1	136	1	680	71000	88	1,114.4	3,489.9	1,610.1	SB 9-1	4	6
Hexachlorobutadiene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Hexachlorocyclopentadiene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			

TABLE con't

Raymark Industries Docket No. 1-87-1057

Phase IIB Soil Summary Statistics

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
Hexachloroethane	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Hexachloropropene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Indeno(1,2,3-cd)pyrene	ug/kg	27	136	20	690	71000	11000	1,223.1	3,632.1	1,738.9	MW J4	2	8
Isodrin	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Isophorone	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Isosafrole	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Kepone	ug/kg	0	130	0	1300	140000		2,180.8	6,994.4	3,197.2			
m & p-Cresol	ug/kg	33	136	24	680	15000	9600000	76,081.4	824,486.6	193,185.2	SB 10	2	6
m-Dinitrobenzene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Methapyrilene	ug/kg	1	136	1	680	71000	170	1,115.0	3,489.7	1,610.6	MW O4	18	26
Methyl methansulfonate	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
N-Nitroso-di-n-propylamine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
N-Nitrosodi-n-butylamine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
N-Nitrosodiethylamine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
N-Nitrosodimethylamine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
N-Nitrosomethyl-ethylamine	ug/kg	1	136	1	680	71000	300	1,115.6	3,489.5	1,611.2	SB 24	2	6
N-Nitrosomorpholine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
N-Nitrosopiperidine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
N-Nitrosopyrrolidine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Naphthalene	ug/kg	43	138	31	680	8800	49000	1,634.4	5,547.7	2,416.6	SB 10	2	6
Nitrobenzene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
o,o,o,-Triethylphosphorothioate	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
o-Cresol	ug/kg	23	135	17	680	15000	76000	1,640.3	8,053.0	2,788.3	SB 10	2	6
o-Toluidine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
p-(Dimethylamino)azobenzene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
p-Phenylenediamine	ug/kg	0	134	0	4500	470000		7,436.2	23,303.3	10,771.0			
Pentachlorobenzene	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Pentachloroethane	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Pentachloronitrobenzene	ug/kg	0	136	0	1300	140000		2,178.7	6,863.5	3,153.5			
Pentachlorophenol	ug/kg	7	135	5	3100	320000	6600	4,697.0	15,784.5	6,947.4	SB 4	8	8 5
Phenacetin	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Phenanthrene	ug/kg	71	141	50	680	4200	44000	2,273.9	6,600.3	3,194.4	MW J4	2	8
Phenol	ug/kg	39	136	29	680	9000	930000	8,404.1	79,669.5	19,719.8	SB 10	2	6
Pronamide	ug/kg	0	136	0	1300	140000		2,163.2	6,863.7	3,138.1			
Pyrene	ug/kg	60	140	43	690	71000	39000	1,914.7	5,667.2	2,707.9	MW J4	2	8
Pyridine	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
Safrole	ug/kg	0	136	0	680	71000		1,116.4	3,489.4	1,612.0			
sym-Trinit[illegible]nzene	ug/kg	0	129	0	680	71000		1,121.7	3,568.4	1,642.3			

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
Volatile Organics													
1,1,1-Trichloroethane	ug/kg	34	152	22	2	98000	120000	1,489.3	10,613.6	2,914.1	MW J4	26	28
1,1,2,2-Tetrachloroethane	ug/kg	0	152	0	10	190000		1,000.7	8,100.3	2,088.2			
1,1,2-Trichloroethane	ug/kg	3	152	2	5	98000	27	518.6	4,182.4	1,080.1	SB 4	2	4
1,1,2-Trichloroethane	ug/kg	3	152	2	5	98000	27	518.6	4,182.4	1,080.1	MW M4	6	8
1,1-Dichloroethane	ug/kg	33	152	22	5	98000	1800	551.6	4,182.4	1,113.0	MW J4	2	4
1,1-Dichloroethene	ug/kg	10	152	7	5	98000	83	519.6	4,182.3	1,081.1	SB 21	1	2
1,2-Dichlorobenzene	ug/kg	1	152	1	5	98000	5	518.4	4,182.4	1,079.9	SB 49	10	12
1,2-Dichlorobenzene	ug/kg	1	152	1	5	98000	5	518.4	4,182.4	1,079.9	SB 50	6	8
1,2-Dichloroethane	ug/kg	4	152	3	5	98000	100	520.0	4,182.3	1,081.5	MW J4	2	4
1,2-Dichloroethane	ug/kg	4	152	3	5	98000	100	520.0	4,182.3	1,081.5	SB 4	8	8.5
1,2-Dichloroethene (total)	ug/kg	45	151	30	10	56000	240000	1,989.9	19,670.9	4,639.6	SB 10	2	4
1,2-Dichloropropane	ug/kg	0	152	0	5	98000		518.3	4,182.4	1,079.8			
1,3-Dichlorobenzene	ug/kg	3	152	2	5	98000	6	518.4	4,182.4	1,079.9	MW G4	66	68
1,4-Dichlorobenzene	ug/kg	3	152	2	5	98000	14	518.4	4,182.4	1,079.9	SB 52-1	2	4
1,4-Dichlorobenzene	ug/kg	3	152	2	5	98000	14	518.4	4,182.4	1,079.9	SB 4	2	4
1,4-Dichlorobenzene	ug/kg	3	152	2	5	98000	14	518.4	4,182.4	1,079.9	SB 64	4	6
1,4-Dichlorobenzene	ug/kg	3	152	2	5	98000	14	518.4	4,182.4	1,079.9	SB 77	8	10
1,4-Dichlorobenzene	ug/kg	3	152	2	5	98000	14	518.4	4,182.4	1,079.9	MW G4	66	68
1,4-Dioxane	ug/kg	21	139	15	21	400000	2700	2,345.2	17,839.3	4,851.1	MW B4	26	28
2-Butanone	ug/kg	16	152	11	6	56000	280000	2,248.4	22,825.5	5,312.7	SB 10	2	4
2-Hexanone	ug/kg	0	152	0	10	190000		1,000.7	8,100.3	2,088.2			
4-Methyl-2-pentanone	ug/kg	1	152	1	10	190000	51	1,000.7	8,100.3	2,088.2	MW H4	8	10
Acetone	ug/kg	9	152	6	10	1100000	4500	4,276.3	44,640.7	10,269.4	SB 60	28	30
Acetone	ug/kg	9	152	6	10	1100000	4500	4,276.3	44,640.7	10,269.4	SB 43	6	8
Acetonitrile	ug/kg	3	152	2	41	790000	400	4,136.1	33,621.8	8,649.8	MW J4	38	40
Benzene	ug/kg	34	152	22	5	98000	410	527.0	4,181.6	1,088.4	MW M4	6	8
Benzene	ug/kg	34	152	22	5	98000	410	527.0	4,181.6	1,088.4	MW J4	82	84
Bromodichloromethane	ug/kg	1	152	1	5	98000	6	518.4	4,182.4	1,079.9	SB 64	1	2
Bromoform	ug/kg	0	152	0	10	190000		1,000.7	8,100.3	2,088.2			
Bromomethane	ug/kg	0	152	0	10	190000		1,000.7	8,100.3	2,088.2			
Carbon disulfide	ug/kg	42	152	28	3	98000	300	523.2	4,181.9	1,084.6	SB 68	6	8
Carbon tetrachloride	ug/kg	1	152	1	5	98000	6200	463.7	4,050.8	1,007.6	MW O4	12	14
Chlorobenzene	ug/kg	33	152	22	10	56000	1500000	10,357.1	121,655.6	26,689.5	SB 10	2	4
Chloroethane	ug/kg	16	152	11	10	190000	5400	1,094.2	8,107.2	2,182.6	SB 8	8	10
Chloroform	ug/kg	5	152	3	5	98000	28	518.7	4,182.4	1,080.2	SB 64	1	2
Chloromethane	ug/kg	0	152	0	10	190000		1,000.7	8,100.3	2,088.2			
Chloroprene	ug/kg	0	152	0	21	400000		2,105.3	17,069.8	4,396.9			

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
cis-1,2-Dichloroethene	ug/kg	46	152	30	10	56000	260000	3,620.0	28,137.2	7,397.4	SB 21	1	2
cis-1,3-Dichloropropene	ug/kg	0	152	0	10	190000		1,000.7	8,100.3	2,088.2			
Dibromochloromethane	ug/kg	0	152	0	5	98000		518.3	4,182.4	1,079.8			
Dichlorodifluoromethane	ug/kg	0	152	0	10	190000		1,000.7	8,100.3	2,088.2			
Ethylbenzene	ug/kg	37	152	24	5	16000	250000	2,980.8	21,220.6	5,829.7	SB 10	2	4
Isobutyl Alcohol	ug/kg	1	152	1	100	2000000	44	10,470.3	85,129.5	21,899.0	SB 1	4	6
Methyl Methacrylate	ug/kg	0	152	0	21	400000		2,105.9	17,069.7	4,397.5			
Methylene Chloride	ug/kg	17	152	11	10	190000	630	1,005.4	8,099.9	2,092.8	MW J4	38	40
Propionitrile	ug/kg	1	152	1	21	400000	100	2,106.4	17,069.7	4,398.1	MW J4	38	40
Tetrachloroethene	ug/kg	13	152	9	5	98000	15000	581.4	4,303.4	1,159.1	MW J4	26	28
Toluene	ug/kg	62	152	41	2	3800	2100000	23,165.4	195,643.9	49,430.7	SB 10	2	4
trans-1,2-Dichloroethene	ug/kg	7	152	5	5	98000	4400	547.5	4,194.0	1,110.6	SB 21	1	2
trans-1,4-Dichloro-2-butene	ug/kg	0	152	0	5	98000		518.3	4,182.4	1,079.8			
Trichloroethene	ug/kg	49	152	32	2	29000	3500000	33,257.1	308,084.9	74,617.8	SB 10	2	4
Vinyl chloride	ug kg	9	152	6	10	190000	990	1,012.3	8,099.3	2,099.6	SB 21	1	2
Xylene (total)	ug kg	66	153	43	5	3800	1900000	19,788.9	157,413.5	40,851.8	SB 10	2	4

Parameter	Units	No. Detects	No. Samples	Detection Frequency	Det Limits of NDs Minimum	Det Limits of NDs Maximum	Maximum Detected	Arithmetic Mean	Standard Deviation	95% UCL [note a]	Location of Max	Depth (ft) Upper	Depth (ft) Lower
Pesticides/Herbicides/PCBs/Dioxin													
2,4,5-T	ug/kg	6	138	4	4.9	85	4000	34.6	340.2	82.6	SB 10	2	6
2,4-D	ug/kg	1	138	1	48	7600	1300	76.9	339.8	124.8	SB 77	11	16
SILVEX	ug/kg	3	138	2	4.9	780	270	10.1	41.8	16.0	MW W4	2	8
Aroclor 1016	ug/kg	0	115	0	18	3300000		18,692.6	155,452.3	42,733.9			
Aroclor 1221	ug/kg	0	115	0	18	3300000		18,692.6	155,452.3	42,733.9			
Aroclor 1232	ug/kg	0	115	0	18	3300000		18,692.6	155,452.3	42,733.9			
Aroclor 1242	ug/kg	0	115	0	18	3300000		18,692.6	155,452.3	42,733.9			
Aroclor 1248	ug/kg	0	115	0	18	3300000		18,692.6	155,452.3	42,733.9			
Aroclor 1254	ug/kg	0	115	0	18	3300000		18,692.6	155,452.3	42,733.9			
Aroclor 1260	ug/kg	0	115	0	18	3300000		18,692.6	155,452.3	42,733.9			
Aroclor 1262	ug/kg	90	121	74	18	110000	4000000	53,840.6	386,990.4	112,163.6	SB 10	2	4
Aroclor 1268	ug/kg	107	123	87	19	375000	6400000	140,834.0	799,750.2	260,364.4	SB 10	2	4
Dimethoate	ug/kg	0	137	0	35	5400		44.2	229.0	76.6			
Disulfoton	ug/kg	0	137	0	35	5400		44.2	229.0	76.6			
Famphur	ug/kg	0	138	0	35	5400		44.0	228.2	76.2			
Methyl parathion	ug/kg	0	138	0	35	5400		44.0	228.2	76.2			
Parathion	ug/kg	0	138	0	35	5400		44.0	228.2	76.2			
Phorate	ug/kg	0	138	0	35	5400		44.0	228.2	76.2			
Sulfotepp	ug/kg	0	138	0	35	5400		44.0	228.2	76.2			
Thionazin	ug/kg	0	138	0	35	5400		44.0	228.2	76.2			
Dioxin TEF Lower [c]	ug/kg	[d]	75	[d]			16.27	0.5	2.0	0.9	SB 75	5	6
Dioxin TEF Upper [c]	ug/kg	[d]	75	[d]			41.27	1.4	5.1	2.4	MW J4	6	8

Notes:

All statistics include nondetects at 1/2 the detection limit (when detection limit reported), and this may cause anomolous results when there are few detects (or no detects) and high detection limits skew the statistics.

[a] 95% Upper confidence limit on the arithmetic mean according to US EPA guidance.

[b] "High" and "Low" indicate the high and low end respectively when analytes were reported as ranges.

[c] Dioxin TEF Lower = Dioxin toxicity equivalents with nondetected isomers summed as zero (0).
TEF Upper = toxicity equivalents when nondetects included at 1/2 their detection limit.

[d] Because dioxin TEF are calculated values, the number of detects depends on isomer-specific results.

APPENDIX A

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

REMEDIAL INVESTIGATION
FEASIBILITY STUDY

RAYMARK INDUSTRIES INC. FACILITY
STRATFORD, CONNECTICUT

Prepared By

EPA-New England

Halliburton NUS Corporation

EPA Work Assignment No. 47-1LH3
EPA Contract No. 68-W8-0117
HNUS Project No. 4847

June 1995

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PREFACE

The U. S. Environmental Protection Agency (EPA) held a 60-day public comment period (Originally the public comment period was set at 30 days, but a request for an extension made during the early part of the comment period was granted. Consequently, EPA extended the public comment period by another 30 days) from April 8, 1995, to June 8, 1995. The public comment period provided an opportunity for interested parties to comment on EPA's Proposed Cleanup Plan for the contaminated soil-waste at the Raymark Industries, Inc. Facility in Stratford, Connecticut. The Proposed Cleanup Plan was selected after EPA developed a Remedial Investigation (RI) Report based on field data collected by Raymark's consultants, Environmental Laboratories, Inc. (ELI). The information in the RI Report formed the basis for evaluating five alternative cleanup approaches for the facility that are discussed in the Feasibility Study (FS). EPA identified its preliminary recommendation of a Proposed Cleanup Plan in a 10 page document at the start of the Raymark Facility public comment period. The RI, the Risk Assessment, the FS, and the Proposed Cleanup Plan were issued in April 1995 and became part of the public record for the facility.

On Saturday, April 8, and again on Tuesday, April 11, EPA conducted open houses to introduce Stratford citizens to the findings of the RI, the risks associated with the site waste, the cleanup alternatives evaluated in the FS, and the Proposed Cleanup Plan that included the recommended cleanup option. These open houses afforded the public an opportunity to better understand the cleanup options and the processes involved in formulating a cleanup plan. EPA project leaders described the environmental investigations at the site and EPA's rationale for the proposed cleanup plan. Approximately 84 people registered on the sign-in sheets.

On the evening of May 4, 1995, EPA conducted a public hearing attended by 35 people; thirteen people testified at the hearing. Thirty-seven written documents were received during the public comment period. Of those submitting written comments, three also testified at the public hearing.

The purpose of this Responsiveness Summary is to document EPA responses to the comments and questions raised during the public comment period, including those raised during the open houses. EPA considered the comments summarized in this document before selecting a source control cleanup plan to address soil-waste contamination on and temporarily stored at the Raymark Facility in Stratford, Connecticut.

The Responsiveness Summary is divided into the following sections:

Section I. Overview. This section discusses the site history, outlines the objectives of the RI, identifies the treatment alternatives evaluated in the FS, identifies and summarizes the general reaction to EPA's Proposed Cleanup Plan, and specifies the EPA's selected cleanup plan.

Section II. Background on Community Involvement and Concerns. This section contains a summary of the history of community interest and concerns regarding the Raymark Facility.

Section III. Summary of Major Comments Received During the Public Comment Period and EPA's Response to those Comments. This section characterizes the written and oral comments by the public and interested parties on the Proposed Cleanup Plan into themes and provides EPA's responses.

ATTACHMENT A - This attachment provides a list of the community relations activities that EPA (sometimes in conjunction with other government entities) has conducted for the RI/FS for the Raymark Facility site.

ATTACHMENT B - This attachment is the transcript of the May 4, 1995, public hearing held in Stratford, Connecticut.

ATTACHMENT C - This attachment is the summary of the questions and answers posed at the open houses on April 8 and 11, 1995.

ATTACHMENT D - This attachment includes the complete text of comments received during the public comment period.

I. OVERVIEW

Raymark Industries, Inc. and its predecessor, Raybestos Manhattan, Inc., operated a facility at 75 East Main Street in Stratford, Connecticut, from August 1919 until September 1989, when operations ceased. The facility produced brakes, clutch parts, and other friction-based products. Raymark's operations generated flammable and corrosive wastes, as well as lead-asbestos sludge containing many contaminants and scrap materials.

From August 1919 to July 1984, Raymark used a system of lagoons to dewater lead and asbestos wastes produced by its manufacturing process. As the lagoons filled with sludge, they were often dredged and the material was used as fill in areas around Stratford or the lagoons were covered with asphalt to increase the manufacturing and storage area of the facility. Throughout the summer and fall of 1992 and early 1993, the EPA covered and stabilized Raymark's waste at Raybestos Memorial Ball Field.

During the fall of 1992 and the spring and summer of 1993, Raymark, under EPA oversight, stabilized and covered three of four remaining lagoons and removed thousands of bags of asbestos,

as well as several containers, and tanks of hazardous materials. Raymark also redirected the surface water drainage on the Raymark property so that it no longer entered the fourth lagoon and Ferry Creek. The fourth lagoon was stabilized and covered during the summer of 1994. The Raymark Facility has also been secured against trespassers with the installation of fencing and an electronic gate, and the boarding up of the lower floors of buildings.

In February 1993, the federal Agency for Toxic Substances and Disease Registry (ATSDR), agreed to conduct a public health assessment/health consultation and other health follow-up activities concerning the Raymark Facility for the Town of Stratford. These activities were carried out in coordination with the Connecticut Department of Public Health and Addiction Services (CTDPHAS) and the Stratford Health Department.

In early 1993, results from on-going environmental investigations at the Raymark Facility revealed the presence of dioxins/furans beneath the surface of some areas on the Raymark property. ATSDR reviewed the data and concluded that the dioxins/furans found on the property did not pose an immediate health threat because most of the ground surface was covered by asphalt and gravel and public access was restricted.

At the time, it was not known whether any of the Raymark waste disposed around Stratford contained contaminants similar to those found on the Raymark property. The EPA and the Connecticut Department of Environmental Protection (CT DEP), in consultation with ATSDR and CTDPHAS, began an initial surface sampling effort, focussing on residential properties, schools, recreation areas, and accessible public properties. Results showed the presence of lead, asbestos, and PCBs in the soil. ATSDR issued a Public Health Advisory in May 1993, declaring that an imminent public health threat existed from exposure to these contaminants. In May 1993, a public meeting was held by the Town and attended by more than 400 people. In response to the contamination problem, the governor of Connecticut committed $5 million under State Superfund jurisdiction. In June 1993, the EPA committed $3 million for the continued evaluation and eventual cleanup of the Raymark contamination problem. To date, the EPA has spent approximately $25 million cleaning up contaminated properties in Stratford.

In the spring of 1993, the EPA set up a command post in Stratford to coordinate field work at those priority locations needing to be investigated and remediated. ATSDR, CT DEP, and CTDPHAS also provided personnel stationed in Stratford to coordinate environmental and public health activities. From June 1993 through the present, the EPA, working closely with CT DEP, ATSDR, and CTDPHAS expanded the breadth of the investigation. Sampling included residences, recreation fields, day care

facilities, schools, public areas, and local water bodies (Housatonic River, Ferry Creek, and streams, lakes, and ponds). In addition, planning continued for cleanup at residential locations identified as contaminated.

On January 18, 1994, the EPA proposed adding to the National Priorities List (NPL) the Raymark property and other locations in Stratford where Raymark's waste has come to be located and that EPA determines pose a significant threat to public health. The NPL is a listing of abandoned or uncontrolled hazardous waste sites that the EPA deems potentially most harmful to public health and the environment. Raymark was added to the NPL on April 25, 1995.

As more sampling results were received, more residential areas were added to the list of known Raymark waste locations; a number of municipal areas with contamination were also found. The EPA and CT DEP installed temporary protective measures on some residential, commercial, and municipal properties. The measures included sod, bark mulch, fences, and warning signs, to protect the public from exposure to the Raymark contamination until a permanent remedy was completed.

In September 1993, the EPA began the permanent cleanup of the first residential property. During the 1993, 1994, and 1995 construction seasons, the EPA continued to remove waste from residential properties. EPA expects that the cleanup of 43 residential properties will be completed in the fall of 1995. The excavated material from these residential properties (and waste from the Wooster Junior High School) are being disposed of on the Raymark Facility. These wastes, together with the waste already existing on the Raymark Facility were the subject of the EPA's Proposed Cleanup Plan.

A. Feasibility Study Alternatives

The objectives of the source control cleanup action are to: 1. prevent the public from exposure to contaminated soil-waste material through touching or accidentally ingesting or inhaling it; 2. minimize contaminant leaching from the facility; and 3. facilitate future re-use of the property.

Based on these objectives, EPA developed and evaluated five alternatives to address the soil-waste material. The alternatives that were evaluated in the FS are described briefly below. The EPA's preferred alternative was described in a Proposed Cleanup Plan issued in April 1995 and presented at the open houses held on April 8 and 11. After the close of the public comment period and consideration of comments from the public, state, and local agencies, and the Potentially Responsible Parties' representatives, the EPA selected the alternative that would be implemented to address on-site source

control. Summaries of the alternatives evaluated in the Feasibility Study are presented in this section; a synopsis of the Proposed Cleanup Plan is presented in Section I.B. A description of the general reaction to the Proposed Cleanup Plan is included in Section I.C. Section I.D. details the EPA's selected cleanup plan.

The general response actions to clean up the Raymark facility property that the EPA considered included: no action, which serves as a comparative baseline; containment, which covers contamination in such a way as to prevent exposure to the waste and restrict its migration; off-site treatment of soil-waste materials; and on-site treatment of the soil-waste. Based on these general response actions, EPA identified five specific alternatives evaluated in the FS:

1. No Action
2. Capping (the Proposed Cleanup Plan)
3. Capping with Limited Excavation
4. Off-site Treatment/Disposal
5. On-site Treatment with Thermal Desorption and Solidification

The following section outlines the basic components of each cleanup alternative analyzed in the Feasibility Study for the Raymark Facility.

Alternative 1. .....No Action

- Leave the facility as it is
- Test groundwater and surface water
- Visit and evaluate the facility every 5 years to review site conditions

Alternative 2.....Capping (EPA's Proposed Cleanup Plan)

- Decontaminate and demolish all buildings
- Use the residential and Wooster Middle School soil-waste and some building debris to level the ground surface
- Install a vapor control system beneath the cap to capture potential gases
- Construct a cap to prevent exposure to the contamination and minimize water seepage into the soil-waste
- Remove the highly concentrated pockets of liquid (solvent) contamination from contact with groundwater
- Implement groundwater and surface water monitoring, cap maintenance, and restrictions on site use

- Visit and evaluate the facility every 5 years to review site conditions . . . . . .

Alternative 3.....Capping with Limited Excavation

- Decontaminate and demolish all buildings
- Excavate soils with the highest levels of PCB contamination and then treat and dispose of them off site (approximately 21,000 cubic yards)
- Use the residential and Wooster Middle School soil-waste and some building debris to level the ground surface
- Install a vapor control system beneath the cap to capture potential gases
- Construct a cap to prevent exposure to the contamination and minimize water seepage into the soil-waste
- Remove highly concentrated pockets of liquid (solvent) contamination from contact with groundwater
- Implement groundwater and surface water monitoring, cap maintenance, and restrictions on site use
- Visit and evaluate the facility every 5 years to review site conditions

Alternative 4.....Off-site Treatment/Disposal

- Decontaminate and demolish all buildings
- Excavate all contaminated soils above the water table (approximately 330,000 cubic yards)
- Transport the excavated soils and residential and Wooster Middle School soil-waste off site to a disposal facility for incineration, solidification, and/or landfilling
- Remove the highly concentrated pockets of liquid (solvent) contamination from contact with groundwater
- Backfill excavation areas with new fill
- Implement groundwater and surface water monitoring and restrictions on site use
- Visit and evaluate the facility every 5 years to review site conditions

Alternative 5.....On-site Treatment with Thermal Desorption and Solidification

- Decontaminate and demolish all buildings
- Excavate all contaminated soils from above the water table (approximately 330,000 cubic yards)
- Heat the excavated contaminated soils and residential and Wooster Middle School soil-waste, on site, to remove solvents and PCBs
- Solidify metals in the contaminated materials on site
- Return treated materials to excavated areas
- Remove the highly concentrated pockets of liquid (solvent) contamination from contact with groundwater

- Implement groundwater and surface water monitoring and restrictions on site use
- Visit and evaluate the facility every 5 years to review site conditions

B. Proposed Cleanup Plan

EPA's Proposed Cleanup Plan presented Alternative 2. Alternative 2 proposed to remediate the soil-waste historically buried on the Raymark Facility and the soil-waste materials being excavated from residential properties and the Wooster Junior High School(approximately 70,000 cubic yards). The proposal was divided into four principal components.

1. Decontaminate and Demolish Facility Buildings and Structures

All buildings and other structures on the facility would be decontaminated and demolished. Contaminated building remains would likely be removed from the property and appropriately disposed, while uncontaminated material could be used to level the ground surface. Existing building foundations would be left intact.

2. Remove the Highly Concentrated Pockets of Liquid (Solvent) Contamination from Contact with Groundwater

Highly concentrated pockets of liquid contamination currently in and around wells near the former acid neutralization pits and the former toluene spill area appeared to serve as continuing sources of contamination to the groundwater. These sources of contamination would be removed to the reasonable extent possible.

3. Cover the Entire Facility with an Impermeable Cap

A multi-layered barrier (cap) would be constructed over the facility to prevent people from coming into contact with the contaminated soil either by direct exposure (touching), by incidental ingestion (accidentally eating), or by inhalation. The cap would also minimize rain from infiltrating the contaminated soil-waste material on the property and moving this contamination into the groundwater.

The cap would collect water that could seep through the top layer of the cap, but not into the waste, and discharge it into a storm water drain. A piping system would be constructed to collect solvent vapors that could potentially build up below the cap; the vapors would be treated in an on-site emission control system.

Before the cap was constructed, the contaminated soil-waste material from residential properties and the Wooster Middle School would be used to level the ground surface.

4. Ensure the Integrity of the Cap

Several restrictions would be necessary to protect the cap and assess the cleanup's effectiveness. Cap maintenance would include regular inspections to ensure the system is working as designed. Formal restrictions on site use would prohibit activities that could damage the cap. Quarterly groundwater and surface water monitoring would determine the quality of the water leaving the facility and the effectiveness of the chosen cleanup plan. Every five years, EPA would review site conditions to assess whether the cleanup action is working as planned.

As stated in the Feasibility Study, EPA will begin additional studies to further evaluate the groundwater contamination, and at the same time, the effectiveness of the chosen cleanup plan. The additional information from existing and newly installed groundwater monitoring wells would allow the EPA to identify potential groundwater cleanup options in the future, if necessary. If they are needed, these options would be presented to the public for comment at a later date.

C. General Reaction to the Proposed Cleanup Plan

As expressed by public comments, there is moderate support for selection of the Proposed Cleanup Plan. Comments show increased public support if the community (in particular, the Stratford Health Department and the Stratford Citizens Advisory Counsel (SCAC) has an active role in planning to reduce impacts from building demolition and capping, construction scheduling and public notification, and the future groundwater investigation. Among those commenting on or testifying to a position of support include the State of Connecticut, the Town of Stratford (the First Councilman, the Director of the Health Department, and the Town Manager), and the civic group, SCAC. Fifteen (15) people expressed opposition to the proposed plan. A sizeable percentage of the people who submitted written comments did not express any obvious opinion on a cleanup alternative but did highlight related and unrelated issues. A transcript of the public hearing is included in Attachment B. A summary of the questions and answers posed at the two open houses, where general support was expressed, is included in Attachment C.

D. Selected Cleanup Plan

The EPA has selected Alternative 2 as its source control approach. Implementation of Alternative 2 will address the public health and facility re-use issues: by constructing a permanent cap, the public will be protected from exposure (through the skin, accidental ingestion, or inhalation) to the contaminants on the facility and the amount of precipitation leaching through the waste will be diminished. Facility re-use

is addressed by coordinating the building demolition and capping with the requirements of redevelopers.

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

The level of community concern about the Raymark soil-waste was highest during the summer of 1993, after the Agency for Toxic Substances and Disease Registry (ATSDR), a branch of the U. S. Public Health Service, issued a health advisory. Federal and state agencies stationed staff in Stratford to increase their understanding of the scope and depth of residential, municipal, and commercial properties that contained Raymark soil-waste. Bankers and real estate agents clamored for answers that the government did not have.

After months of waiting for the results of individual soil tests, the scope of the contamination become evident. Eventually, EPA determined that approximately 43 residential properties required that the waste material be excavated. The excavation activities began in the fall of 1993 and should be completed by the fall of 1995.

As a result of these activities, the themes that were prevalent during the interviews for the Community Relations Plan (conducted in the spring of 1994) included public health; economic concerns (real estate values, local taxes, and impacts on economic growth); nuisances (vermin, truck traffic); poor government communications; and future use of the facility property.

Beginning in the spring of 1993 and throughout its activities in Stratford, EPA has issued many public documents about the cleanup and has hosted or co-sponsored numerous meetings with the public to present information and listen to their concerns. A list of the outreach efforts is presented in Attachment A.

III. SUMMARY OF MAJOR COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES

The comment characterizations and EPA responses that follow are divided into the following topic groupings: administrative; legal; technical (construction impacts; cap; long-term considerations including utility access and groundwater monitoring; costs; off-site investigations including groundwater, surface water and sediments; support for other alternatives; and other considerations); and commenters posing many individual comments.

A. ADMINISTRATIVE ISSUES

Comment: Several commenters requested that the EPA extend the public comment period. An early, verbal request asked that the original 30-day comment period be extended for 30 days, to June 8

from May 8. Another did not specify an extension length; the third requested a 90-day extension, to September 8. The basis for the requests was the need to take additional time to review the technical information available regarding the proposed cleanup plan.

Response: The public comment period for the proposed cleanup plan was extended to June 8, 1995 for a total of sixty (60) days. The Agency has conducted an extensive community outreach program to inform the public of the proposed cleanup plan that exceeds our normal practice in complying with the public participation requirements of CERCLA §113 (k) at the Raymark site. The typical two to three hour public meeting to explain the results of the Remedial Investigation/Feasibility Study/Proposed Plan was expanded to two, four-hour "open houses." The open houses included presentations with questions and answer sessions. EPA personnel were also available to speak one-on-one with individuals regarding the proposed cleanup plan. In addition, the EPA held a Public Hearing as required by CERCLA §§ 113 and 117 on May 4, 1995.

EPA's position is that 60 days is sufficient time for an interested party, attorney or environmental consultant to identify the project's significant issues and articulate them in writing for EPA's consideration.

B. LEGAL ISSUES

Comment: Raymark should pay for past and future cleanup costs and be prosecuted. Future site users, rather than EPA, should pay for the cleanup.

Response: The EPA is presently in negotiations with Raymark regarding the recovery of costs associated with the cleanup of Raymark's waste. The EPA is also negotiating with a potential developer for the site to define the future owner's responsibility. If the future owner has entered a prospective purchaser agreement with EPA before it buys the property, the new owner will not be responsible for cleanup costs unless the new owner exacerbates or contributes to the contamination.

Comment: The commenter wants a hold harmless agreement between the Town and EPA before transporting wastes from the Wooster School to the Raymark Facility. The commenter does not want the Town to become a third party and become liable. The commenter wants EPA to indemnify the Town as well as residential property owners against third party liability suits.

Response: This comment is not relevant to the Proposed Cleanup Plan. This issue will be addressed by the Town, State, and EPA independent of the remedy decision for the Raymark Facility.

In January 1995, Regional Administrator John DeVillars stated that EPA would take all necessary and appropriate action to provide residents with protection from third party liability suits, if Raymark were to bring any such actions.

Comment: Raytech Corporation denies any successor liabilities of Raymark Industries. If Raytech is ever labeled by a court as liable, the company will seek recourse against all entities that were found to have Raymark fill.

Response: The EPA will not speculate as to the action Raytech may take based on future unknown actions and events.

C. TECHNICAL ISSUES

1. Construction Impacts

Comment: Five years for the cleanup is too long.

Response: The Raymark Facility is a large parcel of land that spans over 33 acres. To properly address the demolition of all buildings, and to design and implement the clean-up of the facility takes time. The 5 years referred to by the commenter only applies to the alternatives that require extensive excavation, treatment, or off-site disposal. The EPA plans to complete building demolition and capping as set out in the proposed cleanup plan by late spring, 1996.

Comment: The commenter wants EPA to establish cleanup priorities, work standards, and schedules to complete discrete tasks, carefully compare all contractor proposals, and institute QA/QC procedures. The commenter also wants information to be disseminated to the public through mechanisms like the newsletter, the Stratford Environmental Update.

Response: The remediation of the Raymark Facility (demolition and any subsequent construction activities) will have an established set of goals and a schedule. Specifications will be developed that direct the work activities. All procurement of contractors and subcontractors will follow established government regulations and procedures. The performance of all work activities will comply with federal and state regulations that govern hazardous waste site activities and environmental issues. Health and safety plans will be developed to protect workers and nearby communities and individuals.

Comment: The commenter is concerned about potential exposure to fugitive dust during demolition. To ensure that no fugitive dust is generated during demolition and cap installation, the site and property perimeter should be monitored.

Response: EPA is aware of the potential for fugitive dust generation, as discussed in the Feasibility Study for each remedial alternative. Measures will be taken to monitor and abate fugitive emissions during the building demolition and during cap construction.

The EPA will provide information to the public regarding the proposed demolition and construction activities before and during the construction period. Information will be provided through newsletters, public meetings, and press releases. Residents and individuals may also call the local EPA hotline number (203/380-6034) and leave messages.

Comment: The Agency for Toxic Substances and Disease Registry (ATSDR), the Connecticut Department of Health and Addiction Services CTDPHAS), and Stratford Health Department should review all health and safety plans prior to the commencement of any work on the property with sufficient lead time to convene neighborhood forums.

Response: EPA will consult with the health agencies as necessary to develop plans that are protective of public health and safety. EPA will provide final health and safety plans to the health agencies. EPA will work with Stratford's Health Department and inform the community, especially those individuals nearest the site about the site cleanup.

Before any construction work commences on-site, EPA will convene neighborhood forums and continue to issue fact sheets, press releases, and newsletters like the Stratford Environmental Update, to keep all parties informed of the construction activities.

Comment: The Stratford Citizens Advisory Council wants to review design plans to ensure that all safety considerations to workers as well as the public are included. These plans should also include provision for communications with residents of the affected areas and the town in general. Neighborhoods should be notified of upcoming construction activities by leafleting so they know when demolition will take place and during which hours. Signs should be posted in and around the shopping center warning parents to keep young children away from the area. EPA should publish newspaper notices indicating specific dates and times when work will be done, and indicate when conditions will be the most critical. Notify Parent Teachers Associations of surrounding schools about the schedule.

Response: EPA will provide final health and safety plans for public review once they are completed. Appropriate signs will be posted around the Raymark Facility informing people to keep off of the property. EPA will work closely with the local Health Department to disseminate information. The EPA will provide

information to the public regarding the proposed demolition and construction activities before and during the construction period. Information will be provided through newsletters, fact sheets, public meetings, and press releases. Residents and individuals may also call the local EPA hotline number (203/380-6034) and leave messages. EPA will respond to these messages shortly thereafter.

Comment: EPA should commit to specific dates for demolition and capping.

Response: EPA will commit to specific dates for the demolition and capping when the work plans are finalized. EPA will notify the Town and the public regarding the proposed construction activities and dates in the same manner as EPA has been doing for the last two years.

Comment: EPA should implement measures to contain all debris, including airborne debris.

Response: Appropriate measures will be taken to monitor air quality and to prevent fugitive air emissions during all demolition and construction activities. During building demolition and subsequent construction, measures such as wetting of materials and other appropriate engineering controls will be employed to minimize dust problems that could affect the surrounding community.

Comment: EPA should hire security guards to ensure that the public is kept out of the facility.

Response: The Facility will be secured to minimize unauthorized personnel from entering the facility. Security guards, fencing, and other measures will be used to secure the site and prevent trespassing.

Comment: EPA should have a lot of the work done during the night to minimize public exposure.

Response: EPA recognizes that night time activities could be disruptive to nearby residents. If night work is required, nearby residents will be notified prior to the initiation of activities. EPA will endeavor to minimize the impacts of the construction on the surrounding community. EPA acknowledges that there will be inconveniences as a result of the construction activities.

2. Cap

Comment: The responsibility for long-term management of the site after remediation needs to be determined.

Response: The responsibilities for future upkeep of the cap will be shared by the State and future site owners and will be defined in the State Superfund Contract and any prospective purchaser agreement.

Comment: If the soil is good enough to cap Raymark, why isn't it good enough to leave at Wooster?

Response: The EPA will not use soil from the Wooster Junior High School to cap the Raymark Facility. Rather, contaminated soil and materials that originated from the Raymark Facility will be consolidated back on the facility. A multi-layer cover system will then be constructed over all the consolidated contaminated materials to prevent possible human exposures. The cap would also minimize infiltration that could leach contaminants into groundwater.

Furthermore, one of the principle reasons for excavation of the waste at Wooster School is to reduce the risks to children in a recreational setting. The setting at Raymark is an industrial/commercial area where recreation is limited. Questions regarding the excavation of the Wooster School should be directed to the Connecticut Department of Environmental Protection at (203) 424-3705 .

Comment: By capping the 33 acres, more storm water runoff will be entering Ferry Creek.

Response: Capping the 33 acres will not increase the existing surface water runoff at the Facility. Much of the existing property is already paved and the precipitation runoff currently discharges to Ferry Creek. During construction, the existing subsurface drains will be plugged to prevent any residual contamination from discharging into Ferry Creek. Once the cap is installed, only runoff from precipitation will be discharged. This water will be directed to the storm water sewer through a new clean network of drainage pipes unaffected by contamination. In accordance with state requirements, monitoring of the storm water quality will be conducted by collecting runoff samples and performing chemical analyses.

Comment: The clean fill brought to the site should be tested to make sure it is clean. Who would do this testing and what contaminants would you test for?

Response: The Facility already has a substantial amount of material that will be used as fill to grade the site. The fill brought to the Facility for cap construction will have to meet the technical specifications as set out in the design for the cap system and be tested to ensure that it is clean. All soil-waste and fill materials will be covered by the cap system.

EPA's contractor will test the fill to be used in the cap for a variety of contaminants to ensure that it is clean.

3. Long-term Considerations Including Utility Access and Monitoring

Comment: EPA should be sure that utilities are installed before the cap is constructed to ease site re-development.

Response: The developer and their engineers are working on a plan to install all necessary utilities in an enclosure that would not be affected by either the proposed cap system or the existing contaminated soil. The plan is to ensure that no contact with contaminated soil occurs during installation of utilities or in the future when utility modifications or repairs may be required.

Comment: Groundwater monitoring should be conducted more frequently than every 5 years.

Response: After the remedy is constructed, initial monitoring will be conducted on a quarterly basis each year (not every 5 years) to evaluate contaminant status in groundwater and to determine whether contaminants are migrating off-site. Since storm water runoff also discharges off-site to the storm sewer system and ultimately to Ferry Creek, monitoring of this flow is required by the State.

Comment: The EPA must address future utility services for the main sewer line that cuts through the facility. There may be exposure to contaminants when the pipe eventually requires replacement in the future. The creation of a worker safety zone is one suggestion that has and should be pursued.

Response: The EPA is currently discussing the sewer line issue with the Town of Stratford's Engineer and the developer. Provisions will be made so that the sewer line can be serviced in the future.

Comment: Who will be doing the groundwater testing on and off the site? Who will be responsible for the cost? Can this testing be done prior to the cap being put on or will it take place after?

Response: EPA will be conducting the groundwater testing on and off-site of the Raymark Facility to characterize the nature, rate and extent of contamination. EPA will pay for the cost of the groundwater investigation. The State will be responsible for long-term monitoring of groundwater and will also be responsible for periodic monitoring of the Facility property. This will be defined by the Superfund State Contract that EPA enters into with the State.

The majority of the on-site and off-site groundwater monitoring will be conducted after the installation of the cap system.

Comment: Who will be policing the new owners? Who will make sure that they maintain the integrity of the cap? What penalties would be implemented if they fail to maintain the cap? If the deed is broken, who will be the responsible party? Who would assume ownership of the property if the deed was broken? What are the deed restrictions?

Response: The developer would share responsibility with the state for monitoring and maintenance of the cap system. The Prospective Purchaser Agreement will define the developer's responsibilities for these activities. Any actions by the developers or owners or lessees which violate the Prospective Purchaser Agreement will be justification for EPA to invoke its enforcement authority against these entities. Therefore, if the deed is violated the owners and/or the lessees would be the responsible parties. The owners of the property would still be the owners of the property if they violated the deed restrictions.

Institutional controls and/or deed restrictions will prevent certain actions and activities from harming the cap system. These issues will be resolved during the design phase of this project.

4. Costs

Comment: Raymark should pay for the cleanup.

Response: EPA is negotiating with Raymark Industries, Inc. to settle the cost Raymark will pay for EPA's clean up of the Raymark Facility and other areas where Raymark's waste is posing threats to public health and the environment.

Comment: The commenter does not understand how monitoring and site visits can cost 15 percent of the total cost of Alternative 2.

Response: Because of the numerous contaminants identified in both soil and groundwater underlying the Raymark Facility, it is necessary to monitor changes in the contaminant status. Therefore, a variety of analyses, which are costly, need to be performed to properly assess contaminant status. The facility covers more than 33 acres, which means a large number of samples are needed to monitor groundwater conditions. Initially, monitoring will be conducted on a quarterly basis each year (not every 5 years) to evaluate contaminant status in groundwater and to determine whether contaminants are migrating off-site. Since storm water runoff also discharges off-site to the storm sewer system and ultimately to Ferry Creek, monitoring of this flow is

required by the State. If it is determined that the contaminant status varies only slightly between each quarterly monitoring event, the monitoring frequency could be decreased which would reduce the overall costs of monitoring. For the purpose of the feasibility study (FS), quarterly monitoring was assumed to determine what the costs would be to implement Alternative 2 over 30 years.

Comment: The commenter believes that the cost of the Proposed Cleanup Plan is exorbitant, particularly based on governmental inefficiencies.

Response: The estimated costs presented in the FS are derived from available information sources including: costs for similar types of hazardous waste cleanups, vendor and treatment facility quotations, and standard cost guides for construction activities. These estimated costs also include engineering, health and safety, and contingency factors. Because of the additional health and safety needed during hazardous waste site cleanups, costs are higher than other types of construction.

The costs in the FS were developed to allow the comparison of different remedial alternatives. The actual cost of the remediation will be dependent on the labor, materials, equipment, fuel, utility costs, interest rates, and other factors when construction is implemented.

Comment: Who will pay for the Proposed Cleanup Plan? The developer should pick up the tab for some of the cleanup costs.

Response: The cost for the planned clean-up of the Raymark Facility will be paid for initially by the EPA's Superfund with contributions from the state. The EPA will pursue cost recovery from potentially responsible parties (PRPs) including Raymark. The developer will not be responsible for the cleanup costs of the site.

5. Off-Site Investigations

Comment: The commenter is concerned about contamination in Ferry Creek and how it may affect the long-range development of Stratford's waterfront. The commenter thinks that the property below the high water mark belongs to the State of Connecticut.

Response: EPA is currently investigating the surface water and sediments in Ferry Creek and other areas in Stratford. The sampling is being performed to ascertain whether contaminants are present in the water and sediments of Ferry Creek. At the conclusion of the investigation, EPA will present to the public the results of the studies and propose a cleanup plan to address the contamination problem. EPA's goal is to have a proposed cleanup plan by late summer, 1996, for the Ferry Creek area.

Comment: The commenter believes that it is imperative that some assurances be given to the Town that the groundwater migrating off-site of the Raymark property be thoroughly addressed. The commenter is unaware of how far the plume of contamination has advanced, a situation that poses public safety issues. Several years ago a foundation caught fire during an excavation project. Toluene found in the groundwater seeping into the construction area was thought to be the cause of the fire. The commenter is concerned about the safety of workers and neighboring residents.

Response: A groundwater study will be conducted to better define the extent of contamination, whether contaminants are migrating, and whether humans and the environment are at risk. EPA's goal is to present the results of this investigation and propose a cleanup plan to the public in December 1997. The implementation of any alternative to address the Raymark Facility will not interfere with any subsequent groundwater response actions. In addition, results of an area wide study found that no one is drinking groundwater downgradient of the Raymark Facility and the aquifer is classified as not suitable for drinking without treatment. Therefore, since no one currently drinks the groundwater in the vicinity of the Raymark Facility, the risks to public health are significantly reduced from any potential groundwater contamination migrating off-site.

Comment: The Housatonic River and the Sound should be tested before and after the remediation is done.

Response: The EPA has sampled the Housatonic River as well as Ferry Creek. The EPA is presently investigating the contamination in Ferry Creek and other ecological areas in Stratford. Depending on the results of this study, EPA may sample Long Island Sound. After the remedy is completed at the Raymark Facility, monitoring of the groundwater and surface water will be conducted.

Comment: Wells should be established along Ferry Blvd. and between Raymark and the Housatonic River north of Ferry Creek.

Response: Off-site monitoring wells will be installed as part of the planned groundwater investigation, and contaminant migration from the Raymark Facility will be assessed for impacts to downgradient areas. If a well situated on Ferry Boulevard supports the groundwater investigation, then that location will be considered for the study.

Comment: The commenter favors the removal of chemicals before they pollute the Housatonic River, Ferry Creek, and Long Island Sound, and ruin waterfront development and scare away potential developers who might have to underwrite an expensive cleanup of migrating Raymark contamination.

Response: EPA is investigating the surface water and sediments in the Stratford Area. Sampling is being conducted in Ferry Creek. EPA's goal is to present the results of this investigation and propose a cleanup plan of the Ferry Creek area to the public in late summer, 1996. In addition, the groundwater migrating from the Raymark Facility property will be studied and a proposed cleanup plan is anticipated to be presented to the public in December, 1997.

EPA has a policy which states that where hazardous substances have come to be located on or in a property solely as a result of subsurface migration in an aquifer from a source of contamination outside the property, EPA will not require the property owner to cleanup the property. Therefore, developers do not have to pay for the cleanup of contaminated groundwater migrating onto their property.

6. Support for Other Alternatives

Comment: Raymark should purchase land in the Nevada desert and pay property taxes on it. Raymark waste should be packaged and sent there, an area without a large population, water mass, or food chain.

Response: It is virtually impossible to send contaminated materials to any other parts of the country without affecting other human populations or the environment. Furthermore, EPA has no legal authority to require Raymark to purchase land in the Nevada desert.

Addressing the contamination where it is currently located protects human health and the environment. The threats posed by the contaminated materials are through exposures such as inhalation, accidental ingestion, or skin contact. These exposures can be eliminated by isolating the contamination from potential human contact, such as through capping, or through the removal of contaminants. The net public health protection of capping all soils in place is comparable to excavating all materials and sending them off-site.

EPA prefers Alternative No. 2, capping, since it offers the best combination of protecting human health in the short and long-term, can be completed within a relatively short time period, is economically feasible and implementable, and would result in less disturbance to nearby individuals during implementation.

Comment: The commenter supports Alternative 3. Even though Alternative 3 may take an extra 6 months or a year to complete, it would make the site safer in the long term.

Response: Alternative No. 3 would provide only a marginal increase in protectiveness because over sixty (60) different

contaminants would remain in place. Combined with the increased short-term risks inherent in excavating hazardous wastes, the net reduction in overall risks to human health is negligible. Furthermore, capping of the contaminated site soils or capping of the site with several areas excavated would afford the same level of protection since there would essentially be no contact with any contaminated materials.

Comment: The commenter supports Alternative 5. No other area should be burdened with Raymark's problem.

Response: As indicated in the previous responses, Alternative No. 2 offers the best combination of protecting human health in the long and short-term. It can be completed within a relatively short time period, is economically feasible and implementable, and would result in less disturbance to nearby residents and property owners during implementation. Alternative No. 5 has many technical, timing, and community impacts associated with it that make this alternative extremely difficult to implement as well as potentially increasing risks from exposure to contaminants. As soon as the site is capped, threats to the public health will be mitigated.

Comment: The commenter supports Alternative 4 since it would be more cost-effective in the future and would stop groundwater contamination. The lagoons should be dredged and the topography should be restored, and area ponds should be cleaned.

Response: Alternative 4 calls for the off-site disposal of all contaminated materials above the water table. This Alternative is probably the most difficult option to implement because of the volume of wastes to be excavated, the time required to clean-up and restore the site topography, the potential threats that may be incurred during excavation and transport, and the cost of the remediation. In addition, it may be difficult to locate sufficient off-site treatment and disposal facilities to accommodate the volume of contaminated material. This alternative would also take the longest time to complete, which entails more impacts to the local community. In addition, Alternative 4 does not entail digging up contaminated materials below the water table -- approximately 150,00 cubic yards of waste. Therefore, Alternative 4 would not entirely eliminate groundwater contamination.

Although there are many groundwater monitoring wells on Raymark's property indicating that the groundwater is contaminated, there are no groundwater monitoring wells off-site to characterize the groundwater. Furthermore, there are nearby facilities other than Raymark that are also contributing to groundwater contamination. A separate groundwater study will be conducted to define the extent of groundwater contamination and risks posed to human

health and the environment. At the conclusion of the study, EPA will propose to the public a cleanup plan.
The last series of visible lagoons have all been temporarily closed. Raymark's entire property, including the lagoons, will be permanently capped and graded as part of the cleanup plan.

EPA is sampling selected ponds as part of its surface water and sediment sampling program in the Stratford area under a separate investigation. The sampling is being performed to ascertain whether contaminants are present at these locations. If contamination is identified, it will be assessed to determine any potential human health and ecological risks and whether remediation is required. The public will be involved in this process.

Comment: The commenter supports Alternative No. 5. Contamination should be removed because: capping is not a long-term solution; capping may not be effective; and paving for a shopping center is not assured. The commenter supports Alternative No. 4 as a second choice.

Response: As indicated in the previous responses, EPA prefers Alternative No. 2, capping, since it offers the best combination of protecting human health in the short and long-term, can be completed within a relatively short time period, is economically feasible and implementable, and would result in less disturbance of highly contaminated material and possible threats to nearby individuals during implementation of the remedy. With proper maintenance and restrictions on use of the property, the cap is a permanent remedy. The responsibilities for future upkeep of the cap will be shared by the State and future site owners and will be defined in the State Superfund Contract and any prospective purchaser agreement.

The health risks posed by the contaminated soil and material occur only if there is an exposure (such as through inhalation, accidental ingestion, or through direct contact) to waste at concentrations that could pose a threat. The cap effectively prevents exposure to these contaminants. If the site is to be reused by a developer, the cap will be under the building foundations and pavement. This will decrease weathering and exposure of the cap, thus further protecting and ultimately prolonging the cap's life.

Under Alternative No. 2, the overall status of the site and the effectiveness of the cap will be re-visited every five years. In addition, the groundwater at the site will be monitored four times per year. Actions would be taken to remedy problems, if any are identified. These 5-year reviews would be conducted in addition to the periodic monitoring and maintenance that will be required.

Comment: The commenter wants all contamination taken away, above and below the waterline. If it is not, the commenter believes that monitoring may fail since there is no guarantee of government funding forever. Groundwater will continue to be contaminated. The cap has no guarantee of lasting forever. EPA should spend $2 to $3 billion and up to ten more years to clean up the site if that's what it takes to thoroughly clean the property.

Another commenter favors removal of PCBs and toxins from the site and clean up of the site today, while there are still funds available in the Superfund.

Response: EPA prefers Alternative No. 2, capping, since it offers the best combination of protecting human health in the short and long-term, can be completed within a relatively short time period, is economically feasible and implementable, and would result in less disturbance of highly contaminated material and possible threats to nearby individuals during implementation of the remedy. The excavation and off-site disposal may create more problems than may be solved. Capping is a permanent solution provided that there is periodic maintenance and it affords a level of long-term protection appropriate to the future re-use of the property.

The responsibility for performing the long-term monitoring and maintenance of the cap lie with the State and the developer as set out in previous responses. Also, any developer of the property would have to sign a prospective purchaser agreement that addresses their responsibilities. These measures will ensure the integrity of the cap.

One component of the preferred alternative is that the overall status of the site and the effectiveness of the cap will be re-visited every five years. Actions would be taken to remedy problems, if any are identified. As indicated in previous Responses, these 5-year reviews will be conducted in addition to the periodic monitoring and maintenance requirements.

The EPA must select remedies that are cost-effective pursuant to the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The expenditure of funds in excess of what is necessary to protect human health and the environment which affords little or no added protection is an unwarranted disbursement of government monies.

Comment: The commenter stated that Alternatives No. 3 through 5 would entail the moving of contamination which may pose a health risk, and that off-site treatment is too expensive. The commenter also felt that the developer's proposal protects the cap.

Response: The comments raised by the commenter are some of the important tenets that supported EPA's selection of Alternative No. 2 as the preferred cleanup option.

7. Other Considerations

Comment: The commenter asks whether EPA's Proposed Cleanup Plan includes remediation of Raybestos Memorial Field? If so, what will happen to the memorial to honor the veterans of WWII, a boulder at the entrance of the field.

Response: EPA's Proposed Cleanup Plan only addresses the Raymark Facility, and will not affect the Raybestos Memorial Field or the memorial. The EPA installed a soil cover over Raybestos Memorial Field in 1992 and 1993 to abate imminent threats. Any future actions on the site will endeavor to accommodate the memorial.

Comment: What contingency exists to deal with residential or municipal sites that are discovered after the cap is constructed?

Response: If new sites are identified and/or discovered that pose unacceptable risks to human health and the environment after the cap is constructed, the EPA and/or CT DEP will address these sites through other mechanisms.

Comment: The commenter feels that the community may want to use the site for open space.

Response: One of the remediation objectives is that after remediation is completed, the site will be permanently safe for its intended use. Since this part of Stratford is zoned for commercial and industrial use, this would be the most realistic goal for future land use. Questions regarding the future use of this site should be directed to the town manager, town council, and the zoning board.

Comment: The commenter requests a response to his letter of April 13, 1995, concerning Ferry Creek.

Response: All comments submitted during the public comment period will be addressed in this Responsiveness Summary. Individual letters of response will not be written to each commenter.

Comment: The 24 volumes that take up a whole wall of the Stratford library contain no answers to the public's questions. There is no information in those 24 volumes from the Stratford Health Department survey or the health effects study funded by the Agency for Toxic Substances and Disease Registry (ATSDR). The library contains no information on the lead screening program or the Stratford Public Works screening program.

Response: The administrative record which contains 24 volumes of information is only meant to address the investigation and planned remediation of the Raymark Facility and was not meant to address studies performed for other purposes. Questions regarding the health studies (i.e. evaluation of cancer incidence, and lead screening program) should to be directed to the Connecticut Department of Public Health and Addictive Services (CTDPHAS) and the Stratford Health Department.

The Stratford Health Department has placed all of the fact sheets and newsletters on environmental health activities in the reference section of the Stratford Library. The CTDPHAS is currently drafting a public health assessment of the Raymark Industries, Inc. Site. This Public Health Assessment will include summaries of all of the health activities that have occurred in Stratford. The CTDPHAS plans to release the draft Health Assessment for public comment in late summer, 1995.

Comment: The Community Relations Plan (CRP) mis-characterized the Town. How much did the CRP cost?

Response: Information regarding the Town came from the 1990 Census and from interviews. A CRP attempts to characterize the concerns of a community affected by the presence of a hazardous waste site. As activities progress that address the contamination, as well as the community's concerns about those actions, the document is reviewed to determine whether conditions have changed sufficiently to warrant updating the plan. Suggestions for changes or additions to plan are welcome.

The EPA has spent approximately $50,000 on community outreach which includes a variety of tasks such as the issuance of numerous newsletters to the Stratford community, fact sheets, public meetings, and the preparation of the CRP. The approximate cost of the CRP was $3,000.

Comment: The commenter expressed a desire that the spirit of cooperation among the interested parties experienced to date be carried through to the remediation.

Response: EPA concurs completely in maintaining the spirit of cooperation that has existed throughout this project.

Comment: The commenter wanted to know whether the lead content of soil-waste discussed in the Proposed Cleanup Plan was a total count or TCLBs [TCLP]?

Response: The lead concentrations in the soils and waste materials were analyzed for total lead presence. A separate TCLP analysis was performed on other samples to determine whether the contaminated materials are a hazardous waste.

Comment: How did EPA determine where Raymark had deposited its waste? How would anyone know if their property had Raymark's waste deposited on it?

Response: Locations of where Raymark's wastes were used as fill materials in the Town of Stratford were determined through a variety of sources including: Raymark, historical town records, visual observations, chemical analyses, geophysical tools, aerial photographs, and by interviews with a variety of people including past employees of Raymark -- residents -- local officials -- and the town historian.

Comment: The commenter is concerned about the re-opening of the Wooster School playing fields.

Response: Issues relating to the Wooster School should be addressed to the Connecticut Department of Environmental Protection and the local Health Department. CT DEP is responsible for the excavation of Raymark's waste and restoration of the school's playing fields. The local Health Department will work with the CT DEP and other agencies to ensure that the fields at the Wooster School are safe when re-opened.

Comment: One commenter submitted three sets of documents regarding construction management strategies for the upcoming demolition at the Raymark Facility and how he could be of assistance.

Response: EPA appreciates the recommendations this commenter made and will consider them as the project proceeds.

D. COMMENTERS POSING MANY INDIVIDUAL COMMENTS

1. The State of Connecticut

The State is in favor of the cleanup approach as set out in Alternative No. 2 and offers the following comments:

Comment: The State does not consider the proposed approach to address the non-aqueous phase liquids (NAPLs) to be an appropriate level of effort. NAPL recovery in the vicinity of the toluene spill and the former acid pit areas (MW-J and MW-V well clusters) should be conducted using wells specifically designed for extraction of these contaminants. The areal extent of the NAPLs should be delineated, and wells and other engineering features to address the NAPL should be incorporated into cap system design. Engineering devices to address the NAPLs should be consistent with re-use of the Site.

Response: NAPL recovery will be attempted in at least two areas of the Raymark Facility: in the former acid pit areas (MW-J cluster) and in the toluene spill area (MW-V area).

To further evaluate the extent and to quickly initiate removal, NAPLs will be measured and removed from the two (2) existing on-site monitoring well clusters. These remedial design activities will be used to evaluate how quickly or not the NAPL recovers in the existing wells. If NAPL recovery is minimal, then further evaluation of the feasibility of NAPL removal will be required. If the NAPL removal yields substantial quantities and NAPL recovery from the existing wells is rapid, this approach will be continued until which time the existing monitoring wells will need to be decommissioned because of the building demolition/capping activities. New wells, more specifically designed for NAPL removal, will be installed, if and to the extent practicable, prior to cap installation and incorporated into the cap design in order to continue with the mass removal of NAPL. Engineering devices designed for NAPL recovery will be integrated into the cleanup design so as to not impede future site re-development.

Comment: Several regulations should also have been identified as ARARs in the FS report.

1. Connecticut Coastal Management regulations (22a-90 through 22a-112, CGS inclusive). EPA needs to make a formal consistency review.

2. Asbestos Abatement regulations (19a-332a-1 through 19a-332a-16 RCSA).

3. Asbestos Licensing and Training regulations (19a-332a-17 through 19a-332a-23 RCSA).

Response: 1. The EPA concurs that these regulations are ARARs.

2. These regulations will be complied with in the demolition of the buildings, and during the disposal and handling of asbestos-containing materials.

3. These regulations are mandatory for any contractors and subcontractors that will be engaged in remediation efforts involving asbestos abatement. ARARs are meant to identify regulations that are directly invoked as the result of specific actions to be taken at a site.

2. The Town of Stratford

The Town of Stratford supports the Proposed Cleanup Plan. Several specific concerns were noted:

Comment: The public is concerned about contaminant migration from the Raymark Facility via groundwater. EPA should install off-site monitoring wells and collect off-site groundwater samples to determine if the groundwater poses any problems.

Response: The EPA will be conducting a groundwater investigation to determine the nature, rate, and extent of contamination that includes the installation of off-site groundwater monitoring wells and sampling. The study will evaluate risks posed by the contamination. EPA plans to propose a cleanup plan for the groundwater to public in late 1997.

Comment: The Town supports NAPL removal since this is the first step to addressing a larger groundwater contamination issue.

Response: The NAPL removal will commence as quickly as possible. All practical efforts will be made to remove NAPL.

Comment: Slip-lining, abandonment, and re-routing are not feasible options to address the sanitary sewer that traverses the Raymark Facility. Since the sewer line will have to be replaced some day, the cap's integrity and the health of utility workers is in question. A worker safety zone should be created around the line to provide workers with unencumbered access.

Response: EPA is discussing this issue with the Town. Slip-lining is a viable method for extending the useful life of the pipe. The liner can be made of PVC, which has good corrosion resistance properties and would be resistant to the corrosive liquids typically found in sewer lines. Abandonment and re-routing may be possible, but additional evaluations are necessary. The creation of a worker safety zone may also be feasible.

Comment: The Town urges EPA to provide state and local officials time to review demolition, cap engineering and health and safety plans. The Town also urges the EPA to meet with these officials periodically to discuss the status of the site. The Town is pleased by the level of cooperation to date.

Response: EPA will consult with the health agencies as necessary to develop plans that are protective of public health and safety. EPA will provide final health and safety plans to the health agencies. EPA will work with Stratford's Health Department and inform the community, especially those individuals nearest the site about the site cleanup.

Comment: The Town supports establishment of on-site and perimeter air sampling units. The Town also wants on-site security to prevent unauthorized personnel from entering Raymark's property.

Response: Air monitoring will be conducted on-site and at the perimeter to ensure that fugitive emissions are properly controlled and that the public and workers are protected. Site security will be maintained twenty-four hours per day to prevent trespassing and unauthorized entry into work areas.

Comment: The Town is in support of the continued communications with the public through the Environmental Update, and participation in neighborhood forums and periodic official briefings that include citizens groups such as SCAC.

Response: The EPA will continue to keep the public, the Town, and the State informed on all aspects of the site remediation. The EPA endeavors to accurately communicate information on all aspects of the cleanup activities on-going in Stratford.

3. Raymark Industries, Inc.

Raymark Industries, Inc. does not support the Proposed Cleanup Plan and offers the following comments:

Comment: The scientific data for the Facility and the Town of Stratford does not support the Proposed Cleanup Plan.

Response: EPA has compiled sufficient data with which to select a remedy, pursuant to the requirements of the NCP and CERCLA. Using field and analytical data contained in a site wide environmental investigation report (known as a RCRA Facility Investigation or RFI) developed by Raymark and its contractor, Environmental Laboratories, Inc., EPA prepared a detailed Remedial Investigation (RI) report. The RFI was overseen by EPA where samples were split and the data were validated and checked for accuracy. The RI assessed the types and extent of contamination present at the facility, how contaminants may migrate into groundwater and off-site, and developed a risk assessment that quantified the potential risks associated with exposures to contaminated materials.

Comment: "... [T]he Agency formulated... several proactive alternatives ranging in cost from $110 million to $1 billion... this range is so wide [that it] tends to indicate the inability of EPA to tie the potential remedies to any concrete scientific data."

Response: The formulation of a range of alternatives reflects consistency with the NCP, which indicates the FS should evaluate various options that protect human health and the environment. The FS evaluated options for containment (Alternatives 2 and 3 for capping, $40 million and $110 million, respectively), treatment (Alternative 5 for thermal desorption and solidification, $330 million), and off-site treatment and disposal (Alternative 4, $1 billion), and No Action (Alternative 1, $6 million). The costs of the various cleanup options do vary over a wide range. This is the result of evaluating different cleanup options. When the costs of these different cleanup options are combined with the tremendous volume of contaminated soil and waste caused by Raymark during its operating period, the cleanup options become very expensive.

Comment: EPA refuses to address the lack of data to support the addition of Raymark to the National Priorities List (NPL) and the Proposed Cleanup Plan.

Response: Regarding the lack of data to include Raymark on the NPL, the EPA did address this concern when EPA added Raymark to NPL. The NPL is intended to be a "rough list" of prioritized hazardous waste sites; a "first step in a process -- nothing more, nothing less" Eagle Picher Indus. v. EPA, 759 F.2d 922, 932 (DC Cir. 1985) (Eagle Picher II). As described above, the information from the Remedial Investigation (RI) and the Feasibility Study (FS) do support the need to cleanup Raymark's property.

For further information regarding the addition of Raymark to the NPL, please refer to EPA's response to comments raised during the public comment period for the proposing of Raymark to the NPL.

Comment: The lead in the waste does not leach unless exposed to acidic conditions with a pH of less than four.

Response: All metals leach from soils in the presence of water as the result of ionic processes; leaching at a low pH values is more pronounced. Raymark used acids in its manufacturing process and disposed of the acids on the ground. The low pH conditions at Raymark facilitate leaching and transport of metals. Metals will not leach if there is no infiltration by precipitation. The capping system described in the Proposed Plan would address the leaching of metals to groundwater.

Comment: Dioxins are considered isolated and are not statistically significant.

Response: Dioxins were not detected as frequently as other contaminants, but nonetheless dioxins are very toxic and do pose risks to human health and the environment.

Comment: PCBs are not mobile, unless in the presence of solvents.

Response: PCBs were detected in soils throughout the Facility's subsurface. Several areas have been identified as containing solvents where PCBs are present in the groundwater. It is likely that the PCBs were mobilized by these solvents. The solvents may not remain in discrete locations indefinitely and can migrate, thus potentially mobilizing PCBs in other locations.

PCBs do adhere to soil particles. Once exposed to ambient air, PCB-laden soils, without a cap in place, may be airborne through fugitive dust emissions thereby posing potential health risks to on-site workers and the public. Therefore, even in the absence of solvents, PCBs can migrate through another pathway.

Comment: Asbestos is not free to the atmosphere, based on air data collected on and off the Facility.

Response: Air sampling was conducted by Raymark during the closure of the lagoons and during drilling to monitor potential worker exposures. The results do indicate that airborne asbestos was generated as the result of intrusive activities. However, the concentration of asbestos that was detected was below levels of concern. Any future use of the Facility without remediation could cause asbestos migration.

During remediation, all measures will be taken to monitor and abate fugitive emissions.

Comment: There are no users of private wells within 4 miles of the Facility. Therefore, groundwater is an incomplete exposure pathway because no population would be exposed to the groundwater.

Response: Current searches by the CT DEP have not identified any public wells within 1 mile of the Facility. One private well was discovered upgradient of the Raymark Facility within one mile of the Facility. However, the ultimate discharge of groundwater has not been identified and there may be human populations or environmental receptors at risk.

Comment: Shellfish has been tested by the State and found not to be contaminated.

Response: EPA is continuing to study Ferry Creek, the Housatonic River and other ecological areas. The results of these studies have not been finalized. EPA plans to propose a cleanup plan of these areas in the late summer of 1996.

Because Raymark discharged process waters into lagoons that ultimately discharged into Ferry Creek, it is of concern that much of Ferry Creek has been contaminated. Contaminated sediments in the stream bed are likely to be transported downstream into the Housatonic River and may possibly affect the shell fish beds. While no effects of contamination have been observed, it is possible that past disposal and discharges by Raymark have affected Ferry Creek, and may eventually affect the Housatonic River.

Comment: "... [E]pidemiological analysis of CT Health Department data shows that town-wide cancer rates are within normal incidents of cancer experienced on a state-wide basis and ... that the Stratford community has not suffered rates of cancer greater than that of any town in Connecticut of equal size." The comment indicates that no further action is needed since no health problems have been identified to date.

Response: Actual evidence of health problems are not a pre-requisite for placing a site on the NPL or for EPA to abate health threats. EPA can determine that there is a significant threat to human health without cancer studies. To wait for health effects to be clearly evident (which could take many years) would be a grievous transgression of the EPA's mission to protect public health.

Comment: The Agency has never determined that the Facility and Satellite Sites pose a significant threat to public health. The EPA has no basis for concluding that the Raymark Facility poses a significant threat to public health.

Response: EPA completed a risk assessment in early April 1995 (provided to the public on April 8, 1995) for the Raymark Facility that concluded the soil-waste materials underlying the facility did pose risks under current and future land use scenarios. The risk assessment was developed by EPA following documented procedures, using realistic exposure scenarios, and analytical results provided by Raymark (and Raymark's contractors). The ATSDR Health Advisory was prepared to identify threats to residences that had fill materials from the Raymark Facility, and concluded the fill materials do pose threats.

These assessments formed the basis for concluding that the waste materials and contamination generated by Raymark do pose threats to the public.

Comment: A risk assessment for the Facility and Satellites has never been completed. Raymark completed a partial risk assessment that addressed workers in a utility trench scenario. It is the only scenario in which any risk to human health has been shown.

Response: The EPA prepared a risk assessment based on the future land use of the property including scenarios for the worker in different parts of the facility and in the sewer trench. In addition, trespasser exposure scenarios were evaluated. Collectively, the results do indicate potential risks to human health.

Comment: Trespassing at the Facility is highly unlikely because of the barriers surrounding and inside the Facility, and should not be used in assessing risk.

Response: The EPA's risk assessment for future land use assumes that there are no barriers to prevent trespassers from entering the site. Before EPA became actively involved in the site, trespassing was very common on Raymark's property.

Comment: The potential pathways identified in the ATSDR health advisory are all hypothetical. In fact, the advisory indicated

that "no health hazard is currently posed" by the presence of dioxins on the Facility.

Response: EPA considers the dioxins and up to sixty other contaminants at the Raymark Facility to pose future risks to human health. As indicated in the Response above, the results of the risk assessment do indicate potential risks to human health.

Comment: EPA has refused to identify the specific sites around Stratford where Raymark waste was or is located.

Response: This issue was discussed in EPA's addition of Raymark to the NPL. This comment is not germane to EPA's Proposed Cleanup Plan.

Comment: Government contractor estimates for demolition are nearly three times the estimate prepared by Raymark for the same work. Such demolition costs were not taken into account in the Proposed Cleanup Plan.

Response: At the time the FS was prepared, EPA requested of Raymark the basis for their demolition cost estimate. This information was not forthcoming. EPA was only told that all demolition could be performed for approximately $10 million. Raymark did provide a rough breakdown of the costs of the building demolition, but the information provided to the EPA did not contain a sufficient amount of documentation to verify Raymark's estimate.

In addition, EPA and its contractors did not have access to all the buildings in order to survey the structures and to verify Raymark's estimate. However, Raymark's demolition cost was used in the FS uniformly in all alternatives. According to the NCP, the purpose of the FS estimates is to compare the relative costs for different alternatives, within an accuracy of +50 to -30 percent. Demolition estimates have not been finalized by EPA's contractor at this time.

Comment: The Agency has refused to consider the redevelopment of the property after remediation. EPA never considered the probable uses of the site.

Response: EPA has considered the re-development of the property after remediation throughout the RI/FS process. The probable uses of the Facility were considered in the EPA's risk assessment future land use scenarios. EPA has facilitated numerous discussions between the developer and the remediation contractor to ensure that scheduling, design, and construction issues are properly integrated and implemented.

Comment: The Proposed Cleanup Plan encompasses the excavation of various, unspecified Satellite Sites.

Response: The Proposed Plan does not encompass the excavation of various, unspecified Satellite Sites. The Plan is meant to address the contaminated materials present at the Facility and off-site contaminated materials, which originated from Raymark and will be consolidated back to the Facility. The Proposed Cleanup Plan does state that soils removed from some of the satellite sites would be consolidated back at the Facility and addressed under the proposed capping option.

Comment: The excavation at the Satellite Sites includes removal of all waste, even that below the water table, despite the health advisory's recommendation that only the upper three to four inches needed to be removed.

Response: The excavation of Raymark's waste from residential properties generally does not include excavating waste from below the water table. In order to permanently cleanup the residential properties, the waste is excavated so that future residential uses will not pose risks to human health.

Comment: The Proposed Cleanup Plan acknowledges that wastes at the Facility and satellite sites do not require removal or on-site treatment, except in certain, unspecified, areas. Therefore, the removal of wastes from the Satellite Sites may not have been warranted.

Response: The ATSDR Health Advisory recommended the dissociation of residents from the contaminated fill materials. Excavation and removal has been proceeding through the on-going removal process to protect the health of residents. Based on the results of the Risk Assessment and the RI for materials at the Raymark Facility, under a future commercial/industrial land use scenario, where less exposure than a residential setting is likely, the FS determined that remedial options are available to protect human health and the environment without soil treatment or removal at the Facility.

Comment: The proposed double layer cap is underlain by a drainage system. However, the existing pavement reduces infiltration, and a less costly cap is appropriate.

Response: The integrity of the existing pavement as a component of the cap is questionable. The current pavement is in disrepair with many potholes. Therefore, the existing pavement provides limited infiltration reduction capabilities. The multi-layer cap is to be constructed above all waste fill materials.

Comment: Installation of vapor extraction system may be appropriate for solvent-contaminated areas. Installing such an expensive system may be costly if done early in the process. To avoid unnecessary costs, the vapor extraction system should be completed in conjunction with the end user of the property.

Response: The EPA has already initiated the coordination of possible remedial construction requirements with the developer's engineer to ensure that all remediation and future development needs are properly integrated. The design and installation of the vapor extraction system will accommodate the future use of the site.

Comment: The EPA plans to install additional wells and complete additional studies. These costs are not included in the Proposed Cleanup Plan.

Response: The cost for replacing some of the existing monitoring wells is included in the remedial alternatives cost estimate. As clearly indicated in the FS and the Proposed Cleanup Plan, a separate study for groundwater will be conducted. Those investigation costs are not included in the Proposed Cleanup Plan.

For more information on the off-site groundwater study, the commenter is referred to EPA's Responses in Section E, Off-site Investigations, of this document.

Comment: The EPA has not addressed Raymark's arguments. The EPA has postponed addressing these arguments "... until an unspecified later point in time. That time is now." EPA never completed a "... full risk assessment or NPL study. Numerous aspects of the Proposed Plan ... remain questionable and could be addressed in a much more cost-efficient manner."

Response: The EPA has addressed all of Raymark's comments. EPA included Raymark on the NPL pursuant to the regulations in the NCP. Furthermore, EPA did perform a complete risk assessment of the Raymark Facility that identified risks to human health. Based on the information contained in the RI and FS, the Proposed Cleanup Plan is a cost-efficient mechanism to cleanup the Raymark Facility and facilitate re-use of the property.

4. The Dock, Inc.

The Dock, Inc. does not support the Proposed Cleanup Plan and offers the following comments:

Comment: The Proposed Cleanup Plan is not consistent with the National Oil and Hazardous Substances Contingency Plan (NCP). If the Facility is not cleaned up now, it will have to be addressed again in 30 years. The Proposed Cleanup Plan threatens Ferry Creek and the Housatonic River. Alternative No. 3 more thoroughly complies with existing federal regulations.

Response: The Proposed Cleanup Plan, and its development and selection, is consistent with the requirements of the NCP which sets out the rules for Superfund cleanups. A remedial

investigation of the Raymark Facility was completed, the risks to human health were evaluated, and a range of remedial options were developed to address potential human exposure to contaminated soil and minimize leaching of contaminants into the groundwater. The RI, risk assessment, and FS serve as the basis for EPA's selection of Alternative No. 2 as the Proposed Cleanup Plan. Alternative No. 2 is a permanent remedy as indicated in previous Responses.

The Proposed Cleanup Plan does not threaten Ferry Creek. Subsurface drains at the facility that currently discharge to the Creek will be plugged. In the future, only storm water run-off (that does not come in contact with waste materials) will be discharged into the Creek, and will be monitored (analyzed) periodically.

Alternative No. 3 would provide only a marginal increase in protectiveness because over sixty (60) different contaminants would remain in place. Combined with the increased short-term risks inherent in excavating hazardous wastes, the net reduction in overall risks to human health is negligible. Furthermore, capping of the contaminated site soils or capping of the site with several areas excavated would afford the same level of protection since there would essentially be no contact with any contaminated materials.

Comment: The government (EPA, DOJ, and ATSDR) has not been timely in responding to Freedom of Information Act (FOIA) requests.

Response: The FOIA requests are for issues unrelated to the Proposed Cleanup Plan for the Raymark Facility and will not be addressed as part of this Responsiveness Summary.

Comment: The Administrative Record in Boston and Stratford was missing 113 key pages of information until late May 1995. This lack of information deprived the public of information necessary for preparing comments.

Response: As indicated in several letters to this commenter, the 113 pages were missing from the Administrative Record in Boston only. As stated in the Dock's comments, the missing pages were promptly provided to them and the missing pages were added to the Administrative Record in Boston. The analytical data provided in Raymark's RFI was summarized and sorted in a variety ways. In addition, a summary of the analytical results along with a discussion of the meaning of the data are included in Volume I of the RFI. Furthermore, the analytical data along with a complete discussion of the data was included in the RI. Therefore, considering the data was summarized in a number of different formats and discussed at length in both the RI and RFI and the

subject data was present in Stratford, the public was not deprived of information necessary to prepare comments.

Comment: The Proposed Cleanup Plan is technically unsound and unworkable, and contrary to laws and EPA guidances. A decision cannot be made to address only soils and NAPL without determining remedial actions for groundwater and surface water.

Response: The Proposed Cleanup Plan, which addresses contaminated soil and NAPL underlying the Raymark Facility, is appropriate to protect human health and the environment. The development of the Proposed Cleanup Plan is consistent with the NCP, regulations, and EPA guidances. Additional investigations will be conducted to address contaminated groundwater, and on-going investigations are assessing whether surface water and sediments may have been affected.

The EPA commonly divides the cleanup of contaminated areas into phases. The Proposed Cleanup Plan for Raymark is no different than the cleanup approach for other large contaminated sites across the country. There are many sites in the nation that have caps installed before the remedy for the groundwater is chosen. Capping the site now protects public health while the investigation of other areas of contamination proceeds. Waiting for all of the investigations to be completed while the remedy for the soil and sources of contamination at the Raymark Facility is known would be inconsistent with the EPA's mission to protect public health. As indicated in previous Responses, the EPA is addressing this site in phases. Residential properties are currently being cleaned up, Ferry Creek and other ecological areas are currently under investigation and the groundwater investigation will commence in the near future.

Comment: EPA must comply with 40 CFR § 300.430(a)(1)(iii)(F) which states that groundwater will be returned "to their beneficial uses where practicable" and otherwise "prevent further migration of the plume, prevent exposure to contaminated groundwater, and evaluate further risk reduction." The Dock believes that the Proposed Cleanup Plan would impede and be inconsistent with the expected final groundwater remedy.

Response: The beneficial use of the groundwater will be assessed as part of the groundwater investigation that will be initiated in late 1995. Because groundwater contamination may not be restricted to just the Raymark Facility in that part of the Town of Stratford, the groundwater investigation will assess the extent of contamination for the area, identify potential users of groundwater, determine whether there are threats to human health and the environment, and identify risk reduction measures, as warranted. The Proposed Plan would be consistent with a potential groundwater remedy since capping would minimize contaminant leaching into groundwater, and NAPL removal would

result in decreased dissolution and migration of organic contaminants.

Comment: EPA should not sign the ROD until all on-site and off-site investigations are completed. The Dock does not believe that there is sufficient time to complete all studies before the placement of the cap in early 1996.

Response: Additional on-site and off-site evaluations of groundwater contamination will be conducted. In addition, as stated above, EPA will continue to investigate other areas where Raymark's waste has come to be located. The EPA's goal is to propose a groundwater cleanup plan to the public in December 1997. The implementation of the Proposed Cleanup Plan would protect public health and minimize the continued leaching of contaminants to groundwater.

Postponement of the ROD signing would leave the Raymark Facility unaddressed, and pose potential threats to the public. In addition to the risks posed to human health from the contamination on-site, many of the buildings are unsafe which further increases the risk to public health. Waiting for all of the investigations to be completed while the remedy for the soil and sources of contamination at the Raymark Facility can be implemented would be a transgression of the EPA's mission to protect public health.

Comment: Construction of a building and a cap before the selection of remedies for other operable units (groundwater and surface water) would preclude any future remediation of underlying soil or groundwater.

Response: The Proposed Cleanup Plan is a permanent remedy for the contaminated soil at the Raymark Facility. Groundwater remediation or containment can be implemented without disturbing the cap.

Comment: EPA has not made clear who will be responsible for inspecting and maintaining the cap. The public must be informed about who will be accountable.

Response: The responsibilities for future upkeep of the cap will be shared by the State and future site owners and will be defined in the State Superfund Contract and any prospective purchaser agreement.

Comment: The RI report did not present off-site (sediment and surface water) data that were collected as part of an EPA Site Inspection.

Response: The existing off-site data will be assessed with the results of additional surface water and sediment samples

collected under a separate investigative phase of this project, as discussed above. The threat posed by the Raymark Facility to surface water and sediments consists of the discharges from the lagoons and the subsurface drainage system. The lagoons have already been closed and water no longer discharges from the lagoons to Ferry Creek. The existing subsurface drains will be plugged as part of the Proposed Cleanup Plan and a new clean drainage system will be installed as a component of the cap. Therefore, inclusion of the data in the RI would not have affected the development of the cleanup alternatives or selection of a preferred alternative.

Comment: Groundwater quality off-site is likely to be above MCLs.

Response: This may be the case. However, exceedance of MCLs is of concern if the aquifer is being used as a drinking water supply. The groundwater in Stratford is classified by the state as not suitable for drinking water. The proposed groundwater investigation will assess the risks of the groundwater to human health and the environment.

Comment: Raymark drainage is discharging contaminants to Ferry Creek. Contaminated groundwater may be discharging from Raymark to Ferry Creek and the Housatonic River.

Response: The discharge from the lagoons to Ferry Creek has already been terminated. Discharges from the subsurface drainage system will be completely eliminated once the drains are plugged as part of the site remediation. EPA will be addressing the groundwater contamination as discussed above.

Comment: Contaminated groundwater may be discharging to surface water, wetlands and residents' basements.

Response: The contaminated groundwater including any potential affects on residents' basements will be addressed as discussed above. In addition, EPA's on-going surface water and sediment sampling program will provide information to evaluate whether surface water and wetland areas may have been affected by any contaminated groundwater migrating from the Raymark Facility.

Comment: Residents may be eating homegrown foods contaminated by site groundwater. Contaminated groundwater may be reaching private wells and swimming pools.

Response: As part of the planned groundwater investigation, private uses of groundwater will be identified. If potential threats are identified, measures will be taken to abate any hazards.

Comment: Light non aqueous phase liquid (LNAPL) vapors may be entering homes creating health and explosion hazards.

Response: The cap system as proposed in EPA's cleanup plan will have a vapor collection system to capture VOCs that may accumulate under the cap. In addition, the groundwater migrating off-site will be addressed as discussed above.

Comment: People may consume fish and shellfish that may be affected by contaminated groundwater that discharges to sediments and surface water.

Response: Biota sampling will be conducted as part of the EPA's assessment of contamination in surface water and sediments. Groundwater contamination will be assessed for potential impacts to surface water and sediments.

Comment: Industrial/commercial pumping wells may cause exposure to the public.

Response: As part of the groundwater evaluation, users of groundwater in the area will be identified to the extent practicable. If threats are identified, measures will be enacted to protect public health.

Comment: EPA failed to consider the effect that soils have on groundwater.

Response: The effect of contaminated soils on groundwater was considered in RI and the FS. The RI assessed the relationship of soil and groundwater contamination, and evaluated potential contaminant transport pathways and mechanisms. The FS took the RI findings and developed remedial action objectives that would be protective of groundwater.

Comment: EPA must present its position on the most beneficial use of groundwater. Based on results collected to date, EPA objective should be to restore groundwater to potable use; otherwise, eliminate adverse impacts to surface water and sediments. Plume containment should be implemented if objectives cannot be achieved, and state how this can be achieved with a cap in place.

Response: As part of the groundwater evaluation, the groundwater use in the area would be assessed. Without conducting the groundwater investigation, it is impossible to determine whether remedial actions such as plume containment or remediation is warranted. Once the investigation is completed, EPA will propose a cleanup plan for the groundwater as described above.

The EPA commonly divides the cleanup of contaminated areas into phases. The Proposed Cleanup Plan for Raymark is no different

than the cleanup approach for other large contaminated sites across the country. There are many sites in the nation that have caps installed before the remedy for the groundwater is chosen. Capping the site now protects public health while the investigation of other areas of contamination proceeds. Waiting for all of the investigations to be completed while the remedy for the soil and sources of contamination at the Raymark Facility is known would be a transgression of the EPA's mission to protect public health.

Comment: EPA is not consistent with the PCB Spill Cleanup Policy set forth in 40 CFR Part 761. EPA intends to dispose of off-site PCB-contaminated soils at the Raymark Superfund Site. The policy clearly requires that soils containing greater than 50 ppm of PCBs be disposed on in an incinerator or a chemical waste landfill.

Response: The EPA will comply with the TSCA chemical waste landfill requirements set forth at 40 CFR § 761.75 with the exception of certain requirements which are waived pursuant to 40 CFR § 761.75(c)(4).

In this case, placement of soils on the top of the ground surface, construction of an impermeable cap, and groundwater monitoring will address the risks posed by PCBs contained in soils transported to Raymark from residential and the Wooster School properties. In implementing this response, EPA will comply with the TSCA chemical waste landfill requirements regarding flood protection (40 C.F.R. § 761.75(b)(4)); topography (§ 761.75(b)(5)); and monitoring systems (§ 761.75(b)(6)). Pursuant to the waiver authority contained within the TSCA regulations at 40 C.F.R. § 761.75(c)(4), EPA is waiving certain requirements of chemical waste landfills. The provisions to be waived include: the construction of chemical waste landfills in certain low permeable clay conditions (40 C.F.R. § 761.75(b)(1)); the use of a synthetic membrane liner (§ 761.75(b)(2)); no hydraulic connection between the site and flowing surface water and that the bottom of the landfill be 50 feet above the historic high water table (§ 761.75(b)(3)); and that a leachate collection monitoring system shall be installed (40. C.F.R. § 761.75(7)). For the following reasons, the requirements of 40 C.F.R. §§ 761.75(b)(1), (2), (3) and (7) are not necessary in this case to protect against an unreasonable risk of injury to health or the environment from PCBs.

Low permeability clay conditions for the underlying substrate are not necessary at this site to prevent migration of PCBs. Soils over 50 ppm will be placed on top of the existing ground surface. An impermeable cap will effectively prevent future migration. The requirement of a synthetic membrane liner is waived because there will be no hydraulic connection between the soils and the groundwater or surface water. Infiltration of PCBs to the

groundwater will be prevented by placing the PCBs under an impermeable cap. Surface erosion of PCBs in soils and transport of the soils will be prevented by the impermeable cap. The hydrologic requirement that the landfill must be fifty feet above the historic high water table is waived because it is highly unlikely that the soils will ever come into contact with groundwater. The soils will be placed on the ground surface above the historic high water table, and will not be located in a floodplain, shoreland or groundwater recharge area. Finally, the leachate collection system is not necessary as the materials will be located under an impermeable cap and a groundwater monitoring program will be implemented at the site. Additionally, groundwater at the site will be addressed in a subsequent operable unit.

Comment: The PCB Spill Cleanup Policy also requires that sites with PCBs greater than 50 ppm be remediated. The commenter cites two cases: In the Matter of Standard Scrap Metal Company, TSCA Appeal No. 87-4, 1990 LEXIS 10 (Aug 2, 1990) and accord In the Matter of City of Detroit Public Lighting Department, TSCA Appeal No. 89-5, 1991 LEXIS 1 (Feb 6, 1991).

Response: The PCB Spill Cleanup Policy, 40 CFR § 761.120, establishes the criteria the EPA will use to determine the adequacy of the cleanup of spills resulting from the release of materials containing PCBs at concentrations of 50 ppm or greater. The EPA considered these criteria as guidelines for soil cleanup at the Raymark Facility. Furthermore, as discussed above, the EPA will remediate the Site in compliance with the TSCA regulations applicable to the disposal of PCBs at concentrations greater than 50 ppm with the exception of certain requirements which are waived pursuant to 40 CFR § 761.75(c)(4).

Comment: The EPA is excavating Raymark's wastes at off-site locations and bringing the waste back to the Facility in violation of the Off-Site Rule and RCRA land disposal regulations (LDRs).

Response: CERCLA § 104(d)(4) provides that where two or more noncontiguous facilities are reasonably related on the basis of geography, or on the basis of the threat, or potential threat, to the public health, welfare, or the environment, the EPA may treat these related facilities as one for the purpose of the response. Pursuant to 104(d)(4), EPA is treating the Raymark Industries, Inc. property and locations where Raymark's waste has come to be located and pose a threat to human health as one facility. Therefore, the Off-Site Rule does not apply.

EPA determined that compliance with RCRA Land Disposal Restrictions during the time critical removal action involving excavation of Raymark's waste from residential properties was impracticable. See the National Contingency Plan at 40 C.F.R. §

300.415. The time required to treat the waste would delay the Removal Action at residential properties, thereby compromising the protection of public health. Additionally, the treatment of wastes is beyond the scope of the removal action in that it exceeds what is necessary to abate the threats at the residential properties.

Compliance with such requirements was therefore impracticable. The EPA is nonetheless managing the waste in a protective manner and in compliance, to the extent practicable, with RCRA requirements set forth at 40 C.F.R. § 265.250, et seq. (e.g., 265.251 (protection from the wind) and 265.253 (containment)). Additionally, EPA will ultimately dispose of such wastes in a protective manner as set forth in the ROD.

Comment: The Raymark Facility does not meet the requirements for a RCRA Subtitle C treatment, storage, or disposal facility. The EPA is in effect creating a landfill at the Raymark Facility. Therefore, the disposal of contaminated soils at the facility which are excavated from satellite locations violates the Off-site Rule which is to avoid having CERCLA wastes contributing to future environmental problems.

Response: Since the EPA is addressing the cleanup of Raymark's waste as one Facility pursuant to CERCLA section 104(d)(4), the Off-Site Rule does not apply. Nonetheless, EPA is managing the waste in a protective manner as discussed above.

Comment: The EPA has "conceded" that LDRs do apply based on a memorandum prepared by K. Woodward and M. Hill. During the Time-Critical Removal Action, the materials excavated from residential properties were placed, without treatment and without complying with LDRs, on the Raymark Facility because of a lack of time and further delays would pose an immediate threat to the public. Since the immediate threats to the public are over, EPA must comply with LDRs.

Response: Once placement of the waste has occurred as part of the time critical removal action, a subsequent remedial action within the same area of contamination does not trigger LDR again with respect to the waste.

Comment: The area of contamination (AOC) concept applies only to movement of wastes within one area and does not apply to consolidating wastes from multiple AOCs, as the EPA has done through the removal action. Disposal of excavated materials at Raymark therefore has to comply with the RCRA requirements, such as landfill closure.

Response: Pursuant to CERCLA section 104(d)(4), the EPA is treating the Raymark Facility and the satellite sites as one Facility, as discussed above. Once at the Raymark Site, the

waste is being managed within one AOC. As explained previously, the Raymark Site will be closed in accordance with the RCRA landfill requirements.

Comment: The Raymark Facility does not meet the requirements for a RCRA Subtitle C treatment, storage, or disposal facility. EPA is in effect creating a landfill at the Raymark Facility. Therefore, the disposal of contaminated soils at the facility violates the Off-site Rule which is to avoid having CERCLA wastes contributing to future environmental problems.

Response: Since EPA is addressing the cleanup of Raymark's waste as one Facility pursuant to CERCLA section 104(d)(4), the Off-Site Rule does not apply.

Comment: EPA has "conceded" that LDRs do apply based on a memorandum prepared by K. Woodward and M. Hill. During the Time-Critical Removal Action, the materials excavated from residential properties were placed, without treatment and without complying with LDRs, on the Raymark Facility because of a lack of time and further delays would pose an immediate threat to the public. Since the immediate threats to the public are over, the EPA must comply with LDRs.

Response: Once placement of the waste has occurred as part of the time critical removal action, a subsequent remedial action within the same area of contamination does not trigger LDR again with respect to the waste.

Comment: The area of contamination (AOC) concept applies only to movement of wastes within one area and does not apply to consolidating wastes from multiple AOCs, as EPA has done through the removal action. Disposal of excavated materials at Raymark therefore has to comply with the RCRA requirements, such as landfill closure.

Response: Pursuant to CERCLA section 104(d)(4), EPA is treating the Raymark Facility and the satellite sites as one Facility, as discussed above. Once at the Facility, the waste is being managed within one AOC. As explained previously, the Raymark Facility will be closed in accordance with RCRA landfill requirements.

Comment: Post-closure care as specified in 40 CFR §§ 264.117 and 264.228(b) should be included in EPA's Proposed Cleanup Alternative.

Response: EPA's Proposed Cleanup Plan includes post-closure care of the cap as set out in EPA's Responses above.

Comment: The RI/FS did not adequately consider the impacts of contaminated soils and NAPLs to on-site and off-site groundwater, surface water, and human receptors.

Response: The effect of contaminated soils and NAPLs on on-site groundwater and human receptors was considered in the RI and the FS. Off-site impacts to groundwater, surface water, and potential receptors will be assessed by EPA in additional investigations. The capping of the Raymark Facility will reduce contaminant migration to groundwater, prevent potential exposures of contaminants to the public, and eliminate discharges from the facility's drainage system into Ferry Creek.

Comment: Trichloroethylene (TCE) was detected in monitoring well M2 at 1,100 µg/kg (ppb) which is 220 times the MCL. Because soils collected from the north or northwest (upgradient) of this location did not contain such high levels, this suggest groundwater flow was inadequately characterized. These results suggest that another area with high TCE concentrations or NAPL, possibly under the building. Further sampling should be conducted.

Response: The lack of TCE in upgradient soils does not mean that groundwater was inadequately characterized. The elevated TCE presence at groundwater monitoring well M2 may indicate that a spill or discharge occurred near or at this location, not that there absolutely had to be a TCE source under the building. Whether or not there is a potential TCE source under the building, the placement of the cap system will sharply reduce the leaching of contaminants to groundwater. The cap's vapor control layer will capture VOCs that volatilize from the soil pore spaces and prevent potential exposures to the public.

Comment: There is a lack of reliable hydraulic conductivity data, which may affect groundwater or surface water remediation. For example, the reported hydraulic conductivity results for the stratified silty sand unit range from 0.075 to 96.4 ft/day, which is not indicative of a singly homogeneous geologic unit.

Response: Additional investigations will determine whether off-site groundwater or surface water remediation will be necessary to protect human health or the environment. As reported in the RFI report and the RI report, the geologic units underlying the Raymark Facility are highly stratified and are heterogeneous. Should remediation be necessary at a later date, investigations will be conducted to define aquifer characteristics that support the design of a groundwater remediation system.

Comment: The color graphics presented at the public meetings are misleading. The graphics do not reflect the extent of the groundwater contamination. The graphics were developed using the Site Planner data mapping and presentation software. Site Planner

uses linear interpolation, which is inappropriate. A geostatistical variogram-based approach would be more appropriate and would probably give a different depiction, and would have the ability to predict off-site concentrations.

Response: The use of the color graphics was to present the public with visual depictions of the approximate contaminant presence underlying the Raymark Facility. The use of different methods to interpolate data will always result in somewhat different interpretations. As stated at the public meetings, more detailed information on the nature, rate, and extent of contamination is contained in the RFI and RI.

Comment: The soils and groundwater data were not properly "contoured." Soil data should be contoured from the same depth and groundwater samples should only be contoured from the same geologic unit.

Response: The use of the color graphics presented at the public meetings was to present the public with general visual depictions of the approximate contaminant presence underlying the Raymark Facility. As stated at the public meetings, more detailed information on the nature, rate, and extent of contamination is contained in the RFI and RI.

Comment: Contaminated soils and NAPL impacts to groundwater and surface water were not considered in the FS. Slurry walls and groundwater containment/treatment options were not fully investigated. These alternatives, theoretically, could be installed after the cap, but in practice would be impeded by and inconsistent with the early installation of a cap.

Response: The effects of contaminated soils and NAPLs on groundwater were considered in the RI/FS. Since EPA's goal is to address the contaminated materials residing above the water table and that fractured bedrock is present and quite deep in some areas of the Facility, the effectiveness of slurry walls in containing contaminant migration in groundwater is questionable. Once the groundwater investigation has been completed, the need for containment will be assessed.

As stated above, the EPA commonly divides the cleanup of contaminated areas into phases. The Proposed Cleanup Plan for Raymark is no different than the cleanup approach for other large contaminated sites across the country. There are many sites in the nation that have caps installed before the remedy for the groundwater is chosen. Capping the site now protects public health while the investigation of other areas of contamination proceeds. Waiting for all of the investigations to be completed while the remedy for the soil and sources of contamination at the Raymark Facility is known would be inconsistent with the EPA's mission to protect public health.

Comment: The commenter acknowledges that slurry walls are less effective when the bedrock is fractured, but recommends that slurry walls be reconsidered to reduce groundwater flow through the waste materials.

Response: Once the groundwater investigation has been completed, the need for containment will be assessed.

Comment: For alternatives that specify excavation and treatment, the areas to be excavated are not equivalent to areas requiring treatment and disposal.

Response: The EPA assumes a conservative approach when estimating the total volume of contaminated material to be treated. The total volume of contaminated material to be treated and excavated was therefore assumed to be the same. This was calculated by examining each sampling location and multiplying the maximum contaminant depth above the preliminary remediation goals (PRGs) by its area of influence. The maximum contaminant depth is independent of the type of contaminants detected. If one or more contaminants were detected at a specific location, only the contaminant at the greatest depth was utilized in the calculation. The maximum depth considered in any case was limited to the depth to the low water table at that soil boring location.

EPA field experience has shown that estimating the volume of waste in this manner at hazardous waste sites more accurately reflects the actual volume of waste to be treated in the field. Furthermore, based on Raymark's past disposal practices and the known extent of Raymark's waste contamination, the EPA believes that this approach is sound and provides a more realistic cost estimate.

Comment: All cost estimates for the cleanup options in the FS are significantly overestimated.

Response: These estimates were prepared using available vendor data, the types of facilities available, the hauling distances to treatment and disposal facilities, and the anticipated excavation rates. The actual costs may be lower if there was competitive bidding involved. However, the purpose of the FS costs is to provide relative cost comparisons. The actual costs can be estimated better during the preparation of the remedial design since specific requirements will be identified.

Comment: There are inaccuracies in the FS cost estimates such as not including the cost for groundwater containment and treatment.

Response: This remedial action is only meant to address source control. The costs for any groundwater response will be

developed, if appropriate, at a later date after the completion of the groundwater investigation.

Comment: The flat estimate of Health and Safety Monitoring in Alternative SC-4 is unrealistic. Over $3 million per year is estimated for having 1 to 2 people watch trucks.

Response: The health and safety estimate presented in the FS is meant to address a variety of functions related to demolition and construction activities that go beyond just watching trucks enter or leave the facility. These functions include training of site personnel, sampling and monitoring, preparation of health and safety plans, auditing, monitoring, preparation of reports and records, and other measures needed to ensure worker safety and protect the public.

Comment: The $10 million cost for decontamination and demolition of on-site buildings is not justified other than as a quote from Raymark Industries, Inc. An independent evaluation by EPA is necessary.

Response: A separate estimate of the decontamination and demolition of the on-site buildings is currently being developed for EPA. Raymark's demolition cost was used in the FS uniformly in all alternatives since all of the alternatives, except the no-action alternative, require building decontamination and demolition to be performed. As documented in the Record of Decision (ROD), Section XII -- Documentation of Significant Changes, the capital cost estimate for decontamination and demolition of the buildings, based on EPA's independent evaluation is estimated to be $30 million.

Comment: No reason is given for taking 200 groundwater samples per year. These numbers should be reduced, after 5 years especially for alternatives involving removal of significant amounts of soils.

Response: The 200 samples represent quarterly sampling of approximately 45 wells located in the Raymark Facility and 5 quality control samples. The existing wells located predominantly along the perimeter of the Facility would be used to assess potential contamination migration trends, and to assess whether contaminants may be migrating off-site. The cost estimate assumptions, presented in Appendix C of the FS, provide more detailed information. The EPA concurs that at each 5-year review, the number and frequency of sampling can be reviewed and modified, if appropriate. For cost estimating purposes and to evaluate each option uniformly, the EPA assumes that groundwater monitoring is required. Since all alternative cleanup options evaluated in the FS leave waste below the water table, groundwater monitoring is needed regardless of the volume of waste excavated.

If it is determined that the contaminant status varies only slightly between each quarterly monitoring event, the monitoring frequency could be decreased which would reduce the overall costs of monitoring. For the purpose of the FS, quarterly monitoring was assumed to determine what the costs would be to implement the cleanup alternatives over 30 years.

Comment: A soil density of 1.5 tons/cubic yard was used in the estimates; this is rather high and actual soil densities should be used.

Response: A review of measurements made on samples for a treatability study conducted on Raymark's waste indicated that the densities of the soil-waste materials ranged between 95 to 135 pounds per cubic foot. The conversion of 1.5 tons per cubic yard into pounds per cubic foot yields approximately 110 pounds per cubic foot. This density falls within the sample data range.

Comment: The costs for thermal desorption/solidification represent reasonable estimates for small quantities, but significant economies of scale would likely exist for treating 600,000 tons of soils. EPA should cite costs for comparable sized thermal desorption/solidification stabilization operations.

Response: The costs for thermal desorption/solidification were developed from the results of treatability testing, and the preparation of unit pricing is based on the amount of site-specific contaminants needing to be addressed. If the only contaminants in the soils were VOCs, then lower thermal desorption costs would be anticipated. However, the Raymark wastes contain Aroclor 1262 and 1268, which require significantly higher operating temperatures at much longer durations to desorb properly. Complicating the treatment process is the presence of asbestos, lead -- a volatile metal under high temperatures, and polymerized phenolic resins. Therefore, additional off-gas treatment would be required. Consequently, the unit costs used in the FS are reasonable.

Comment: All alternatives include laundry costs, but standard procedure is to use disposable clothing.

Response: Disposable outer garments would be used to protect site workers from exposure to chemicals. However, disposable garments may be damaged, potentially causing dusts and liquids to be accidentally deposited on work clothes. To better protect the workers, and to ensure that all environmental contaminants remain on-site, work clothes should be collected on-site and cleaned.

Comment: Because a comprehensive assessment of the buildings and structures was not completed, EPA should not have selected an alternative until an assessment was completed. The safety precautions and monitoring procedures that will be enacted during

decontamination and demolition should be specified and provided for public review.

Response: The building decontamination and demolition is required for all of the cleanup options except for Alternative No. 1 which calls for no-action and is not protective of human health and the environment. Consequently, the lack of a complete, comprehensive assessment of the buildings did not impact the comparative analysis of the alternatives. The public will have the opportunity to review the final health and safety plans.

Comment: 113 pages of information were missing from the Boston information repository. But the pages were subsequently provided to the Dock's consultant.

Response: As indicated in the Dock's comments, the missing pages were promptly provided to the Dock. The Administrative Record in Boston was rectified once the problem was identified. The public was not deprived of any information.

Comment: In Volume III of the Administrative Record, the table "Preliminary Statistics for Groundwater Data" is missing the final page: Page 6 of 6.

Response: EPA was not provided this summary page by Raymark's consultant Environmental Laboratories, Inc. (ELI). However, EPA was provided with all of the groundwater data and EPA used this data to characterize the groundwater data in the RI.

Comment: The Dock is concerned that the State of Connecticut will become liable because of the planned excavation of hazardous substances from the Wooster Middle School and state-owned property, and the disposal at the Raymark Facility.

Response: The State will conduct the Wooster Junior High School excavation pursuant to a Superfund Cooperative Agreement. Accordingly, the State will be the lead agency for the Wooster School response. The EPA does not consider the State a potentially liable party (PRP) with respect to the Wooster School response.

Comment: The commenter is concerned that individual residential owners could be held liable for future cost recovery actions.

Response: The EPA has a policy of not seeking cost recovery actions against residential homeowners.

Comment: The Dock recommends that EPA not sign a ROD for any operable unit. An interim or removal action should be implemented to collect NAPL and to limit access to the soils.

Response: The Proposed Cleanup Plan, which addresses contaminated soil and NAPL underlying the Raymark Facility, is appropriate to protect human health and the environment. The development of the Proposed Cleanup Plan is consistent with the NCP, regulations, and EPA guidances. Additional investigations will be conducted to address contaminated groundwater, and on-going investigations are assessing whether surface water and sediments may have been affected by Raymark's disposal practices.

The EPA commonly divides the cleanup of contaminated areas into phases. The Proposed Cleanup Plan for Raymark is no different than the cleanup approach for other large contaminated sites across the country. There are many sites in the nation that have caps installed before the remedy for the groundwater is chosen. Capping the site now protects public health while the investigation of other areas of contamination proceeds. Waiting for all of the investigations to be completed while the remedy for the soil and sources of contamination at the Raymark Facility is known would be inconsistent with the EPA's mission to protect public health. As indicated in previous Responses, the EPA is addressing this site in phases. Residential properties are currently being cleaned up, Ferry Creek and other ecological areas are currently under investigation and the groundwater investigation will commence in the near future.

5. Utility Companies

Four utility companies offered comments on the Proposed Plan.

Comment: The risk assessment concluded that potential human health effects exist for utility workers at the Facility and in the vicinity of the Facility.

Response: EPA acknowledges that the Risk Assessment demonstrates an unacceptable risk for non-carcinogens from exposure to waste in the utility easement area. The Risk Assessment assumes a construction worker, without the use of personal protective equipment, is exposed for 5 days per week for a period of 6 months. This exposure scenario would not be appropriate to assess the risks to utility workers performing routine or emergency maintenance at residential properties in Stratford where residual Raymark waste (at concentrations less than what is found at Raymark in general) was left at depth due to engineering limitations.

Comment: The risk assessment was inadequate because it did not evaluate risks to utility workers/agents and residents at residential properties where Raymark wastes were left in place.

Response: The Risk Assessment properly addresses exposure scenarios only at the Raymark property since that is the area of contamination addressed in this Source Control Operable Unit

remedial response action. The appropriate extent of the response action, conducted under the time-critical removal authority, at the residential properties was determined in accordance with 40 CFR § 300.415 of the National Contingency Plan.

Comment: The EPA has not shared its sampling and analytical data from these residential properties with the utilities so they can protect their workers.

Response: The exchange of information between EPA and the Utilities related to the Time-critical Removal Actions at residential properties in Stratford is not relevant to the selection of a remedial action at the Raymark facility. This is an ongoing issue that will need to be resolved independently of the selection of the remedy decision for the Raymark property.

Comment: The EPA should have involved the utilities in the development of the removal action protocol to ensure that it would be protective of utility workers' health.

Response: The cleanup protocol followed in the Time-critical Removal Actions at residential properties is not relevant to the selection of a remedial action for the Raymark facility. This is an ongoing issue that will need to be resolved independently of the selection of the remedy decision for the Raymark property.

Comment: Unlike groundwater, which will be studied in a separate operable unit, the issue of public worker safety will not be addressed by EPA in a future action. Therefore, this issue must be resolved before the Record of Decision is signed.

Response: The issue of public worker safety at residential properties in Stratford is not relevant to the selection of a remedial action for the Raymark property. This is an ongoing issue that will need to be resolved independently of the selection of the remedy decision for the Raymark property.

Comment: The utilities believe that in the event more Raymark wastes are encountered by utility workers during work performed at the residential properties, the EPA should develop contingencies for excavation and removal of the contaminated materials, and that space should be reserved at the Raymark Facility to accommodate the disposal of Raymark wastes that may be found by the utilities.

Response: It is not practical to reserve space indefinitely at the Raymark facility to accommodate possible future discoveries of Raymark waste. Should Raymark waste be discovered in the future, EPA and/or the CT DEP would perform a removal site evaluation pursuant to 40 CFR § 300.410 of the National Contingency Plan to assess the circumstances of the release and to determine whether or not a removal action is warranted. In

the event that EPA and/or CT DEP were to determine that a removal action was warranted, the "availability" of the Raymark site relative to the status of the remedial action construction, access from the property owner, and other limitations/constraints would need to be assessed to determine whether excavation and transhipment of waste to Raymark or some other response action was appropriate.

Comment: The EPA underestimated the volume of waste material excavated from the residential properties. A revised estimate should be developed.

Response: The estimates, performed by the EPA, of the volume of Raymark waste that has been or will be excavated from residential properties under the Time-critical Removal Action are based on extensive sampling of those residential properties targeted for excavation. The properties were selected only after a very extensive investigation and sampling effort of all Stratford properties suspected of having received Raymark waste for fill. The EPA has been revising the estimate of waste to be excavated when new information warrants a modification.

6. Brake Systems, Inc.

Brake Systems, Inc. (BSI) offers the following comments:

Comment: BSI, not Echlin Inc., leased Raymark property in the mid-1980s. All future correspondence should be directed to BSI.

Response: All future correspondence will be addressed to Brake Systems, Inc.

Comment: From 1985 to 1988, the property was leased to BSI to produce automotive brakes. BSI did have a spill in 1987. The RI and FS incorrectly stated that 6000 gallons of 1,1,1-trichloroethane (1,1,1-TCA) spilled from a tank transfer line in 1984. BSI records indicate that approximately 600 gallons of 1,1,1-TCA were released in the spill. The correct date of the spill is December 1987, not 1984. Since the ground was frozen, the spill flowed on the ground surface to storm basins and drainage lines. A spill response contractor recovered more than 1000 gallons of a TCA water mixture that was disposed of by a licensed disposal company. Therefore, it is unlikely that the TCA found in downgradient groundwater is TCA from the 1987 spill. Historical operating practices by Raymark are the more likely cause of contamination.

Raymark engaged in decreasing operations, some near Building 44 where solvents have been found in the soil and groundwater. A more careful study of Raymark operating practices should reveal additional sources of contamination.

Response: The spill information was obtained from the Raymark RFI report, as noted in the RI and FS reports. The revised information suggests that at least 100 gallons of 1,1,1-TCA was not recovered. Historical management of solvents in this area also may have impacted the subsurface soils and groundwater.

After a review of spill reports, EPA acknowledges that 600 gallons and not 6000 gallons of 1,1,1-trichloroethane was released to the environment.

ATTACHMENT A

COMMUNITY RELATIONS ACTIVITIES CONDUCTED AT THE RAYMARK INDUSTRIES, INC. SITE IN STRATFORD, CONNECTICUT

COMMUNITY RELATIONS ACTIVITIES CONDUCTED AT THE RAYMARK INDUSTRIES, INC. SITE IN STRATFORD, CONNECTICUT

Community relations activities conducted at the Raymark Industries, Inc. site include:

APRIL 1993	Fact sheet on public health activities in Stratford, CT issued (prepared by ATSDR for first public meeting).
	Meeting held with the Wooster School teachers about their concerns regarding the discovery of dioxin at Raymark and the waste used to build the Wooster playing fields. Health Director, ATSDR, CTDPHAS, CT DEP and Michael Grey, M.D., UConn.
	The EPA briefed officials and press on Raymark's past waste disposal practices and presented a course of action for addressing the problem.
MAY 1993	Wooster School Public meeting held, sponsored by DEP and the Stratford Health Department.
	Fact sheets and packets on the environmental data issued (the EPA and DEP provided after first round of sampling). Fact sheet issued in a question/answer format on environmental and health questions for May 27, 1993 public meeting (CTDPHAS).
	Fact sheet on the public health advisory (ATSDR) issued.
JUNE 1993	Meeting with citizens living in the southern end of Stratford, near a public housing area, held at the South End Community Center.
	Meeting with physical education teachers at the Wooster School held. Health Director and ATSDR.
	A booth was sponsored by the Health Department and the Stratford Citizens Advisory Council at the Stratford Day Family Fair.
JULY 1993	Meeting with senior citizens at the Baldwin Center held with the Town Manager, Town Councilman, Conservation Director and Health Director.

	Meeting with parents and residents from a specific councilman's district held. Town Councilman, ATSDR, and the EPA.
	Meeting with people living near Wooster School held on the remediation activities to take place in July and August. Town Manager, Conservation Director, DEP, CTDPHAS and ATSDR.
	The first Stratford Environmental Update issued.
AUGUST 1993	3rd and 4th Avenue Neighborhood Forum held. Neighborhood forum fact sheet for 4th and 5th Avenues issued.
	The second edition of the Stratford Environmental Update issued.
SEPTEMBER 1993	Neighborhood forums held and fact sheet written for Lot K/Elm Street and Morgan Francis property.
	Neighborhood forum held for residents living near Raybestos Memorial Field.
OCTOBER 1993	3rd and 4th Avenue Neighborhood Forum held.
NOVEMBER 1993	The third edition of the Stratford Environmental Update issued.
JANUARY 1994	EPA mailing list notified of Raymark's proposed addition to the National Priorities List.
FEBRUARY 1994	The fourth edition of the Stratford Environmental Update issued.
MARCH - MAY 1994	The EPA conducted interviews for the Community Relations Plan.
JUNE 1994	DEP held a public meeting to inform Wooster School parents and neighbors that the school cleanup was postponed until the summer of 1995.
	The fifth edition of the Stratford Environmental Update issued.
AUGUST 1994	Sidney Street Neighborhood Forum held.

SEPTEMBER 1994	Willow Avenue Neighborhood Forum held.
JANUARY 1995	The EPA sent affected residential property owners a letter indicating that they would not be held responsible for cleanup costs on their properties and that the EPA would protect them against third party liability for waste brought to the Raymark facility.
	Second Elm Street Neighborhood Forum held.
	Stratford Avenue Neighborhood Forum held.
FEBRUARY 1995	Sixth Edition of the Stratford Environmental Update issued.
APRIL 1995	Public notices announcing the open houses, public hearing, and public comment period were published in the Stratford Star, the Bard, and the Connecticut Post.
	The Remedial Investigation Report, the Feasibility Study, and the Proposed Cleanup Plan were issued.
	Open houses were conducted, on Saturday, April 8 during the day, and Tuesday April 11 in the evening, at the Stratford Public Library to introduce the public to the proposed cleanup plan through use of poster stations and a short presentation by EPA project leaders, followed by a question and answer period.
	A 60-day public comment period began on April 8 and ended on June 8.
MAY 1995	A public hearing was held in Council Chambers at Town Hall.

ATTACHMENT B

TRANSCRIPT OF THE MAY 4, 1995 PUBLIC HEARING

ORIGINAL

PUBLIC HEARING
EPA PROPOSED CLEANUP PLAN
RAYMARK INDUSTRIES, INC.

Stratford Town Hall
2725 Main Street
Stratford, Connecticut
May 4, 1995
7:10 p.m.

MR. CAVAGNERO: Good evening. My name is Richard Cavagnero. I'm an environmental engineer with the EPA in Boston, and I'm going to be the hearing officer for tonight's meeting, which is a hearing on the proposed cleanup plan for the Raymark Industries facility.

Let me introduce the other EPA people that are here with me tonight and explain the agenda for tonight's hearing and the format for the hearing.

Art Wing is the On Scene Coordinator who's in charge of the residential cleanup program that's currently going on in town. Mike Hill is the Raymark project manager in charge of the remedial and enforcement activities at the Raymark site. Mike Jasinski is managing the EPA contractor who prepared the remedial investigation feasibility study for the Raymark Industries site, and is also conducting the remedial investigation for Ferry Creek and other ecological areas in Stratford where Raymark waste was disposed. Finally, Liza Judge is the community relations coordinator for all Raymark activities in Stratford.

There are also a number of representatives from the Connecticut Department of Environmental Protection here. They are Ron Curran and Chris Lacas.

For those of you who are unfamiliar with the Raymark project and EPA's approach to the cleanup, you should know that we have divided the remediation into three phases, which we call operable units.

The first phase addresses the contaminated soils on the former Raymark plant property which EPA is proposing to cap in place. Construction of this phase will begin shortly after we sign a Record of Decision in June of this year, and will be conducted by the U. S. Army Corps of Engineers. This phase would also include demolition of the buildings and extraction of highly contaminated liquids in the groundwater. This phase is the subject of tonight's hearing.

The second phase of our project will address contamination in Ferry Creek and a number of wetland areas throughout Stratford. And the third phase of the project will address contaminated groundwater migrating from the Raymark property.

In addition to these activities, a number of interim cleanup measures have also been performed at both municipal and commercial properties throughout Stratford, primarily by the Connecticut DEP and some of the property owners. There will also be final actions performed on these properties after additional study and negotiations with the property owners.

Lastly, EPA has been working to clean up 41 residential properties since last year by excavating the Raymark waste used as fill there and transporting it back to the Raymark facility for storage. We have currently completed work at 29 of those 41 properties, and expect to finish work there this summer.

Back on April 8th and 11th, EPA held public meetings and open houses here in Stratford to present the results of the remedial investigation and feasibility study which examined the extent of contamination at the property and the various alternative ways to clean it up. We then presented EPA's preferred approach or proposed plan and had a question and answer period. After I conclude my introductory remarks, Mike Hill will very briefly recap the results of the remedial investigation, and then Mike Jasinski will again briefly recap EPA's proposal for cleanup, along with why we decided to do that. We will then begin the formal hearing.

The purpose of tonight's hearing is to provide an opportunity for the public to provide oral comments on EPA'S proposed cleanup strategy for the site. I must emphasize that this proposal addresses only the contaminated soils at the Raymark facility, including those which were transported to the site from

the residential properties and those which the State plans to transport from the Wooster School.

It also will address certain pockets of highly contaminated liquids on the site in the groundwater, and also the buildings on site. The proposal does not address contaminated groundwater. It does not address Ferry Creek or the wetlands or Housatonic River. It does not address municipal and commercial properties in town. I ask you, therefore, to try to focus your comments tonight on the proposed remedy for the Raymark property itself.

We will be transcribing the meeting and will later produce a printed transcript which will become part of the administrative record which EPA will use before we make a final remedy decision. The administrative record is available at both EPA's offices in Boston and at Stratford at the public library. If you wish to buy your own copy of the transcript, you need to make your own arrangements with the transcription service. In order to ensure accuracy in the record, we would ask that anyone who wishes to make a statement please fill out one of the index cards at the back, I guess, of the hall and to provide your name, address, and if you choose, your affiliation.

Hopefully, we'll have enough time for

everyone who wants to make a comment. I'll try to limit people's time to 10 minutes at least initially to make sure we have enough time for everyone. And the meeting will be closed when everyone has had a chance to make their comments. We need to vacate the premises by 10 o'clock and need about 15 minutes to pack up, so we'd like to hopefully close the hearing by about 9:30. Whenever we are through, EPA will be staying around for as long as you'd like after the hearing closes, if you have any other general questions about our activities in Stratford that you'd like to ask.

Again, I want to emphasize that although this is your only opportunity to make oral comments for inclusion into the record, it is not your only opportunity to make comment. Whether or not you choose to make oral comments tonight, you may also submit written comments to EPA which we will consider before we make a final decision. These comments should be mailed to Mike Hill at the address given in the proposed plan. They must be postmarked no later than June 8, 1995. You may also submit those written comments tonight if you have them with you and would like to do that. We have received a number of requests for an extension of a comment period, and we have decided to extend it 30 days. Originally, it was to

close on May 8th, and now it will be extended to June 8th.

During the formal hearing, we will not be responding to questions. However, you may ask questions as part of your statement into the record and a response will be included in EPA's Record of Decision in a portion of that called a Responsiveness Summary where EPA responds to all comments. This will be prepared after the public comment period closes and will be included in the ROD decision, which we hope to issue in late June of this year.

Before I turn it over to Mike Hill, I'd ask if there are any questions on either the hearing format or the public participation process that anyone would want clarified. I guess there's none. I will now ask Mike Hill to briefly recap the results of EPA's investigations into the contamination at the Raymark facility.

MR. HILL: My name is Mike Hill, and I've been the project manager at Raymark for the last six years. I'm going to show you some slides of Raymark, and briefly go over what we went over at the public meeting a few weeks ago.

Raymark is located on 75 East Main Street across from The Dock Shopping Mall, and about half a

mile from the Housatonic River. Raymark manufactured brakes and friction products mainly for the automobile industry. The waste generated at the site included solvents and lead asbestos sludges and a number of solvents. Raymark landfilled their waste on-site and in a number of off-site locations; approximately 60, including 41 residential properties, Wooster School, other municipal properties, commercial properties, and in Ferry Creek.

In the last few years, Raymark conducted an environmental investigation of its property where they installed approximately 66 soil borings, and they installed 66 groundwater monitoring wells to look at the soil and groundwater and find out what contamination was there. And they collected hundreds of samples from those monitoring wells and those borings.

This slide is a map of Stratford. The green area shows in general where Raymark disposed of its waste, and the red stars indicate residential properties where EPA's currently digging up the waste. Approximately three-quarters of those have been excavated to date. These symbols indicate, these red ones here and these green ones indicate the soil borings, and these symbols indicate the monitoring

wells on-site.

From 1919 through the 1970's, Raymark landfilled their waste in lagoons and they built on top of them, and they also landfilled or they disposed of acids and solvents in these acid pits here, which is also one right here, you can see in this aerial photograph. And they had a number of spills of tanks on-site. They had a toluene tank here that spilled. Toluene is a volatile organic chemical used in degreasing and things like that. And they also had a spill of 1,1,1-trichloroethylene, which is another solvent used in cleaning metal parts. And they also disposed in pits solvents. And in this area they disposed of trichloroethylene.

So I just want to show you a number of slides that depict the contamination in the soil and in the groundwater briefly. This slide shows in yellow lead above 10,000 parts per million. And basically you can see wherever there's yellow lagoons and underneath the buildings, you can basically see that the entire site is contaminated with lead in very high concentrations.

The waste at Raymark ranged in thickness anywhere between zero and 24 feet thick, and there's approximately a half a million cubic yards on-site. The amount of waste that we're bringing back on-site

represents about 10 percent of that volume. This slide shows PCB's above 250 parts per million. And you can see, again, the pattern where you find the lagoon sludges you also find PCB's in very high concentrations. This slide shows the organic contamination, volatile organics, the solvents. And you can see here that in this area, this is where the acid pits were located, that's where the trichloroethylene is. And that area is fairly contaminated.

This area up here is where the toluene spill was located. And at this monitoring well location right here, monitoring well V, we found a highly contaminated pocket of liquid that's down about 40 feet, and that's about six inches in thickness. And then at this area we found another one, and it's approximately five feet thick. Mike is going to talk about how we're going to address that. And then the spill location over here in the soils, that's where the 1,1,1-trichloroethylene spill was located. Concentrations there are not that great, as you can see, compared to these areas.

This overhead shows the asbestos on-site. The yellow indicates asbestos greater than 25 percent. And again, you can see that the whole area is

contaminated with asbestos in fairly high levels, again, where the lagoons are located. Just to illustrate the point of where the contamination exists on-site, this is asbestos above one percent, and the asbestos is located virtually everywhere inside the property boundary. And there is some asbestos and contamination you're seeing out here, out here, and that will be addressed by the remedy as well.

The groundwater at Raymark flows basically from southwest -- excuse me, northwest to the southeast across the site in general. And as I'm going to show you shortly, this is the acid spill location, the toluene spill, and the TCA spill. And you're going to see how those areas are responsible mainly for the contamination in the groundwater. This is the toluene concentration in the groundwater of a hundred parts per million, and this area in red is the highly concentrated pocket of liquid, and that pocket is causing a lot of the contamination.

And you can see that the contamination is basically flowing towards Barnum Avenue and in this general direction. There are no off-site groundwater monitoring wells, only on-site groundwater monitoring wells. EPA is going to be addressing the off-site groundwater and the contamination associated with that

at a later date and proposing a remedy like we're proposing now in the future.

Again, here's a highly contaminated pocket of trichloroethylene, one of the solvents. And the groundwater is basically flowing in this direction southeast. And when you look at all of the solvents combined in the groundwater, this just shows the -- you can basically see that the groundwater is flowing in this general direction because there's actually a valley at Raymark, and that concentrates all of the contamination in this direction. And the contamination in the southern, southwestern corner essentially flows also to the southeast.

That's essentially the extent of the contamination. I'll let Mike Jasinski talk about the proposed remedy that we're proposing. Thanks.

MR. JASINSKI: Some of you know me. I'm Mike Jasinski, and I'm the project manager that had our contractor prepare the remedial investigation, which is the study of the contamination, and feasibility study, which looks at alternatives to clean up any Superfund site.

As Mike indicated, during the remedial investigation work that's been done at Raymark for several years, the soil and groundwater contamination

is highly contaminated. And in fact, it's contaminated by some 60 different contaminants, trichloroethylene, asbestos, and so on.

As part of the remedial investigation, we performed what is called a risk assessment. It looks at the baseline conditions for exposures to people who may trespass on the property, people who may be working on the property currently or in the future. In that assessment, we determined that trespassers and on-site potential workers who may be contacting the soils underneath the asphalt in the area of Raymark are potentially at risk from direct contact; that is, contacting it by skin or ingesting it.

Based on those two pieces of information, EPA has determined that there are two critical objectives we must establish and meet to respond to the contamination at Raymark. And they are to prevent human exposures to those soils that exist on that property, and also to remove those highly concentrated pockets of chemicals that are sitting in the groundwater.

As Mike pointed out on his overheads, also as Rich Cavagnero pointed out and as Mike indicated, we don't have enough information to right now propose to the public for comment a remedy to clean up the

groundwater, primarily because we don't have enough information from wells off the property to determine where it is going and whom it may be impacting.

What we did do is look at several cleanup options for the Raymark property, the soil contamination, and the highly concentrated pockets of solvents. And what we did was we looked at five different alternatives is what we call them. They range from a no action alternative; that is, basically leaving everything as it is today and walking away.

We looked at Alternative 2, which is simply capping the facility, which involves demolishing the buildings, capping the facility, removing those pockets of contamination, and returning it to some hopefully beneficial use in the future.

Two other alternatives we looked at were capping the facility, but before we would do that we would do a limited excavation of some 21,000 cubic yards of highly concentrated pockets of PCB contamination primarily in those areas to the far west of the facility over near Long Brook Avenue and in that general area. We would take that material and dispose of it off-site appropriately under federal regulations, and then we would go in and cap the facility, tear down the buildings and the like.

The other two alternatives we looked at primarily dealt with excavating all contamination above the water table. As Mike indicated, we have over a half a million cubic yards of contamination on Raymark proper. Approximately 300,000 cubic yards of that is above the water table. What we looked at in two alternatives was excavating all 300,000 cubic yards and either treating it on-site or treating it off-site, and then returning the facility to reuse again with no contamination in that upper 10 to 12 feet.

What we're proposing this evening is Alternative 2, and that is simply capping the facility. In comparing the five alternatives we looked at, we have several criteria that we have to balance and meet in order to select and propose a remedy for public comment. And they involve protecting human health and the environment, meeting the state and federal requirements, laws, providing long-term protection, reducing mobility, toxicity, and volume through treatment, short-term, looking at the short-term impacts from any one of those alternatives or its effectiveness, is it implementable, can you do it, what does it cost, what does the state think, and why we're here during this comment period, what does the community think.

In looking at the five alternatives, we have provided, and as shown on page 7 of the proposed plan, a matrix that sort of looks like a Consumer Reports presentation. It basically shows in dark black circles what we felt the alternative does relative to not meeting the requirements in dark black, partially meeting the requirements as in half circles, or meeting or exceeding the requirements that are being shown here as clean circles.

In looking at the five alternatives, obviously we came to one conclusion that no action, which we have to look at under law, doesn't meet several of the criteria given in comparison to the other ones. It's not going to do any treatment, we're not going to reduce any toxicity, we're not going to provide any protection over the short-term, the long-term, or otherwise. It can be implemented very easily 'cause we're not going to do anything.

So we're left with four other basic alternatives involving capping, capping with some excavation, and excavation and either on-site or off-site treatment. And what you see is simply a comparison of what we feel these five criteria, which are called balancing criteria, how they factor and how they appear to us today to satisfy or exceed the

requirements we have to look at. And the basic differences, as you can see here, are that we can provide long-term protection and a lot of treatment and reduction of mobility, toxicity, and volume by digging up 300,000 cubic yards, but we're also going to have a lot of short-term impacts by digging that up, either by a lot of truck traffic along that area or by simply a lot of excavation activity on that property. And it may be not that simple to implement. And finally, it's going to cost either $330 million or a billion dollars.

So essentially we were left with these two alternatives to choose from and propose to you this evening. And what it came down to in proposing the capping alternative alone with limited excavation is that we have these two criteria that made it a bit more difficult for us to propose a capping with an excavation than simply capping. That is, 21,000 cubic yards of excavation is not a simple task, treating that material off-site is not a simple task, and trying to maintain some sort of control over an excavation of that magnitude is not an easy task. So there are impacts, there are some short-term problems, there are some implementability problems, and it's going to cost $70 million more than what we propose this evening.

The last two criteria that we don't look at

in most Superfund sites, but for this one in particular we added are looking at potential reuse and the time to reach the cleanup goals. And obviously, in order to provide some potential reuse for this property in the next several years, maybe one to two years, we would have to very seriously look at proposed capping alone in order to get there because excavating 21,000 cubic yards may extend that time period out too far in order to provide reuse in some reasonable time frame. Thank you very much.

MR. CAVAGNERO: Thank you, Mike. A couple of administrative notes before we start the hearing. For those of you who didn't come in that way, came in this way, there are copies of the EPA's proposed plan in the back of the room, and also a brochure from the Stratford Citizens Advisory Council indicating who they are, what they've been doing for the past few years, and their involvement in the project.

And one other detail is that we need to collect the index cards so we can call on people to make their comments. And if you'd like to decide that you want to wait awhile before you decide if you want to make a comment, that's fine. If you decide at a later point, just see Liza, give her your card, and then we can call on you.

The first person here is named Jason Santi, 29 Long Brook Avenue. Did you want to make a comment? Next is Al Santi. Elaine O'Keefe.

MS. O'KEEFE: I'm Elaine O'Keefe, Director of Health for the Town of Stratford. I have reviewed the EPA's proposed cleanup plan for the Raymark facility on several occasions and I want to offer some comments on the plan this evening. Some of the concerns that I will voice have been raised in prior discussions with EPA; however, I am simply reiterating them this evening for the record.

One of my primary concerns with the proposed plan is the tenuous nature of the groundwater contamination beneath the Raymark facility and the extent of this contamination beyond the perimeter of the industrial site. Though I understand that the cleanup plan is designed to focus solely on source control and that groundwater remediation will be addressed separately due to the lack of sufficient information to adequately assess the need for groundwater response action or what such action would entail; however, I feel that in order to fully endorse EPA's proposed cleanup strategy of capping with no excavation, i.e., Alternative number 2, it is imperative that some assurances be given to the Town

that the groundwater issue will be thoroughly addressed and in due haste, as we face the very real possibility of diminishing Superfund monies and regressions in environmental regulations needed to clean up the process.

By removing the pockets of liquid contamination or solvents, which is part of Alternative number 2, clearly EPA will reduce the amount of contaminants that could be available and mobile. However, the strategy is only a partial remedy. Again, we need to know more about the character of the groundwater contamination problem. Testing undertaken by Raymark's consultant does not provide information beyond the property boundaries; thus we are unaware of how far the plume of contamination has advanced. Because the end receptor is the Housatonic River, we cannot know what the long-term impact will be once the contamination plume meets the river. While the tests performed last year on shellfish from the river show no evidence of Raymark contamination, we also cannot rely solely on these data to provide us with a window into what will occur in the next 15 to 20 years.

The uncertainties surrounding the groundwater contamination problem poses public safety issues as well. Several years ago, and some of you in this room

may remember this incident, a foundation caught fire during an excavation project because of the toluene content found in the groundwater seeping into the construction area. The back hoe sparked a pipe and an explosion ensued.

Another major concern about the proposed cleanup plan is the safety of workers and neighboring residents. This would apply to any of the options that we're looking at this evening. Clearly, EPA must address future utility services issues as part of its remediation plans. A particular concern is the fact that a main sewer line threads right through the center of the site. The health and safety of the utility workers who will have the responsibility of maintaining this line in the future must be carefully considered. While I understand that EPA is entertaining the notion of relining the pipe to prevent further erosion and to defer maintenance concerns, this measure alone also does not guarantee that workers will be protected from exposure when the pipe eventually requires replacement in the future. The creation of a wroker safety zone is one suggestion that has and should be pursued.

Yet another major issue is the demolition of the Raymark buildings. This aspect of the remediation project obviously raises many concerns about the

potential for exposure to fugitive dust that may be generated during this process. Clearly, monitoring will be necessary at the actual site and at the Raymark property perimeter. Further, I would request that the Agency for Toxic Substances and Disease Registry and that the Connecticut Department of Public Health and Addiction Services, as well as my office, have the opportunity to review all health and safety plans prior to the commencement of any work on the property. In addition, we would ask for sufficient lead time to allow us to convene neighborhood forums so that residents can be properly informed of the schedule and have an opportunity to hear air their concerns about the demolition and ensuing remediation schedule.

The needs for long-term monitoring of the site subsequent to the completion of the remediation work is another concern. To my knowledge, EPA and Connecticut Department of Environmental Protection are working this out, but have yet to formalize an agreement. I would hope that this agreement can be formalized before the remediation commences.

In closing, I'd like to say that I commend EPA for all the work they've done to develop these options, and the tremendous amount of effort they've put into cleaning up the Raymark sites in Stratford.

And I also concur that Alternative number 2 has many positive features, including the fact that this will provide short-term effectiveness and favors implementability. It is feasible from a cost standpoint. For a variety of reasons, and most importantly, the immediate need to protect public health and to reduce the risks that are currently present at that site, I think it behooves us to move quickly with the remediation process, and Alternative number 2 offers us that possibility. Notwithstanding, by EPA's own analysis, Alternative 2 only partially fulfills the criteria of providing long-term protection and reducing mobility, toxicity, or volume through treatment. Both of these criteria figure into the long-term protection of the environment and human health. Although we all want expediency and wish to see the property restored to useful purposes, it is imperative that we not only concern ourselves with our generation, but also act in mind of the health and well-being of generations to come. Thank you.

MR. CAVAGNERO: Tom Carroll. Angie DeMello, Janet Carlucci.

MS. CARLUCCI: I'm Janet Carlucci and this is Angie DeMello. We are the co-chairs of the Stratford Citizens Advisory Council. In June, 1993, our group

was formed. The SCAC is a diverse group of many local concerned residents, business people, and entrepreneurs who became involved to serve as a link to the community between the community and the various government agencies to hold the agencies accountable to the public and to help obtain and disseminate factual information on the issues.

Our ongoing dialogue with the state and federal legislators have helped to indemnify the residential property owners from any financial liability for the waste found on their property. In the future, we hope that the same consideration will be extended to the town as well.

The SCAC would like to respond for the record on the proposed cleanup plan for Raymark Industries as outlined by EPA. The group is in favor of Alternative 2, capping the site. We see this as the most viable and effective option presented. While we realize comparisons were done between each alternative, we are also aware that the engineering details of how to implement the chosen plan and its four principal components have not yet begun. When the engineering and safety plans are finalized by EPA, we would like them to be made available for public review and a public comment period before the remediation process

proceeds. The SCAC would like to point out the following points and have them kept in mind when developing the engineering and safety plans as they relate to four principal components. Angie is going to start.

MS. DE MELLO: I'm Angie DeMello, as Janet said, and I'm co-chair of SCAC. We're going to address this in terms of the four components that EPA has presented as part of their cleanup plan. Component 1 is decontaminate and demolish facility buildings and structures. There are some points that we would like EPA to keep in mind.

The first is that we would like -- SCAC as a group would like to review the plan when you do finalize the plan with some of these points kept in mind. The first is to ensure that all safety considerations to workers as well as the public are included. We would like to see included in the plans communications between or to both residents of the affected areas and the town in general. 3, we would like EPA to commit to specific dates. And I'm not sure that this is too much of a demand, if possible, to commit to specific dates and times for demolition and capping. I'm sure those dates will change as we go along, but at least to be somewhat time bound so we

have an idea of what we're working under.

Second, as an effect of demolition and remediation, there are young children at shopping centers and the Wooster School, which is also part of the remediation plan, who are going to be exposed to fallout during demolition and removal of waste and capping process. We'd like to ensure that as much safety as is possible is maintained. Older children curious about the site may try to get into places and explore. It always is an exciting place, especially when you're not allowed to go in. Measures to contain all debris, including airborne debris, during all phases of the demolition and capping. And we see a definite need for security guards to ensure that the public is kept out of the facility.

The next is notifying the public when demolition and capping will take place. We recommend that the neighborhood be bulletined and residents be told of when this demolition will take place. We recommend that signs be posted in and around the shopping center warning parents to keep young children away from the area, post numerous items in the newspapers indicating specific dates and times when work will be done, and indicate when conditions will be the most critical.

This is a suggestion, but perhaps it will be expedient, to notify PTA's of surrounding schools of the warnings and the dangers of these particular remediation sites to children. That's definitely a place where children are expected to listen, in school, so you know, the message gets out to them. One of our recommendations, and this I think is a great consideration, is to possibly have a lot of the work done during the night. This will minimize public exposure from traffic, cars, trains, planes, and certainly there are fewer people out on the street at that point, so it's a good option to consider.

Component number 2, which deals really with the removal of high concentrations of pockets of solvents or VOC's from groundwater in the area. We do understand that, you know, there is no specific plan at this point as far as testing the groundwater on and off the site. But we do have some considerations that we would like to express. We'd like to know who will be doing this testing and monitoring, and who will be responsible for the cost; can this groundwater problem, can this testing be done prior to the cap being put on or will it take place after? And I imagine this pertains to the testing off-site as well. We would like to see that the Housatonic and the Sound be tested

for contamination before and after the remediation is done. And with that, I'm going to have Janet, you know, talk on the rest of it.

MS. CARLUCCI: On component number 3, cover the entire facility with an impermeable cap. We would like to see that the clean fill that's brought to the Raymark site be tested to make sure it is clean. After all, this is New England; it's very hard to find any fill that is not contaminated with something. We would hate to see the cap end up being more contaminated than what's already at the site.

How frequently it's tested, maybe every truck load, every hundred cubic yards. We're not quite sure what you would consider. Who would do this testing as well, and also what contaminants would you test for? We certainly don't need fill coming from other sites as well and having it trucked from one site and being dumped on this site as clean fill.

There also are concerns that, as Elaine had spoken of, the sewer line that is on the property. And we certainly would like to see that worked out as well utility workers' safety. Those are all issues with the, once the cap is in place, what you are going to do with those.

The next issue is component number 4,

ensuring the integrity of the cap. Who will be policing the new owners. The details of that would actually need to be worked out as part of this engineering plan. And some of the things we'd like you to keep in mind when you're working on that plan is who would make sure that they maintain the integrity of the cap? What penalties would be implemented if they fail to maintain the cap? What are the deed restrictions that would be placed on the Raymark property? If the deed is broken, who will be the responsible party? Who would assume ownership of the property if the deed was broken?

And lastly, the SCAC supports the proposed plan as outlined. We feel if this is engineered and executed properly, that it is the most intelligent and effective solution for the site and also for Stratford. Thank you.

MR. CAVAGNERO: Before you leave, I need to ask one clarifying question. On the building demolition, you made reference to EPA putting bounds on the time. Did you mean the time frame hours of operation during the day, were you speaking of, or just a schedule --

MS. DE MELLO: The schedule, as well as possibly the number of hours so people are aware that

this is actually happening and to avoid being in the areas at that point.

MS. CARLUCCI: Especially the small children.

MS. DE MELLO: I have a comment that I'd like to address as Angie DeMello and not as co-chair of SCAC. I understand until the cap is finally in place that the facility is the recipient of the residential waste, as well as possibly some of the waste from municipal sites. However, I would like to know what alternative is being made once the cap is put on for any possible residential or municipal sites that are discovered after that cap goes on. I really think that's an important issue at this point because I don't know of any known facility in Stratford that will take that kind of waste. Thank you.

MR. CAVAGNERO: Thank you. Next is the Waterfront Harbor Commission, Robert Sammis.

MR. SAMMIS: The preliminary remarks that I have are for the purpose of explanation. Prior to this evening and following the meeting that was held at the Stratford Library, a letter was sent to Mr. Hill with regard to Ferry Creek, which is a considerable concern to the Waterfront Harbor Management Commission. A subsequent review of the data that was available at the library became apparent, and I believe that was

frame 1-1 that shows that the surface water transport goes to the southwest corner. Mike, if you would put the town map on the thing, people can tell a little bit better what I'm talking about.

The surface water goes into storm drains, as one would normally expect, and then go in their merry old fashion to Ferry Creek. And this is not a new phenomenon, but is one which has been going on for decades. The concern that was expressed in the letter of April 13th was that the sediments have been accumulating as, if you will, the downstream accumulation from Raymark since Raymark started discharging and having surface water discharges in that form.

If you look at the map, which is called Raymark Industries with the town as a whole, the green finger, if you will, that comes down from the Raymark site is for all practical purposes the Ferry Creek discharge zone, and eventually the terminus of that discharges into Housatonic River between what is called Brown's Marina or Brown's Boat Yard and Stratford Marina, too. It is also the junction at which a very large concentration of the seed oyster industry is domiciled. Although those rascals do move around a bit, the oyster beds are predominantly from that area

further down the river, which is the normal transport of the Housatonic.

So the letter of the 13th addressed the fact that everything below the high water mark happens to be state-controlled, state property. And obviously the DEP, the state agency, should be highly concerned about the remediation work which is being done upstream as well as their own property, much in the same fashion that a property owner of private property would want their land cleaned up and returned to hopefully a nontoxic state. This is not to say that the Waterfront Harbor Management Commission knows that the Ferry Creek bed, if you will, is contaminated, but reasonable people, we think, would be left with that conclusion.

Subsequent, as I say, to that, we went over to the library and reviewed the documentation. And if anyone has had the opportunity to review your government's documentation, you'll find that it is voluminous. We've heard of the five-foot book shelf of Western Civilization. This is the 10-foot book shelf of the EPA analysis of the Raymark problem. It is extensive; it is highly detailed; it is highly technical. From that, though, you can derive a certain amount of information, which is in what I would call the public sector, the non-technical sector.

Two things are apparent: The storm water transport, rain water, whatever, that is going to come onto that 33-acre site is going to continue to fall and aim itself through the storm system into Ferry Creek. And by further examination of the data, the groundwater; that is, the subsurface water, continues to migrate in a southerly or southeasterly direction. And strange as it may seem, it is a two-way transport system because the findings of the EPA show that in the deep as well as the lower subsurface testing is that the water by and large is brackish up to the railroad tracks. Brackish simply means it's a mixing of salt and fresh water, so it's coming and going.

And in that regard, we have prepared this letter. Actually, it's dated tomorrow because of the incidence of tonight's meeting, and addressed again to Mr. Hill.

"On behalf of the Commission, the Waterfront Harbor Management Commission, I would like to convey to you and your organization our profound concern with regard to the disposition and remediation with regard to Ferry Creek in Stratford. As I mentioned in our letter of April 13, 1995, we expressed a desire to have an indication as to what activities would be undertaken to eliminate the contaminants found in the Ferry Creek

below the high water mark. To this date, we have not yet received a reply."

"In the interim, we have had the opportunity to review some of the documentation placed at the Stratford Library by your organization. A review of this material reinforces our belief that Ferry Creek is, has been and will continue to be the focal point of storm water discharge from the noted site. In fact, the "capping" of the 33 acres, it would appear that the storm water runoff will be increased as the property will no longer have retention properties. As to the groundwater, this too is of some long-term concern. As the proposed cleanup, Alternative 2, does not remove the most contaminated soils, with PCB's, 21,000 cubic yards we mentioned, these and other organics will continue to leach as they have been doing currently toward the river, and in particular, toward Ferry Creek. It is interesting to note that much of the groundwater, at shallow and deep levels, is brackish. This would lead one to surmise that salt water has infiltrated this area and concludes that there is a subsurface transport system at work."

"The remediation plan calls for on-site testing, through wells, of the ground and surface water. We would suggest that it might be prudent to

establish a number of strategic wells or test sites off the property in the area of Ferry Boulevard and perhaps one or more between the site and the Housatonic River more northerly of the creek."

"We look forward to having a response to our concerns in a fashion that we can respond to it prior to the end of the comment period on June 8 of 1995. Sincerely, yours truly, Robert Sammis, Chairman of the Harbor Management Commission."

And since I have the floor for a minute longer, I would like to, without beating a dead horse, extend my personal concerns about third-party liability. The Town of Stratford has recently gone through a rather traumatic effect of delivering at the time, I believe, a load of tires to an appropriate dump site outside the community. And if my intelligence services, including the local newspaper, inform me correctly, that the Town of Stratford, in spite of the fact that they did the right thing at the right time and they were told it was okay, has subsequently been held liable for helping to contaminate the property because they like so many of us in this community, ha-ha, have deep pockets. If you transport all the contaminated material from the school site to the other places throughout this town, the question stands do we

have third-party liability; and if that's the case, the pockets unfortunately in Stratford aren't deep enough to handle that kind of suit. Thank you very much.

MR. CAVAGNERO: Bob Osborne.

MR. OSBORNE: I'm Bob Osborne, and I represent The Dock, Incorporated. We have reservations about the overall effects of the Environmental Protection Agency's Preferred Plan for the Remediation of the Raymark Facility. We have studied the five alternatives for remediation. We are concerned about the lack of permanence in the Preferred Plan. We are concerned about the very limited removal called for in the Preferred Plan. We are very concerned about the long-term health effects, the lack of protection of the citizens of Stratford, and the absence of any information or studies concerning the groundwater and Ferry Creek in Alternative Plan 2, the Preferred Plan. The current Preferred Plan, Alternative 2, is not consistent with the National Contingency Plan, and therefore is not acceptable. We fear that in less than 30 years, the cap will be compromised and the Raymark property will be in approximately the shape it is right now, with contaminants still unmoved and the EPA still telling us they will study it later. Who then will be responsible for the problem? It will be the same

problem that the community of Stratford faces tonight.

The Dock would like nothing better than to see the Raymark site cleaned up and put back on the tax roles. Commercial activity of any kind would be a welcome alternative to the aging industrial site we see every day. We want to see the source of major contamination of the groundwater and Ferry Creek cleaned up before it is capped and paved over. It simply defies logic and factual evidence for the EPA to acknowledge that the Raymark site is a significant source of pollution (the NPL listing, April, 1995) and then restrict access for future site cleanup by prematurely capping the site. Environmental effects on the entire community, including Ferry Creek, Housatonic River, and area groundwater resources, need to be addressed as part of any site cleanup plan. Unfortunately, the EPA did not use the time it had to make those studies prior to this juncture. If the groundwater migration and Ferry Creek had been investigated in a timely manner, then there could have been a more comprehensive plan for remediation developed which would have addressed the impact of the plan on the Town of Stratford's resources. The plan before us inadequately addresses contaminants at the Raymark site, ignores precedents established by past

practices of the EPA at other similar sites, and threatens our Town's groundwater and surface water resources.

The future of Stratford's economic and human health depends directly on the Housatonic River and its capacity to sustain life. The Shakespeare Theater is another key to sustaining the economic health of the town and future. We believe it is irresponsible, shortsighted, and not in the community's best interest to execute a remediation plan that threatens the vitality of the Housatonic and that of Ferry Creek. There is nothing specific in the preferred plan before us that offers any criteria for off-site impact assessment or the evaluation of the risk to any ecological system beyond the borders of the Raymark property. As we all know all too well, the impact of Raymark's past has extended beyond the site's boundaries. I find it ironic that in addressing the Raymark remediation, the EPA simply wants to pull the covers over the site and ignore the monsters that lurk under the bed.

We have been neighbors of Raymark's for more than 50 years, and we look forward to the day when the site is reclaimed and active again. We also want a new neighbor that will not continue to degrade Housatonic

River and Ferry Creek. According to the EPA itself, Alternative 3 provides three key elements missing in the Preferred Plan, Alternative 2. Alternative 3 more thoroughly complies with existing federal regulations. The proposed excavation and off-site disposal in Alternative 3 eliminates a significant health threat. The third alternative with its excavation and off-site disposal also eliminates a source of groundwater contamination. Alternative 2 does not offer anything but a premature installation of a cap. It is a non-solution to a problem that has gone on for too many years. It is now time to deal with Raymark comprehensively and completely unless we want our children and grandchildren to be dealing with it. The Dock is currently preparing a response to help the EPA protect our environment. We anticipate this response to include the results of our investigation, the identification of specific areas that have not been addressed and yet are vital to the protection of our community, and a site cleanup plan that incorporates more cost-effective and protective, long-term remedial solution.

MR. CAVAGNERO: Chris Kopley, Clem Naples, Rebecca Soukup, Jim Hiller, Steve Garvey, Anne Kelleher Smith.

MS. SMITH: I became involved back in '93 when Mr. Parker came to town and we had a meeting at Stratford High with about 400 townspeople, and he frightened the mothers and babies almost to death. There was crying and hysterics, and something didn't ring right with me. A professional person does not come in and scare a community the way Mr. Parker did. So I took it upon myself to try to read up on everything that came into town. And in the beginning at the Stratford Library, where all information was supposed to be put, there was generic information like "Lead in your Child."

About a month ago, 25 volumes, as Mr. Sammis mentioned -- and I saw your little yellow marker; I knew someone else was there -- arrived. And I thought, "Oh, good, maybe there's some answers to all of my questions." I joined SCAC in the beginning because we had questions. They've done a fabulous job of asking them. To this date, we do not have answers. I read all the notes, even though I was not able to go weekly, monthly to all the meetings. You guys have tried desperately to get answers to questions. We still don't have them. All those volumes, 24, that take up a whole wall of the library, there's no answers to any of our questions.

There's even more questions, as Mr. Sammis brought up, in terms of the water. Your last meeting, you said you were not going to deal with the groundwater problem because no studies were done on it. There's plenty of information in those volumes on groundwater and you're not dealing with them at all. $40 million has been spent so far. For what? We have capped residential, Wooster, the ball fields down near the park, and now we're talking about digging it all up and bringing it over to Raymark and capping it there, because the one line would cost too much to take all of the contaminated soil out of Raymark.

Of the 24 volumes of information, there's nothing that answers any of our problems. Now, let me go back and ask a couple of questions. This 15-page was the most interesting out of the 24 volumes. It's called "The Community Relations Plan, Raymark Industry Site and Surrounding Areas for U. S. Environmental Protection Agency" by Halliburton NUS Corporation, I would like to know how much they were paid for this study.

Let me just read the description of our town. "Community background: Stratford is located immediately east of Bridgeport on Long Island Sound in Fairfield County. Its residents are among those with a

moderate to average income. Much of Stratford's population in the first half of the century was employed by one of several aviation-related industries. Among its distinguishing characteristics, Stratford has a significant older population" -- I wonder how they survived all of those contaminations -- "and the largest number of real estate agents of any community in the state."

Now, as a real estate agent, I find that interesting. It's not factual, but why would whoever was paid big money on a one-paragraph describing our community have to put in a whole sentence that we have the largest number of real estate agents of any community in the state? Also, that we have a population of Spanish-speaking residents, and a significant number of residents living in public housing. Now, is that anyone in this room's description of Stratford? That's it.

I went and read through all 24, I didn't read it word for word, I don't understand a lot of the tests, borings, and lab results, but I don't have to. I was looking for answers to the questions that we raised two years ago. The health results. You lined up mothers hysterical with babies in the heat for lead levels. We still don't have any results on that. The

cancer study, it's still the old facts that there is no significant difference in Stratford than any other community. Now we want to wait and decide whether we're going to take the soil from Wooster and put it on Raymark's and then maybe be liable. Well, if it's good enough to cap on Raymark, why isn't it good enough to leave it alone at Wooster? Why can't you let the kids play on those fields?

Also, I didn't see any connection with Attorney Barry Knot's Leach Family holding who's interested in developing this. At the last meeting there was all kinds of information, the site plans. There is no technical information in the library analyzing what is involved in this and connecting it with what you're going to do there. Also, I know and it says on the front of your proposal that in accordance with the Comprehensive Environmental Response Compensation and Liability Act, Section 117, the law that establishes the Superfund program, certain things have to be done. And yes, technically, you did them. You did establish a Citizens Advisory Committee. I don't know if they even know that that's what they are. They are technically established to meet the requirements of this law.

You established a medical -- I don't know

what you call it, but there is no information in those 24 volumes from the Stratford Health Department survey. There is no information from the health effects study funded by the ATSDR at the library. There is no information on the lead screening program. There is no information on the Public Works screening program.

So technically, on the surface you've accomplished the law, but in terms of real facts and information, you have come in and hurt Stratford. And as a real estate agent and as a person who has lived here and loved Stratford, to see what you've accomplished -- this was my time to say it and I took it. Thank you.

MR. CAVAGNERO: Ann McCrory. Is it Lori Henderson?

MS. HENDERSON: My name is Lori Henderson. I'm a member of SCAC. A couple of days ago I called Liza Judge in regards to the fill that was put in between Long Beach and Pleasure Beach. She told me that the fill was taken out of Housatonic River. Housatonic River is in bad shape. So is our Sound. We need to find out whether or not this contamination came from Raymark or if it happened naturally, which I don't think it did. Let's think of our river, our Sound, community, and wildlife. If we don't do this right the

first time, we'll be doing this again in 10, 20 or 30 years. Let's hold these owners responsible in court now, even if it means that they go bankrupt. They didn't care about us. Why should we about them? And with this going on, let's get our legal system changed by letting our town, state, and government officials know that this can't and will not be tolerated again. Let's not let companies all over our country make money by contaminating our earth. We only have one. Let's keep it clean. DEP and EPA officials, you are here to help. Let's do this right now. Thank you.

MR. CAVAGNERO: Rudy Weiss.

MR. WEISS: Rudy Weiss, Councilman-at-Large, Town of Stratford. I just want to take a couple minutes to echo my support for the concerns of Elaine O'Keefe and the Stratford Citizens Advisory Council regarding the site cleanup. And I would also just like to ask that during this process as problems and conflicts arise that the EPA continue the spirit of cooperation in working with the Town and the neighbors to remedy problems that are bound to come up during this process.

I also want to take a few minutes tonight because I thought it would be proper to thank a few people that have spent an awful lot of time and been a

huge help to the Town regarding this whole issue. And I'd like to start with Elaine O'Keefe, Andrea Boissevain, Bill McCann and Mike Barnart from the Town. And I'm sure there's probably some other people that I'm not as aware of that put so much time and effort into the handling of this situation as something that's been very time-consuming and complex over the past few years.

I'd also like to thank the Stratford Citizens Advisory Council, who have been the eyes, ears, and voice of the Town through this process and have been a huge help not only for the Town administration, but for the Town Council. And I know there's more than this, but the people I've worked with over the past year, Janet Carlucci, Angie DeMello, Cindy Kaplan, and Don Patterson. I know there are a number of other people that also deserve a lot of thanks on behalf of the Town.

And in closing, I'd like to also thank the EPA and DEP, who have worked together with the Town throughout this process to speed the cleanup up and to also minimize the inconvenience of the Town as much as they could and also the Town's future liability. The speed -- and I know there are some concerns tonight that need to be addressed a little bit further, but the

speed at which this is moving forward is lightning fast, considering the situation, and my personal feeling is that the faster this is done and done right, the better off the town is going to be, both economically, just a perception, and I think everybody's overall well-being. And I just wanted to make sure that we don't forget that we have a lot of work left yet with the EPA and DEP, and hopefully we can continue the good work that's gone on so far. Thank you.

MR. CAVAGNERO: John Gloria. Kim Sterling.

MS. STERLING: I feel somewhat obliged to my fellow SCAC members to say a little something in defense of our group. I don't think any of us feel as though we've been pawns by the establishment. Every other Wednesday a group of citizens who come from all walks of life meet in the basement of the library because we all love this town and we all want to see that the right thing is done. So I certainly don't feel that we were played for a dupe or anything like that.

My biggest concern about this plan is in the actual implementation of the demolition of the Raymark building itself. I am a mother of two small children. And fortunately, I've done enough reading to know that

there is such a thing as ambient fallout regardless of precautions that are going to be taken at the site. And I would certainly do my very best to keep my children away because they're very small bodies and they're much more vulnerable to this kind of thing than grownups are.

It's unfortunate that the actual site itself isn't painted with bright yellow and blue markings. People tend to think that if they can't see it then, well, it's probably not really there and it's not so bad. They also tend to operate under the mindset that if something is not an imminent threat, if people aren't dying in droves tomorrow or next week that there is not a real cause for concern, and that's not the case. I know, as the people at the EPA know, as the ATSDR know, as the health department knows, there are things that have a cumulative effect that may not manifest themselves for 15 or 20 years. But how sad for me as a mother to think that one of my children could possibly be diagnosed with some bizarre form of cancer when they're in the prime of their lives.

So that's the concern that our group is operating under. And I would really strongly request that while the demolition is occurring neighborhood forums do take place to notify people in the area,

people who may not know about it or even maybe care about it. There are an awful lot of mothers coming in and out of Stop & Shop. And you know, we certainly don't want to damage their business, but I think we really need to take in account that we need to protect people who may not know about it. Thank you.

MR. CAVAGNERO: I've got one more name which, I'm sorry, I cannot read. It's Steven W. from Shelton, Mizia.

MR. MIZIA: I happened to read the news and I saw this article, and I'm with an environmental remediation outfit in New Jersey. But this is close to home and anything close to home I get involved in or try to find out what's going on with it. I'd just like to ask a couple questions, though. Is the lead content, which is 10,000 parts per million, that's totals or is that TCLB's?

MR. CAVAGNERO: We're not going to do questions and answers during the hearing, but we'll be happy to do it afterwards.

MR. MIZIA: I was just curious about that. And how many yards of that. Those are my questions. You have similar situations in New York and places in Connecticut with these type of toxics, and all sites are different and how you implement your program is

basically related to site specific. All sites are different. But I just wanted to ask these questions because I was curious about what's going on around my area. And I've been involved in waste energy facilities all over the United States, including Connecticut, so I wanted to know more about what's going on here.

MR. CAVAGNERO: Mike will be happy to speak to you when we're through, either Mike. Is there anyone who hasn't signed up who would like to make a statement for the record? He can ask his questions for the record, if he'd like. All I'm saying is we're not answering questions. The answers will come as part of the Responsiveness Summary. He can ask them if he wants. If he wants the questions and answers on the record, he can do that, or he can ask them informally afterwards. Either one. Could we have your name, sir?

MR. HARGUS: Ed Hargus. All I want to know is who's paying for this project? Is the taxpayer, Town of Stratford? I'm very disturbed. The reason I'm disturbed is there's so many homes for sale, and I'm wondering if this toxic business has something to do with it. And if we have to pick up the tab as a taxpayer, I think I'm ready to move out myself. It give us some bad publicity in this town, and I don't

think it was really needed. I didn't believe in this toxics. I worked in Raybestos for one year. I played on them softball fields for 40 years. I'm 73 years old. I'm still here. No cancer, no nothing. I'm still chasing women. So that's the reason I don't believe them.

Another thing is we're letting this developer get off the hook. I think he should pick up the tab for some of this, some of this work that's got to be done. You know, everybody is looking, these developers are looking for everybody to do their work for them and then they come in and they start dictating the town. Now, we don't need any more stores, any more in town because we've got a lot of stores now that are empty. So a project like that is not going to do Stratford any good. We're looking for maybe some kind of small industry in there, clean industry, that's going to pay decent wages. Now, these stores are only going to pay five-dollar minimums. So that's not going to help the families in this town.

I don't like to lose the tax base that's going to go in there, but we got to think this thing out before it goes through with it. We've got to get something better than stores in there; otherwise, I don't believe in the project at all. So you guys look

at it at a different view than the average taxpayer does. You know, and we need industry, that's what we need, some clean industry that will pay a decent wage to a decent guy or a decent gal. Stores are not going to do the work for us.

As far as the runoff, the water runoff, I go along with Mr. Sammis. There's a guy that's very, very knowledgeable in this town. I wish he was the Town Manager, to tell you the truth. But if you listen to this fellow, he knows what he's talking about. And runoff is very important. So like I said, I just don't simply don't believe in what's happening, and I wish you'd look at it at a different view. Thank you.

MR. CAVAGNERO: Is there anyone else who would like to -- would you like to get your questions on the record?

MR. MIZIO: Yes, I think that might be helpful. If the 10,000 parts per million is totals or is it 10,000 parts per million of lead? That must be totals, not the leachable, the TCLPs. I'm just curious what the TCLPs are.

MR. HILL: We'll answer you after.

MR. MIZIO: Okay.

MR. CAVAGNERO: If anyone read from a prepared text and would like to, we'd appreciate if you

could leave the stenographer a copy of that to make sure we get it accurately transcribed, if that's possible.

If there is no one else who'd like to make a comment for the record, I'd like to thank you all for coming. And I remind you again that those who did not make comments or who did make comments may still submit any written comments in addition to what you've said tonight or have chosen not to say. You have to get them postmarked no later than June 8, sent to Michael Hill. And the address is in the Proposed Plan, which hopefully you have a copy of. If not, there are extras on the table in the back of the hall. And like I said, we'll be here for another hour or so and be happy to speak to anyone that has any questions. Thank you very much.

(The following questions were submitted in writing by John Gloria of 250 East Main Street, Stratford, Connecticut, 06497.)

"How did EPA determine where Raymark had deposited their waste?"

"How would anyone know if their site has had waste deposited on it?"

(The Hearing was officially closed at 8:35 p.m.)

C E R T I F I C A T E

I hereby certify that I am a Notary Public, in and for the State of Connecticut, duly commissioned and qualified to administer oaths.

I further certify that the record of the proceedings held in this matter was taken by me stenographically in the presence of counsel and reduced to typewriting under my direction, and the foregoing is a true and accurate transcript of said proceedings.

I further certify that I am neither of counsel nor attorney to either of the parties to said matter, nor am I an employee of either party to said matter, nor of either counsel in said matter, nor am I interested in the outcome of said cause.

Witness my hand and seal as Notary Public this 9th day of June, 1995.

Janet C. Mills
Notary Public

My Commission expires:
October 30, 1996

ATTACHMENT C

SUMMARY OF QUESTIONS AND ANSWERS FROM THE OPEN HOUSES, APRIL 8 AND 11, 1995

EPA OPEN HOUSE MEETING SUMMARY
STRATFORD PUBLIC LIBRARY
STRATFORD, CONNECTICUT
APRIL 8 AND 11, 1995

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

RAYMARK II
STRATFORD, CONNECTICUT

For
U.S. Environmental Protection Agency

By
Halliburton NUS Corporation

EPA Work Assignment No. 47-1LH3
EPA Contract No. 68-W8-0117
HNUS Project No. 4847

April 1995

Halliburton NUS
CORPORATION

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APRIL 1995

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EPA OPEN HOUSE MEETING SUMMARY
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
RAYMARK II
STRATFORD, CONNECTICUT

1.0 INTRODUCTION

On Saturday, April 8, and Tuesday April 11, 1995, the U.S. Environmental Protection Agency (EPA) hosted open houses to present its proposed cleanup plan (attached in the appendix) for the Raymark Industries, Inc. Superfund Site to the public. The events, held in the Lovell Room of the Stratford Public Library, began at 11:00 am and ended at 3:00 pm (on Saturday, April 8) and began at 4:00 pm and ended at 8:00 pm (on Tuesday, April 11). Thirty-four people signed the sign-in sheet on April 8, including the Town Manger and Chair of the Waterfront Harbor Committee, four representatives of the State (Department of Environmental Protection - DEP and Department of Public Health and Addiction Services -DPHAS), four representatives of the media (The Fairfield County Weekly, the Bard, the Connecticut Post, and WICC radio), five members of Stratford Citizens Advisory Committee (SCAC), and three representatives of Leach Family Holdings (who hold a purchase and sales agreement for the Raymark Facility). Approximately 50 people attended the April 11 event, including the Stratford Health Director and Town Engineer, five representatives of the State (DEP, DPHAS, and the Department of Transportation - DOT), four members of SCAC, two persons representing Raymark, one person representing Raytech, and three representatives of Leach Family Holdings.

The meetings were held to discuss the results of the Remedial Investigation (RI) and risk assessment, describe the remedial alternatives evaluated in the Feasibility Study (FS), and articulate the components of the proposed source control cleanup plan. From 11:00 am to 12:30 pm (on April 8) and from 4 pm to 6:30 pm (on April 11), those attending the open house were able to review aerial photographs of the site and poster boards depicting the highlights of the RI, the FS, and the proposed plan and ask one-on-one questions of EPA staff. A question and answer session followed the forty-five minute presentations, ending at 1:42 and 7:53, respectively.

2.0 SUMMARY OF PRESENTATIONS

Wendy Hyman, from the Fairfield County League of Women Voters, who volunteered to be the open house moderator, opened the one and one-half hour presentation session (12:35 pm on April 8 and 6:30 pm on April 11), and introduced the speakers. They included Liza Judge, the site Community Involvement Coordinator; Michael Hill and Michael Jasinski, Remedial Project Managers, and Margaret McDonough, Risk Assessor, from EPA. Ms. Hyman reviewed the agenda (attached in the appendix) and outlined the presentation ground rules (the project only addresses waste at the Raymark Facility, and excavated residential and Wooster School soils consolidated at the Raymark Facility). At the April 11 meeting, she also indicated that all questions should be written on the 3 by 5 inch cards that were passed out. Ms. Judge then reviewed the three methods of participating in the public comment period process and encouraged those in attendance to write their comments on the single-sheet handouts available by the sign-in sheet. Mr. Hill reviewed the history of the site, stated that to

date, excavation had been completed at 29 of 41 residential properties that had Raymark waste, and described the highlights of the Remedial Investigation through use of overhead graphics and slides. Ms. McDonough discussed Chapter 6 of the RI report, the baseline human health risk assessment. She also indicated that no ecological risk assessment was performed because no significant amount of wildlife habitats or ecological receptors existed on the site. Through use of overhead graphics, she described the risk assessment process, the contaminants of concern, and the potential human population that was evaluated in the assessment.

Mr. Jasinski identified the existing threats to the public and groundwater if action is not taken at the site, described the remedial alternatives evaluated in the FS, discussed the components of EPA's proposed cleanup plan, and identified the nine criteria EPA uses to evaluate remedial alternatives. Ms. Judge described the criteria the public should focus on in providing public comments on the proposed cleanup plan and confirmed the public hearing date of May 4, 1995, at 7:00 pm in Council Chambers.

Ms. Hyman then opened the session to questions and answers.

3.0 COMMENTS AND RESPONSES

Questions and answers from the open houses have been merged into one summary to provide a broad picture of issues of concern to Stratford citizens. The topics covered have been grouped: proposed cleanup plan; other alternatives; costs; site re-use; off-site impacts, including groundwater; risk assessment; and miscellaneous.

3.1 *Proposed Cleanup Plan*

Comment: Will it actually take 1 to 4 years to complete the cap?

Response: Mr. Jasinski indicated that a 33-acre area typically takes this long to cap. However, since the developer is on a fast track, cleanup activities may have to be speeded up. For example, the excavation of the Wooster Middle School and the remaining residential parcels would have to be completed immediately and building decontamination/demolition may have to be performed for more than eight hours a day and on weekends. EPA will keep the community informed.

Comment: Will implementation of Alternative 2 hamper the litigation against Raymark?

Response: Mr. Hill indicated it would not.

Comment: The chart on page 7 of the proposed plan indicates that Alternative 2 would only partially provide long-term protection. Why is that?

Response: Mr. Jasinski stated that all caps involve some uncertainty. The concern involves cap maintenance and the existence and enforcement of institutional controls such as local ordinances. As long as controls and monitoring are conducted properly, long-term protection is ensured. If maintenance and enforcement could be guaranteed, the half circle would be an open circle, indicating it meets or exceeds the criteria.

Comment: Does the half circle indicate that something could happen to the cap to keep it from being effective?

Response: Mr. Jasinski stated that nothing should happen to keep the cap from performing as expected if it is properly installed and maintained. The cap itself should be approximately 3 feet below the surface.

Comment: What is the expected life of the cap?

Response: Mr. Jasinski responded that EPA typically assumes 30 years for costing purposes. Caps are permanent remedies, provided necessary maintenance is performed. Monitoring will help tell if the cap is functioning properly.

Comment: Could the cap handle the weight of heavy machinery? What about installing a foundation?

Response: Mr. Jasinski indicated that the cap could be constructed to accommodate construction and buildings.

Comment: Who will be responsible 50 years from now for cap maintenance?

Response: Mr. Jasinski said that in situations where funding for site cleanups comes from the Superfund Trust, the state must pay for 10 percent of the costs (the operation and maintenance provisions). Five million dollars of the $40 million estimate for the proposed cleanup plan is for operation and maintenance. The state must ensure future maintenance of the remedy.

Comment: Will the developer maintain the pavement? What is our recourse to ensure this is done?

Response: Mr. Hill indicated that any developer would have to sign a prospective purchaser agreement that would address these kinds of responsibilities. The incentive to sign would be the trade-off for liability protection.

Comment: How would airborne contamination be contained during demolition?

Response: Mr. Jasinski indicated that among the control options are wetting the material or conducting the activity under a tent-like structure. Since the capping option is still out for comment, the design features of the cleanup have not been identified. Once an approach has been proposed, EPA would seek the public's view on details of the demolition activity.

Comment: What does the vapor collection system do?

Response: Mr. Jasinski said it collects potential VOC gases generated and protects the cap. The VOCs collected would be treated with activated carbon.

Comment: Has the vapor control system you are proposing for the cap been used successfully elsewhere?

Response: Mr. Jasinski stated that caps and vapor control systems are a standard approach in dealing with landfills. These devices have been used in tandem many times.

Comment: Would EPA select Alternative 2 if the developer was not in such a hurry?

Response: Mr. Hill indicated that Alternative 2 is the most logical alternative to implement based on EPA's evaluation of the criteria. Mr. Jasinski stated that EPA supports the Town's position that cleaning up this facility is a priority, because of its re-development potential.

Comment: How would the sewer line be repaired if the cap was lying over it?

Response: Mr. Jasinski stated that this issue was recently discussed with the potential developer and will be discussed with the Town Engineer in the near future. EPA has been exploring whether the line could be relocated to an off-site route. EPA may also design the cap so the sewer line could be repaired on site by lining the existing pipe.

3.2 Other Alternatives

Comment: What is the difference between Alternatives 4 and 5?

Response: Mr. Jasinski stated that Alternative 4 would excavate facility waste and dispose of it off site. Alternative 5 would excavate the waste and treat it on site. In both cases, waste below the water table would remain on site.

Comment: Are there any facilities that could accept the waste that would be generated by implementing Alternative 4?

Response: The treatment options evaluated for on-site treatment include solidification to treat the lead and thermal desorption to address PCBs and solvents. Both were analyzed in treatability studies conducted on Raymark waste. A question exists whether there are vendors that can accommodate the vast waste volumes to be treated under Alternatives 4 or 5. Of course, anything can be done for a high enough price.

3.3 Costs

Comment: Is the cost of the five-year review factored into the costs indicated in the proposed cleanup plan?

Response: Mr. Jasinski indicated that it is, and is stated in terms of present worth. Of the $40 million estimated to implement Alternative 2, $35 million is the cost for the cap (and $10 million of that $35 million is for decontamination and demolition). An estimated $5 million would be used for long-term monitoring and five-year reviews over the 30-year period assumed for costing purposes.

Comment: Why isn't Raymark paying for all this? Where will the $40 million come from and to whom will it be paid?

Response: Mr. Hill stated that EPA is currently in litigation with Raymark. He is sure Raymark will have to pay but the actual amount is in question since the issue is part of a settlement that involves all those suing the company, including people with health problems caused by exposure to asbestos. This should be resolved within a year or so.

Mr. Jasinski indicated that money for the cleanup will be borne by the Superfund Trust Fund and that the US Army Corps of Engineers will be conducting the cleanup design. The Corps has hired Foster-Wheeler to do the actual cleanup.

Comment: How much will the groundwater cleanup cost?

Response: Mr. Jasinski indicated that he had no idea how much it would cost because insufficient groundwater data exists. The groundwater study EPA will initiate may show that no remedial action is necessary.

Comment: What would it cost to excavate all the waste, not just the waste above the water table?

Response: Mr. Jasinski stated that alternative had not been analyzed but that he would guess that such activity would involve approximately 550,000 cubic yards and would cost approximately 2 to 3 times the $1 billion estimate for Alternative 4.

Comment: How were the costs developed?

Response: Mr. Jasinski stated that the costs specified in the proposed cleanup plan are not design costs. They are estimates calculated on assumptions developed on the concept embodied in Alternative 2. According to EPA guidance, the costs estimated in the FS could increase by as much as 50 percent or decrease by 30 percent.

3.4 Site Re-Use

Comment: If the proposed plan is implemented, what type of commercial activity could be allowed?

Response: Mr. Jasinski indicated that EPA policy encourages site re-use. However, EPA is not involved in any decisions about what type of development could occur on site except that any development that would not damage the cap would be acceptable. A developer would have to work closely with EPA to ensure that its plan and the EPA cleanup plan were compatible. For instance, the pilings could be extended early in the process so the cap could be laid around them. Raymark and a potential developer of a retail establishment (Leach Family Holdings) have signed a purchase and sales agreement; representatives of Leach Family Holdings are here and any questions concerning the development plan should be directed to them after the question and answer session.

Comment: The graphic of the mall configuration the representatives of Leach Family Holdings have on display indicates extensive plantings on the property. Will they hurt the cap?

Response: Mr. Jasinski observed that the types of plantings would have to be limited by their potential impact on the cap. The Town of Stratford is also considering a zoning ordinance on large trees. The cap design envisions 2 feet of soil to control drainage and parking lot impacts.

Barry Knott, a local attorney hired by Leach Family Holdings, stated that the developer intends to plant the trees in earthen berms; only plants with shallow roots will be allowed.

Comment: I want to hear more about the proposed redevelopment.

Response: Ms. Judge recommended that since the focus of the open house was to discuss the proposed cleanup of the Raymark Facility, anyone interested in talking about site redevelopment could discuss the matter with Leach Family Holdings representatives after the meeting. Mr. Jasinski assured the audience that the proposed redevelopment plan had no effect on EPA's proposed cleanup plan.

3.5 **Off-Site Impacts, Including Groundwater**

Comment: What is the fate of the contamination that would be buried under the cap?

Response: Mr. Hill stated that it could be there forever. Solvents are the primary contaminants found on the site that migrate; the proposed cleanup plan envisions removing solvent pockets. Since the other contaminants are less likely to migrate, they are not as great a threat to groundwater, which the EPA will be investigating soon. Even if a groundwater problem is determined, it would not affect the capping proposal because contaminated groundwater typically is addressed by pumping through extraction wells.

Mr. Jasinski reminded the audience that the cap would keep water from seeping into the waste from above, so leaching would be reduced.

Comment: Why has EPA separated cleanup of the soil and the groundwater? Is EPA not dealing with it because Raymark did not monitor the groundwater?

Response: Although there are many monitoring wells on site, Mr. Jasinski reiterated that no monitoring wells were installed downgradient of the Raymark Facility so EPA does not know what impact contaminated groundwater is having off site, including on the Housatonic River. Raymark is not the only possible source of groundwater contamination in the area. EPA will

need to initiate and complete a comprehensive study of the groundwater and may come back in a public forum proposing a groundwater cleanup strategy. In the interim, EPA has proposed to remove the concentrated pockets of liquid solvents to reduce the release of contamination to the groundwater.

Comment: How much contaminated groundwater has gone beyond the site?

Response: Mr. Hill stated that EPA has no idea how much or how far it has gone, only that it is flowing off the site.

Mr. Jasinski indicated that of the site contaminants, the solvents are the ones that would migrate but they would not likely have ecological impacts. EPA also needs to determine if recreational impacts should be reviewed.

Comment: Will laying the cap impede any groundwater cleanup?

Response: Mr. Hill stated that it would not. The groundwater study will analyze data collected from off-site wells. If analysis of these samples indicates a risk, one alternative could be to pump and treat the groundwater through wells installed at the edge of the Raymark Facility property. If the study indicates no risk exists, no pumping would be necessary.

Comment: Does the big sewer pipe across the property leak TCE?

Response: Mr. Hill stated that the pipe contains sanitary waste and not chemicals. However, the path in which the pipe lies could be a conduit for contamination.

Comment: Is there any evidence that the Raymark Facility waste was in the Housatonic River?

Response: Mr. Hill stated that none had been found yet. Disposal areas from the facility exist along the river. Raymark discharged its wastewater to Ferry Creek for many years. Ferry Creek continues to flow to the Housatonic River. EPA is currently investigating the extent of contamination in Ferry Creek and, if necessary, the Housatonic River.

Mr. Jasinski added that fish sampling has been completed in various ponds around town. DPHAS will be issuing a press release on the results in the next few weeks.

3.6 Risk Assessment

Comment: What cleanup levels are EPA using and how are they derived?

Response: Ms. McDonough explained that no soil cleanup standards exist; EPA uses the results of the risk assessment to develop soil cleanup levels. Only groundwater has cleanup standards (maximum contaminant levels established under the Safe Drinking Water Act).

Comment: The risk assessment was conducted using only the 33 acres of the Raymark Facility. What about the impact on people who live adjacent to the facility? Are we safe?

Response: Mr. Hill said that to date, no airborne contaminants have been migrating off site at levels that pose a concern, based upon available sampling taken at the Facility.

Comment: Was the risk assessment based on actual or hypothetical conditions?

Response: Ms. McDonough indicated that the evaluation is based on the hypothetical situation in which nothing is done to the site in the future.

3.7 Miscellaneous

Comment: Why wasn't the scientific information about the proposed cleanup plan placed in the library until just recently?

Response: Ms. Judge indicated that the reports were completed last week and were placed in the information repository at the library by the start of the public comment period on April 8.

Comment: Has the town hired a technical consultant to review this material?

Response: Ms. Judge stated that SCAC had not pursued obtaining a technical assistance grant from EPA to pay for a technical advisor. Elaine O'Keefe, Director of the Stratford Health Department, said that the town had had a technical advisor but that Andrea Boissevain was now serving in that capacity.

Comment: Will we be subject to suit by Raymark?

Response: Mr. Hill reminded the audience that on January 10, 1995, EPA New England Regional Administrator John DeVillars wrote a letter pledging that EPA would protect Stratford residents from any suits by Raymark resulting from the cleanup of residential properties.

Comment: What if the state disagrees with EPA's proposed cleanup plan?

Response: Mr. Jasinski stated that EPA has kept the DEP informed of the development of the proposed cleanup plan; it appears the state is supportive of the concept set forth in the plan . However, until EPA receives written documentation from the state, EPA will not know the State's official position.

Ms. Elsie Patton from the DEP indicated that her agency had reviewed the proposed cleanup plan and concurred with its concept. However, no official letter supporting the action has been sent.

Comment: What is brownfields?

Response: Mr. Hill related that it is an EPA initiative to expedite cleaning up contamination in urban areas to lure back industry and shore up communities' economic base. EPA has brownfields projects underway in Bridgeport.

Comment: Will EPA clean up all the contamination in Stratford?

Response: Mr. Hill stated that 29 of the 41 residential properties identified as needing excavation have been completed to date. The remaining 12 will be finished by the fall. EPA expects that the proposed plan for dealing with commercial properties and Ferry Creek will be in place by the summer of 1996. The state is dealing with municipal properties.

Ms. Judge reminded the audience of the three ways to participate in commenting on the EPA's proposal and requested that comments focus on criteria numbers 3 through 7 identified on page 7 of the proposed cleanup plan.

4.0 EPA COMMITMENTS

1. EPA will keep the community informed of issues involved in the decontamination/demolition construction schedule, including extended hours, weekend work, etc.

APPENDIX

Proposed Cleanup Plan for

Raymark Industries, Inc.
Stratford, Connecticut

The Proposed Cleanup Plan

After careful study of the Raymark Facility, the EPA has developed a plan to reduce risks from the sources of the facility's contamination. EPA is proposing the following cleanup plan that would:

- *Decontaminate and demolish all buildings and structures*
- *Remove the highly concentrated pockets of liquid (solvent) contamination from contact with groundwater*
- *Cover the entire facility with a cap to prevent people from coming into contact with the contamination and to minimize the amount of water seeping into the waste*
- *Ensure the integrity of the cap by inspecting it regularly, minimizing intrusive activities, and monitoring groundwater and surface water*

More on the components of the proposal appears on page 2.

Learn More About the Proposed Plan's Potential Effects on Stratford

The EPA will describe this proposed plan and how it compares with the other cleanup options evaluated for the Raymark Facility, and respond informally to your questions and concerns at two informational open houses.

Open Houses

Saturday, April 8, 1995
11:00 AM to 3:00 PM
(presentation and Q&A 12:30 to 1:30)

Tuesday, April 11, 1995
4:00 PM to 8:00 PM
(presentation and Q&A 6:30 to 7:30)

Lovell Room
Stratford Public Library
2203 Main Street

See page 8 for details.

Official EPA responses, however, will only be provided if presented to EPA at the May 4, 1995 public hearing (7:00 PM at the Town Hall) or submitted in writing anytime during the 30-day public comment period.

Tell Us What You Think ...

EPA is accepting your comments on the proposed plan from Saturday, April 8 through Monday, May 8, 1995. You do not need to be a technical expert to comment. If you have any concerns or preferences on this proposal, EPA wants to hear them before making a final decision on how work should proceed at the Raymark Facility.

There are three ways to formally register a comment:

1. Write down your comments on the attached sheet, or on other paper, and leave them with us at one of the two open houses.
2. Send written comments postmarked no later than Monday, May 8, 1995 to:

   Michael Hill (HSL-CAN5)
   Remedial Project Manager
   U.S. EPA
   JFK Federal Building
   Boston, MA 02203

3. Offer oral comments during the public hearing scheduled for Thursday, May 4, 1995, in Council Chambers, Town Hall (see page 8 for details).

In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (Section 117), the law that established the Superfund program, this document summarizes EPA's proposal for site cleanup to help the public understand and comment on the proposal. For detailed information on the proposed cleanup plan and other options evaluated for use at the facility, see the Raymark Facility Remedial Investigation and Feasibility Study available for review at the information repository at the Reference Desk, Stratford Public Library, 2203 Main Street in Stratford.

A Closer Look at the EPA's Proposal...

The cleanup proposal can be divided into four principal components. This cleanup plan will address only the soil-waste material being excavated from residential properties (approximately 40,000 cubic yards), waste historically buried on the Raymark Facility, and approximately 30,000 cubic yards of soil to be removed and brought to the facility from the Wooster Middle School.

The site map on page 3 shows the locations discussed in the following paragraphs.

1. **Decontaminate and Demolish Facility Buildings and Structures**

All buildings and other structures on the facility would be decontaminated and demolished. Contaminated building remains would likely be removed from the property and appropriately disposed, while uncontaminated material may be used to level the ground surface. It is anticipated that existing building foundations will be left intact.

2. **Remove the Highly Concentrated Pockets of Liquid (Solvent) Contamination from Contact with Groundwater**

Highly concentrated pockets of liquid contamination currently in wells near the former acid neutralization pits and the former toluene spill area appear to serve as a continuing source of contamination to the groundwater. These sources of contamination would be removed to the reasonable extent possible.

3. **Cover the Entire Facility with an Impermeable Cap**

A multi-layered barrier (cap) would be constructed over the facility to prevent people from coming into contact with the contaminated soil either by direct exposure (touching) or by incidental ingestion (accidentally eating). The cap would also minimize rain from infiltrating the contaminated soil-waste material on the property and moving this contamination into the groundwater.

Two other important features would be incorporated into the cap. One would be to collect water that may seep through the top layer of the cap, but not into the waste, and discharge it into a storm water drain. The second would be to construct a piping system to collect solvent vapors that could potentially build up below the cap and treat them in an on-site emission control system.

Before the cap is constructed, the contaminated soil-waste material from residential properties and the Wooster Middle School would be used to level the ground surface.

4. **Ensure the Integrity of the Cap**

Several restrictions will also be necessary to protect the cap and assess the cleanup's effectiveness. Cap maintenance would include regular inspections to ensure the system is working as designed. Formal restrictions on site use would prohibit activities that could damage the cap. Quarterly groundwater and surface water monitoring would determine the quality of the water leaving the facility and the effectiveness of the chosen cleanup plan. Every five years, EPA would review site conditions to assess whether the cleanup action is working as planned.

The EPA will also begin additional studies to further evaluate the groundwater contamination, and at the same time, the effectiveness of the chosen cleanup plan. The additional information from existing and newly installed groundwater monitoring wells will allow the EPA to identify potential groundwater cleanup options in the future, if necessary. If they are needed, these options would be presented to the public for comment at a later date.

Why is Cleanup Needed?

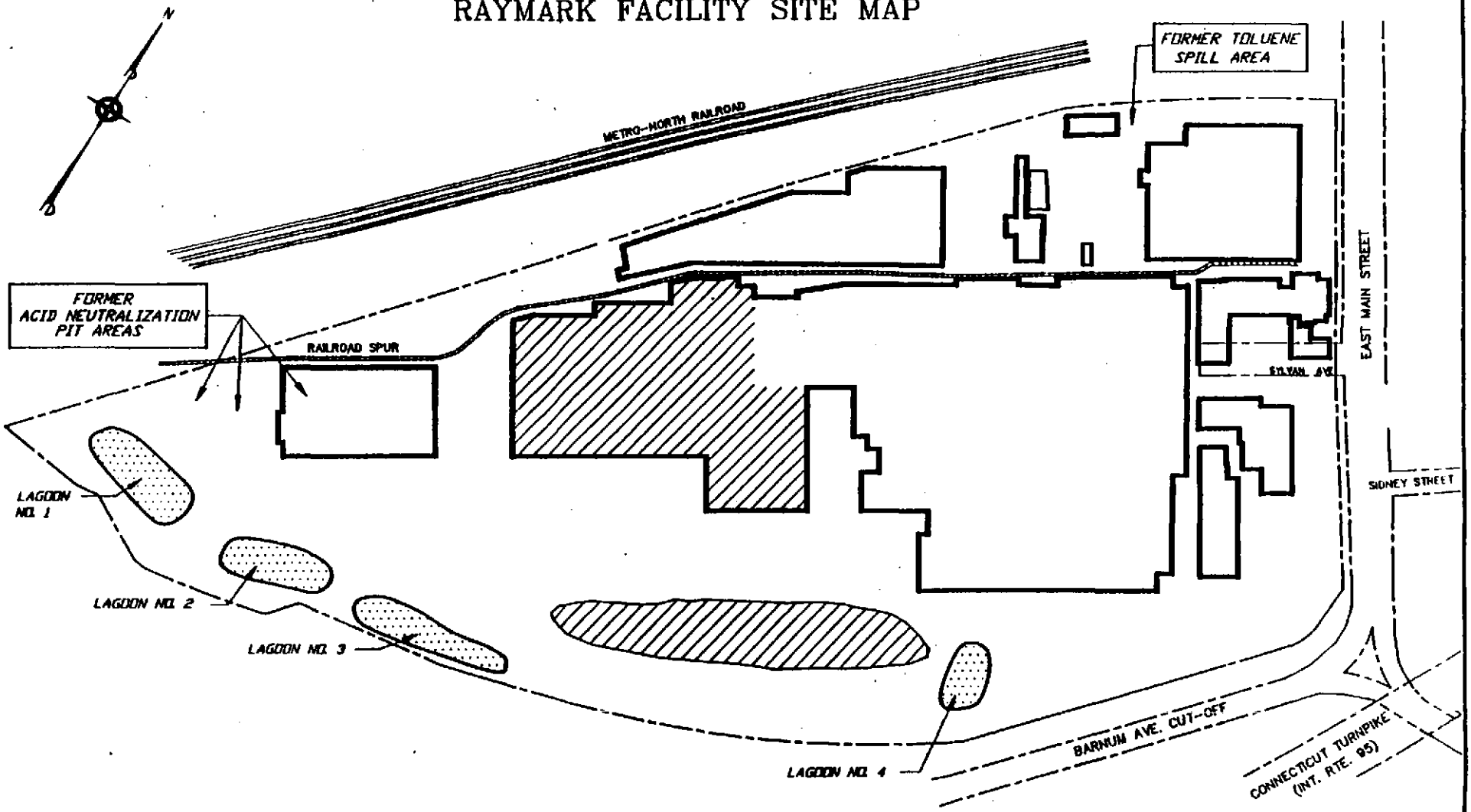
The Raymark Facility field studies contained in the EPA's Remedial Investigation Report found the following:

- Waste exists throughout the Raymark Facility.
- The property contains contaminants including asbestos, lead, solvents, polyaromatic hydrocarbons, polychlorinated biphenyls (PCBs), and dioxins and furans.
- Contaminated groundwater is suspected to be flowing beyond the facility boundary.

The Remedial Investigation Report also included an assessment of the risk to public health, which quantified the current and future risks to workers and trespassers to the property. This assessment of risk concluded that long-term exposure (70 years through periodic accidental ingestion or ski contact) to the contaminants noted above presents a potential public health risk. No ecological risks were determined on the property.

From this information, the EPA's Feasibility Study determined that cleanup is needed to reduce the potential exposure to the contaminants to ensure the area is safe for those who might work on the property during commercial activity, now and in the future, and for trespassers. Additionally, EPA determined that minimizing rainwater entering the contaminated materials would reduce contamination in the groundwater.

RAYMARK FACILITY SITE MAP



NOTE:

1. NOT TO SCALE – ALL LOCATIONS APPROXIMATE

Review of Site History

1919 - 1989: The plant manufactured automotive and heavy vehicle friction parts. The production processes generated waste by-products.

1919 - 1984: Waste by-products were disposed in lagoons on the Raymark Facility property. As the lagoons became full, waste was excavated and used as fill on the Raymark property. Waste from these lagoons was also used by the Stratford community.

1978 and 1993 - present: The town and the Connecticut Department of Environmental Protection provided cover for a number of municipal properties, temporarily protecting area residents from exposure to contaminated wastes.

Fall 1992 - present: With EPA oversight, Raymark covered four lagoons, removed bags and containers filled with hazardous material generated from manufacturing operations, secured the property with fencing, boarded up buildings, and re-routed the on-site drainage system to minimize movement of the contamination off the Raymark Facility.

Spring 1993: Dioxins were discovered on the Raymark Facility. Sampling of residential, municipal, and commercial properties revealed extensive amounts of lead, PCBs, and asbestos in areas where Raymark fill was used in Stratford. The levels of these contaminants were reviewed by the federal public health agency (Agency for Toxic Substances and Disease Registry) and are considered a health risk.

EPA began collecting and testing soil samples from properties located throughout Stratford where Raymark fill was suspected to have been used. To date, approximately 40 residential areas show contamination high enough to need cleaning up.

Summer 1993: EPA began residential cleanups. The excavated material has been trucked to and stored at the Raymark Facility, pending EPA's decision on how best to dispose of it. Cleanup of the last of these residences is scheduled to occur in the fall of 1995.

Winter 1994: To provide long-term funding, EPA proposed to add the Raymark Facility to the National Priorities List, a roster of abandoned or uncontrolled hazardous waste sites that EPA deems are potentially harmful to public health and the environment.

How the EPA Approaches Cleanup Options

The EPA considers a number of technical approaches when evaluating the best way to address risks posed by a Superfund site. The process narrows these approaches to only those that would protect human health and the environment and comply with all laws/regulations. The resulting approaches can be grouped into four fairly simple categories:

No action: Do nothing except monitor groundwater and conduct periodic reviews of site conditions.

Contain it: Leave the contamination where it is and cover or contain it in some way to prevent exposure to or spread of contaminants. This method reduces risks, but does not destroy or reduce the contamination.

Handle it off site: Remove the contaminated material and dispose and/or treat it elsewhere.

Handle it on site: Use a treatment process at the site to destroy or remove the contaminants. The treated material can often be left on site.

The Raymark Facility Feasibility Study evaluated several different options for addressing the sources of contamination at the facility. To compare the options, the Feasibility Study also evaluated how well the nine clean criteria described on page 6 would be met. The options are referred to as "cleanup alternatives," and are generally different combinations of processes to contain or handle the contamination to protect public health and the environment.

During the upcoming comment period, the EPA welcomes your comments on the recommended cleanup plan as well as the other technical approaches briefly described below. Please consult the Feasibility Study for detailed information about all the options evaluated for site cleanup. A copy of the Remedial Investigation, which describes the types and extent of contamination, and the Feasibility Study are available for review at the Stratford Public Library Reference Desk, 2203 Main Street, or at the EPA, 90 Canal Street, Boston, Massachusetts.

Cleanup Options for Your Consideration

The following section outlines the basic components of each cleanup alternative analyzed in the Feasibility Study for the Raymark Facility. See the Feasibility Study for a more comprehensive description.

No Action Option:

Alternative 1: No Action

- Leave the facility as it is
- Test groundwater and surface water
- Visit and evaluate the facility every 5 years to review site conditions

Containment Options:

Alternative 2: Capping (EPA's Proposed Cleanup Plan)

- Decontaminate and demolish all buildings
- Use the residential and Wooster Middle School soil-waste and some building debris to level the ground surface
- Install a vapor control system beneath the cap to capture potential gases
- Construct a cap to prevent exposure to the contamination and minimize water seepage into the soil-waste
- Remove the highly concentrated pockets of liquid (solvent) contamination from contact with groundwater
- Implement groundwater and surface water monitoring, cap maintenance, and restrictions on site use
- Visit and evaluate the facility every 5 years to review site conditions

Alternative 3: Capping with Limited Excavation

- Decontaminate and demolish all buildings
- Excavate soils with the highest levels of PCB contamination and treat or dispose of them off site (approximately 21,000 cubic yards)
- Use the residential and Wooster Middle School soil-waste and some building debris to level the ground surface
- Install a vapor control system beneath the cap to capture potential gases
- Construct a cap to prevent exposure to the contamination and minimize water seepage into the soil-waste
- Remove highly concentrated pockets of liquid (solvent) contamination from contact with groundwater
- Implement groundwater and surface water monitoring, cap maintenance, and restrictions on site use
- Visit and evaluate the facility every 5 years to review site conditions

Off-Site Options:

Alternative 4: Off-Site Treatment/Disposal

- Decontaminate and demolish all buildings
- Excavate all contaminated soils above the water table (approximately 330,000 cubic yards)
- Transport the excavated soils and residential and Wooster Middle School soil-waste off site to a disposal facility for incineration, solidification, and/or landfilling
- Remove the highly concentrated pockets of liquid (solvent) contamination from contact with groundwater
- Backfill excavation areas with new fill
- Implement groundwater and surface water monitoring and restrictions on site use
- Visit and evaluate the facility every 5 years to review site conditions

On-Site Options:

Alternative 5: Treatment On Site with Thermal Desorption and Solidification

- Decontaminate and demolish all buildings
- Excavate all contaminated soils from above the water table (approximately 330,000 cubic yards)
- Heat the excavated contaminated soils and residential and Wooster Middle School soil-waste, on site, to remove solvents
- Solidify metals in the contaminated materials on site
- Return treated materials to excavated areas
- Remove the highly concentrated pockets of liquid (solvent) contamination from contact with groundwater
- Implement groundwater and surface water monitoring and restrictions on site use
- Visit and evaluate the facility every 5 years to review site conditions

How Does EPA Choose a Cleanup Plan?

The EPA uses the nine criteria described below to evaluate the pros and cons of all cleanup alternatives. The final cleanup plan must meet the first two criteria (protecting public health and the environment and complying with environmental laws and regulations), and must achieve the best balance among the next five criteria. Because federal regulations require the EPA to select a cleanup plan that best meets these nine criteria, your comments will be most effective if you focus them on the kinds of issues and questions raised by these criteria.

1. Overall protection of human health and the environment: Will it protect you and the ecological systems supporting plant and animal life on and near the site?

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs): Is it legal? Does the alternative meet all federal and state environmental statutes, regulations, and requirements or would a waiver be necessary to legally proceed?

3. Long-term effectiveness and permanence: Will the effects of the cleanup plan last or could contamination present a risk again over time?

4. Reduction of contaminant toxicity, mobility, or volume through treatment: Does the alternative reduce the harmful effects of the contaminants, their ability to spread, and the amount of contaminated material present by using treatment processes?

5. Short-term effectiveness: How soon will site risks be adequately reduced? Are there short-term hazards to workers, residents, or the environment during the cleanup? Will workers face a short-term risk if removing soil for treatment released contaminants to the air before the soil was treated?

6. Implementability: Is the alternative technically feasible? Are goods and services, such as treatment machinery or space at an approved disposal facility, necessary to implement the plan readily available?

7. Cost: What is the total cost of an alternative over time in today's dollars? EPA must strive to select a plan that affords protection and is cost effective.

8. State Acceptance: Does the state agree with EPA's recommendation?

9. Community Acceptance: What reservations, objections, suggestions, or modifications does the public offer during the comment period?

Why is EPA Recommending this Cleanup Plan?

The chart on page 7 indicates how each of the cleanup approaches examined meets the nine criteria EPA uses to assess possible cleanup methods for the Raymark Facility. Two additional factors, potential for re-use of the property and time to complete the cleanup, shown at the bottom of the chart, were also considered by the EPA in proposing this cleanup plan.

The EPA's proposed cleanup plan (Alternative 2) includes components that adequately protect public health, are technically reliable, and are relatively easy to procure and construct. In a relatively short time, 1 to 4 years, it would also allow for reuse of the property with restrictions on digging or disruption of the cap. The cap would also minimize the movement of contaminants into the groundwater by preventing rainwater from percolating through the waste. The proposed cleanup plan is estimated to have a total cost of around $40 million.

Although Alternatives 2 and 3 appear similar on the comparison chart provided, Alternative 2 is preferred by EPA over Alternative 3 for a number of important reasons. Under Alternative 3, digging up highly contaminated waste (approximately 21,000 cubic yards) would be more difficult to implement and, in the short-term, potentially increase the risk to workers and nearby residents. In addition, Alternative 3 would likely increase the length of the cleanup and, thereby increase the length of the time before the property could be redeveloped. Furthermore, the limited excavation of only PCB-contaminated material in Alternative 3 would not address other areas of high contamination on site, such as is considered in Alternatives 4 and 5. The estimated total cost of Alternative 3 is approximately $110 million.

Alternatives 4 and 5 are more expensive and would take considerably longer to implement: treating all on-site contamination at the facility (approximately 410,000 cubic yards) would cost roughly $330 million and take 5 to 7 years, while excavating and treating all Raymark contamination at an off-site treatment facility would cost roughly $1 billion over 5 to 7 years. Under each of the five alternatives evaluated, waste contamination below the water table would remain at the Raymark Facility.

COMPARISON OF CLEAN-UP ALTERNATIVES

NINE CRITERIA	ALTERNATIVE 1 NO ACTION	ALTERNATIVE 2 CAPPING	ALTERNATIVE 3 CAPPING WITH EXCAVATION	ALTERNATIVE 4 OFF-SITE TREATMENT	ALTERNATIVE 5 ON-SITE TREATMENT
PROTECTS HUMAN HEALTH AND THE ENVIRONMENT (1)	●	○	○	○	○
MEETS STATE AND FEDERAL REQUIREMENTS (2)	●	○	○	○	○
PROVIDES LONG TERM PROTECTION (3)	●	◒	◒	○	○
REDUCES MOBILITY, TOXICITY, OR VOLUME THROUGH TREATMENT (4)	●	◒	◒	○	○
SHORT-TERM EFFECTIVENESS (5)	●	○	◒	◒	◒
IMPLEMENTABLE (CAN IT BE DONE ?) (6)	○	○	◒	◒	◒
COST (OVER 30 YEARS) (7)	$ 6 MILLION	$ 40 MILLION	$ 110 MILLION	$ 1 BILLION	$ 330 MILLION
STATE AGENCY ACCEPTANCE (8)	*STATE ACCEPTANCE OF EPA'S PREFERRED ALTERNATIVE WILL BE EVALUATED AFTER THE PUBLIC COMMENT PERIOD.*				
COMMUNITY ACCEPTANCE (9)	*COMMUNITY ACCEPTANCE OF EPA'S PREFERRED ALTERNATIVE WILL BE EVALUATED AFTER THE PUBLIC COMMENT PERIOD.*				
PROPERTY RE-USE POTENTIAL	●	○	○	◒	◒
TIME TO REACH CLEAN-UP GOAL	NA	1 TO 4 YEARS	2 TO 4 YEARS	5 TO 7 YEARS	5 TO 7 YEARS

CODE: ▭ = EPA's PROPOSED CLEANUP PLAN NA = NOT APPLICABLE ● = DOES NOT MEET REQUIREMENTS ◒ = PARTIALLY MEETS REQUIREMENTS ○ = MEETS OR EXCEEDS REQUIREMENTS

...More on the Open Houses and Next Steps

The EPA encourages you to participate in deciding how the Raymark Facility will be cleaned up. Ask all the questions you wish at one of the open houses. The dates and times are listed on the front page of this document. The format will allow you to review the proposal discussed in this document. Technical experts will be available, one-on-one, to answer any questions you have about what you are reviewing. Part way through each open house, EPA staff will give short presentations of findings about the Raymark Facility contamination, explain the process that lead the EPA to choose its proposed cleanup plan, and discuss the other cleanup options that were studied. The open houses are your opportunity to ask questions and become familiar with the cleanup proposal.

You may also provide EPA with your thoughts about what you hear by using the attached sheet. All you need to do is drop it off at one of the two open houses or mail it in to us, postmarked by May 8, 1995. You can also attend a formal public hearing, scheduled for 7:00 pm on Thursday, May 4, in Council Chambers at Town Hall to deliver your comments orally. This session will be recorded by a stenographer and a transcript will be available at the Library's Reference Desk when EPA's final cleanup decision is announced. Remember that the effects of the facility on groundwater contamination in the area will require more study, so potential groundwater cleanup options will be subject to subsequent EPA action, if necessary.

The EPA will evaluate and answer all public comments received in writing or at the hearing. While we cannot respond personally to your letters, all comments will be consolidated and the EPA will write responses to each question or comment received. The entire set of comments and responses (the Responsiveness Summary) will be evaluated to assist the EPA in selecting the final cleanup plan to control the source of contamination at the Raymark Facility. What you tell us can impact our decision. The responsiveness summary is part of the official EPA decision document, the Record of Decision, that will be available for public review at the Stratford Public Library reference desk. When the Record of Decision is signed, a notice will be sent to the local media and our community mailing list. This is anticipated to occur in June 1995.

If the proposed plan is finalized, the EPA anticipates that decontamination and demolition of buildings at the facility will begin in the summer/fall of 1995, and that residential cleanups will be completed during the fall of 1995.

For further information, call the EPA Community Involvement Coordinator Liza Judge at (617) 565-3419 or the Boston link at (203) 380-6034 and leave a message with your name, telephone number, and question. An EPA staff person will return your call as soon as possible.

Use This Space to Write Your Comments

Your input on the EPA's recommended cleanup plan to control the source of contamination at the Raymark Facility is very important. Public comments assist the EPA in selecting its final cleanup plan.

You may use the space below to write your comments about the EPA's recommended plan. Comments should be directed to Michael Hill and must be postmarked by May 8, 1995. You may also telefax your comments to Mr. Hill at 617-573-9662 by close of business, 5:00 pm, on May 8, 1995. If you have questions about the comment period, contact Liza Judge at 617-565-3419 or, to avoid a long distance toll charge, use the "Boston link" by calling (203) 380-6034, leave a message, and your call will be returned. PLEASE WRITE LEGIBLY.

Name _____

Address _____

Town _____

State _____ Zip Code _____

RAYMARK FACILITY SUPERFUND SITE
PUBLIC COMMENT SHEET

Fold on Dashed Lines, Staple, Stamp, and Mail

Name_____

Address_____

Town_____ State____

Zip Code_____

Place Stamp Here

Michael Hill (HSL-CAN5)
Remedial Project Manager
US EPA
JFK Federal Building
Boston, MA 02203-1911

Mailing List Additions

If you or someone you know would like to be placed on the Raymark Facility site mailing list, please fill out and mail this form to:

Liza Judge (REA)
Community Relations Coordinator
U.S. Environmental Protection Agency
John F. Kennedy Federal Building
Boston, Massachusetts 02203
(617) 565-3419

Name: _____

Address: _____

_____

Affiliation (if any): _____ **Phone:** _____

___ **ADD** ___ **DELETE** ___ **CHANGE**

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION I - REA
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-1911
Forwarding and Address Correction Requested

Raymark Industries, Inc. Superfund Site

Official Business
Penalty for Private Use
$300

First Class Mail
Postage and Fees Paid
EPA Permit No. G-35

AGENDA
12:30-1:30 PRESENTATION
SATURDAY, APRIL 8, 1995
U.S. ENVIRONMENTAL PROTECTION AGENCY

PROPOSED CLEANUP PLAN TO ADDRESS
THE RAYMARK FACILITY, E.MAIN STREET, STRATFORD

WENDY HYMAN, CONNECTICUT LEAGUE OF WOMEN VOTERS
- Open Meeting
- Introduce Presenters
- Review Agenda

LIZA JUDGE, EPA COMMUNITY INVOLVEMENT COORDINATOR
- How Can you Comment? * Questions Today
  * Official Comments

MICHAEL HILL, EPA REMEDIAL PROJECT MANAGER
- Manufacturing & Cleanup History w/Slides
- Type & Extent of Contamination in Soil & Groundwater

MARGARET MCDONOUGH, EPA HEALTH RISK ASSESSOR
- Which contaminants are we concerned about?
- What are the risks to public health?

MICHAEL JASINSKI, EPA REMEDIAL PROJECT MANAGER
- Why is cleanup needed?
- Cleanup options considered
- Why EPA selected this Proposed Cleanup Plan

LIZA JUDGE, EPA COMMUNITY INVOLVEMENT COORDINATOR
- How to make your comments effective
- How to submit formal comments
- Date of formal Hearing

WENDY HYMAN, CONNECTICUT LEAGUE OF WOMEN VOTERS
- Question & Answer Session

ATTACHMENT D

COMPLETE TEXT OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD

LOG OF PUBLIC HEARING COMMENTS
RAYMARK INDUSTRIES, INC., STRATFORD, CT

COMMENTER	DATE OF COMMENTS	DATE RCV'D BY EPA	DATE NUS RCV'D FROM EPA
Henry J. Themal 155 Short Beach Road, Apt. 305 Stratford, CT 06497	Apr. 4, 1995	Apr. 6, 1995	Apr. 7, 1995 VIA FAX
Frank A. Del Vecchio, Jr. 65 Riverside Drive Trumbull, CT 06611	Apr. 10, 1995	Apr. 12, 1995	Apr. 12, 1995 VIA FAX
Betty Pagliaro DID NOT GIVE AN ADDRESS	Apr. 9, 1995	Apr. 12, 1995	Apr. 12, 1995 VIA FAX
Henry J. Themel 155 Short Beach Road, Apt. 305 Stratford, CT 06497	No Date	Apr. 12, 1995	Apr. 12, 1995 VIA FAX
John T. Harrigan 66 Burbank Drive Stratford, CT 06497	Apr. 10, 1995	Apr. 12, 1995	Apr. 13, 1995 VIA FAX
John B. Wilson 90 Bittersweet Lane Stratford, CT 06497	Apr. 11, 1995	Apr. 13, 1995	Apr. 13, 1995 VIA FAX
Joseph Zakhar 120 Cutsping Circle Stratford, CT 06497	Apr. 10, 1995	Apr. 13, 1995	Apr. 13, 1995 VIA FAX
son Santi 29 Longbrook Avenue Stratford, CT 06497	Apr. 11, 1995	Apr. 17, 1995 FROM NUS	Apr. 11, 1995 AT OPEN HOUSE
Robert H. Sammis, Chairman Waterfront & Harbor Management Commission 2725 Main Street Stratford, CT 06497	Apr. 13, 1995	Apr. 18, 1995	Apr. 18, 1995 VIA FAX
Barbara Heimlich 91 College Street Stratford, CT 06497	Apr. 17, 1995	Apr. 17, 1995 VIA FAX	Apr. 19, 1995 VIA FAX
No Name Given No Return Address Given	No Date	Apr. 20, 1995	Apr. 20, 1995 VIA FAX
Michael Brown Osborne The Dock, Inc. 955 Ferry Boulevard P.O. Box 368 Stratford, CT 06497	Apr. 19, 1995	Apr. 20, 1995 VIA FEDEX	Apr. 20, 1995 VIA FAX
Mark & Michele Sparano 116 Willow Avenue Stratford, CT 06497	Apr. 18, 1995	Apr. 26, 1995	Apr. 26, 1995 VIA FAX
hn R. Morton 4005 Main Street Bridgeport, CT 06606	Apr. 21, 1995	May 2, 1995	May 5, 1995 VIA FAX

COMMENTER	DATE OF COMMENTS	DATE RCV'D BY EPA	DATE NUS RCV'D FROM EPA
Henry J. Themal 155 Short Beach Road, Apt. 305 Stratford, CT 06497	May 2, 1995	May 4, 1995	May 5, 1995 VIA FAX
Carl Weigand 122 Shanley Street Stratford, CT 06497	Apr. 29, 1995	May 9, 1995 VIA CERTIFIED MAIL	May 9, 1995 VIA FAX
LeGrande L. Young Raytech Corporation Suite 512, One Corporate Drive Shelton, CT 06484	May 3, 1995	May 8, 1995	May 9, 1995 VIA FAX
Robert H. Sammis, Chairman Waterfront & Harbor Management Commission 2725 Main Street Stratford, CT 06497	May 5, 1995	May 15, 1995	May 15, 1995 VIA FAX
John W. Caldwell Dresser Industries 250 East Main Street Stratford, CT 06497–0536	May 16, 1995	May 25, 1995	May 30, 1995 VIA FAX
James A. Thompson, Jr., Attorney Boeuf, Lamb, Greene & McRae Godwin Square 225 Asylum Street Hartford, CT 06103	May 24, 1995	May 24, 1995 VIA FAX & MAIL	May 30, 1995 VIA FAX
J. Roger Shull 335 Mt. Pleasant Avenue Stratford, CT 06497	May 30, 1995	June 1, 1995	June 1, 1995 VIA FAX
Abbie Eremich, Esq. Wiggin & Dana One Century Tower New Haven, CT 06508–1832	June 6, 1995	June 6, 1995 VIA FAX & FEDEX	June 6, 1995 VIA FAX
Randall J. Foster Brake Systems, Inc. 100 Double Beach Road Branford, CT 06405	May 24, 1995	May 30, 1995 VIA CERTIFIED MAIL	June 7, 1995 VIA FAX
Leonore Santucci 189 Bayberry Lane Stratford, CT 06497	June 5, 1995	June 7, 1995	June 8, 1995 VIA FAX
Fedelia H. Cook 286 Curtis Avenue Stratford, CT 06497	June 5, 1995	June 7, 1995	June 8, 1995 VIA FAX
Mrs. J.W. McGibbon Clinton Avenue Stratford, CT 06497	June 5, 1995	June 7, 1995	June 8, 1995 VIA FAX

COMMENTER	DATE OF COMMENTS	DATE RCV'D BY EPA	DATE NUS RCV' FROM EPA
David & Deborah Tvardzik 2981 Broadbridge Avenue Stratford, CT 06497	June 5, 1995	June 7, 1995	June 8, 1995 VIA FAX
J. Robert Osborne The Dock, Inc. 955 Ferry Boulevard P.O. Box 368 Stratford, CT 06497	June 7, 1995	June 8, 1995 VIA UPS	June 8, 1995 VIA FAX
Angela Notarino 71 Roosevelt Avenue Stratford, CT 06497	June 6, 1995	June 8, 1995	June 12, 1995 VIA FAX
Denise H. Nalezynski 145 Phillips Street Stratford, CT 06497	June 6, 1995	June 8, 1995	June 12, 1995 VIA FAX
Chris Lacas/Ron Curran CT Department of Env. Protection 79 Elm Street Hartford, CT 06106-5127	June 8, 1995	June 8, 1995 VIA FAX	June 9, 1995 VIA FAX
Randall J. Foster Brake Systems, Inc. 0 Double Beach Road Branford, CT 06405	June 8, 1995	June 8, 1995 VIA FAX & FEDEX	June 9, 1995 VIA FAX
Steven L. Law 267 Soundview Avenue Stratford, CT 06497	June 6, 1995	June 9, 1995	June 12, 1995 VIA FAX
Janet Carlucci Stratford Citizens Advisory Council 2730 Main Street Stratford, CT 06497	June 7, 1995	June 9, 1995	June 12, 1995 VIA FAX
Mark S. Barnhart Town of Stratford 2725 Main Street Stratford, CT 06497	June 8, 1995	June 12, 1995 VIA CERTIFIED MAIL	June 12 1995 VIA FAX
Nancy Casazza 114 High Park Avenue Stratford, CT 06497	June 7, 1995	June 12, 1995	June 13, 1995 VIA FAX
Elizabeth McNamara 20 Helen Place Stratford, CT 06497	June 7, 1995	June 12, 1995	June 13, 1995 VIA FAX
J. Robert Osborne The Dock, Inc. 955 Ferry Boulevard .O. Box 368 Stratford, CT 06497	June 8, 1995	June 14, 1995	

LOG OF PUBLIC HEARING COMMENTS
RAYMARK INDUSTRIES, INC., STRATFORD, CT

COMMENTER	DATE OF COMMENTS	DATE RCV'D BY EPA	DATE NUS RCV'D FROM EPA
Robert H. Sammis, Chairman Waterfront & Harbor Management Commission 2725 Main Street Stratford, CT 06497	June 7, 1995	June 14, 1995	

H. J. Thomal, D.S.
155 Short Beach Road,apt.305
Stratford, CT. 06497-7681
(203) 375 7237

April 4, 1995

Mr. Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, MASS. 02203

Dear Mr. Hill:

As a resident of Stratford, CT., I have received the one-page EPA ENVIRONMENTAL NEWS LETTER, regarding the "PROPOSED CLEANUP PLAN FOR THE RAYMARK FACILITY" in Stratford. Although I am aware that you must be fully up-to-date with all the implications of this matter, I am taking the liberty of adding the following comments, based upon my own experience in the matter of environmental protection.

That experience includes my ten years as a Buildings Manager for the U.S. General Services Administration at the Jacob Javits Federal Building, 26 Federal Plaza, New York City, until my so-called "retirement" in 1984, - although I have been busier than ever since then. For five years, I was also a Hospital Housekeeping Officer at the 1200-bed Naval Hospital of St.Albans,NY; and I have also worked as a Quality Control Inspector and Teacher of Professional Training Classes for service employees of the City of New York and with a private Cleaning Company in New York and New Jersey.

My main reason for mentioning all this, Sir, is the tendency by contractors, such as will be required for the cleanup job at the Raymark Facility, to employ numbers of employees, whose experienc and whose numbers--of-hours-worked, will be difficult to control, whose reasonable time-limit for completion of the job will be difficult to assess. In addition, since I often have occasion to observe the Raymark location from the outside, I have noticed that almost all the buildings and grounds are in a terrible state of neglect and probably beyond repair. Of course, since I am not a scientist, I can not tell how much of the prior pollution of air, grounds or buildings may still present an environmental danger.

To conclude, Sir, - should you feel that my background, and my residential proximity to the facility, as well as my professional contacts might be helpful in the solution of the various Raymark efficiency and cost problems, I might be helpful in the implementat of the program, please do not hesitate to contact me. Meanwhile, I thank you for your interest.

Sincerely,

Henry J. Thomal

Encl.

Henry J. Themal
P.O. Box 1042.
155 Short Beach Road
Stratford, CT. 06497-8542

(203) 375 7287

January 1995

R E S U M E

Education: Bachelor of Science Degree, Business & Economics
State of New York University 1982

École Professionnelle de la Société Suisse des Hôteliers, Lausanne, Switzerland 1938/39

Management Courses & Seminars, 600 Hrs. 1970/80

Experience: Buildings Manager
U.S.General Services Administration
Region 2, New York City 10 years 1973/84

Hospital Housekeeping Officer
U.S.Naval Hospital, St. Albans, N.Y.
1200 Beds 5 years 1968/73

Director of Buildings & Grounds
N.Y. University Medical Center 5 years 1963/68

Buildings Manager and Director of Blood Distribution
The American Red Cross in Greater New York
9 years 1953/63

Maître d'Hôtel and Front Office Manager
Hotels in New York City, Atlantic City,
Lisbon, Portugal; Duesseldorf, Germany;
Genova, Italy; Trieste, Italy. between 1935/53

High-School Substitute Teacher in New York City;
Montevideo, Uruguay; Hamden, CT; Stratford, CT.

Languages: English, German, French, Spanish, Italian, Portuguese.

Instructor: English-for-foreign-born;
CAREER DEVELOPMENT TRAINING for young people.
Technical & motivational Training Courses for service personnel. Quality Control Inspections.
"Distance Learning"-College Instructor.

Other Services: Hand -written CALLIGRAPHY for all occasions.
"Made-to-order" personalized POETRY .
Translations, Diplomas, Invitations, etc.

Available: Part-time, mornings pref'd.,work-at-home; - subject to interview. Driver's License.

Documentation upon request.

Use This Space to Write Your Comments

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Please have the forsite to install public water and sewer lines under the cap at strategic locations so that when the EPA is through, the property may be more easily developed without the endless delay of permits, inspections, etc. for the future contractors. We need this location to produce jobs and additional tax base for the town and its people.

Born and raised in Stratford. Real estate broker intown since 1971.

Name Frank A. Del Vecchio Jr.

Address 65 Riverside Drive

Town Trumbull

State CT Zip Code 06611

[redacted]

[redacted]

April 9, 1995

Michael Hill,
Clean up Raymark
that's the best words
we heard what took
so long? Yes, we are
behind you a Hundred
Percent. Thank you.
Start soon.
Betty Pagliaro

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Dear Mr. Hill:
As I already indicated in a previous letter to Ms. Liza Judge, my interest in the Raymark Facility stems from 4- factors : 1. As a former Buildings Manager (GS12) for the United Sates General Services Administration, Region 2, New York City, I have repeatedly come in contact with similar private and/or Government facilities exposed to pollution. And 2.As a resident of Stratford, CT., it pains me to see such a large site, with large industrial potential in such a disrepair and obvious neglect. I would be proud to be able to assist in its cleanup. 3. Based upon my former experience I am taking the liberty of enclosing a brochure of a cleaning contractor, whom I consider more honest and more qualified than some others. 4. I consider the "Five Years", allegedly needed to complete the cleanup, exagerated and unrealistic. Therefore I recommend: 1. Any company; or individual, who anticipates a long-term and high-income contract involving this "cleanup", will obviously exagerate its urgency ! 2. If Raymark Industries still exist, they should be best qualified to indicate where and how and to what extend the pollution took place, and how it can be removed. They should pay for most of the cost !

(Next page, please :)

Name Henry J. Themal, BS

Address 155 Short Beach Road

Town Stratford, CT. 06497

State CT. **Zip Code** 06497

RAYMARK FACILITY SUPERFUND SITE
PUBLIC COMMENT SHEET

(Continued from page 1):

2. Rather than financing the c eanup through E.P.A. alone, all interested future occupants (housing developers, industrialists, commercial entrepreneurs) should be expected to contribute toward the costs of the cleanup. This would also help in a speedup fo the expected work, ther than an "indefinite completion time" of a "Government Contract".

Kindly forgive my bluntness, Sir; but it is based solely on previous experience, although I am no longer in a position to document it.

Sincerely, H.J.Themal

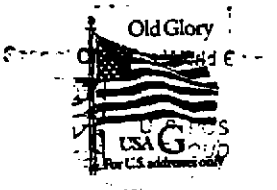
Fold on Dashed Lines, Staple, Stamp, and Mail

Name H. THEMAL

Address 151 SHORT BEACH RD

Town STRATFORD State CT.

Zip Code 06497



Michael Hill (HSL-CAN5)
Remedial Project Manager
US EPA
JFK Federal Building
Boston, MA 02203-1911

RECEIVED
SEP 12

PERSONAL ATTENTION PLEASE

HENRY J. THEMAL (203) 375 7287

P.O. Box 1042

Stratford, Connecticut 06497-8542

R E S U M E

Education: Bachelor of Science Degree; Business & Economics
State University of New York 1982

Graduate, Professional School for Hotel Management,
Lausanne, Switzerland 1938/39

Employment: Buildings Manager (GS-11/12) United States General Services Administration, Region 2, New York City: Supervision of Maintenance- & Cleaning Services in the GSA Services Area. Supervision of contract compliance of service contractors. In-house training conducted. In-house Newsletter edited. Tenant & Public Relations. 1973/84

Hospital Housekeeping Officer. U.S.Naval Hospital, St. Albans, New York (1200 beds) Environmental Sanitation Program for hospital designed and supervised. Training conducted for Naval & civilian personnel. Lecturer at the Surgeon-General's Conference in Bethesda,Md. in 1971. 1968/73

Director of Buildings & Grounds; New York University Medical Center, New York City. Supervision of environmental maintenance of hospital and adjacent grounds & parking areas. 1963/68

Director of Blood Distribution and Buildings Manager; THE AMERICAN RED CROSS IN GREATER NEW YORK. Supervision of storage & distribution of daily blood collections. Organization & supervision of ARC Headquarters' move from midtown to Lincoln Center area. 1953/63

Languages: Experience as teacher of English-for-foreign-born; Fluent German, French, Spanish; some Italian & Portuguese..

Other Activities: Registered Substitute Teacher (High Schools)

Hand-written CALLIGRAPHY for all occasions (Gothic & Script).
Personalized Poetry written upon request.
CAREER DAYS conducted for young people.
An INTERNATIONAL NETWORK OF PENPALS, encouraging children and teenagers from all over the world to correspopd with eachother.

Documentation and References upon request.

Urban Cleaning Contractors, Inc.

3909 DYRE AVENUE
BRONX, NEW YORK 10466

Tel. (718) 994-1150
Fax (718) 994-1731

SPECIALISTS IN INDUSTRIAL AND COMMERCIAL INTERIOR AND EXTERIOR CLEANING

April 5, 1995

Mr. Henry Themal
155 Short Beach Road
Stratford, Conn. 06497

Dear Mr. Themal:

I am pleased to introduce **Urban Cleaning Contractors, Inc.,** one of the most reputable cleaning contractors in the New York/New Jersey Metropolitan area.

As you might expect, there is more to cleaning than meets the eye. Our wide range of services, coupled with our expertise allows us to provide you with a flexible custodial program geared to enhance your surroundings and tailored to meet your needs and budget.

Since it is possible that our services might be of interest to you, I am enclosing a brochure with a partial listing of references of our Clientele and services we offer.

There is no doubt in my mind, if given the opportunity, my firm can be of invaluable assistance in maintaining your properties.

Needless to say, I'm looking forward to your reply and the opportunity to be of service to you and your organization.

Thanking you for your time and consideration.

Sincerely,

Mike A. Moreno
President

ENCL.

John T. Harrigan
66 Burbank Drive
Stratford, CT 06497

Michael Hill (HSL-CANS)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, MA 02203

Dear Mr. Hill,
I am writing this letter in reference to the cleanup of the Raymark Facility in Stratford, Connecticut.

Because of the close proximity of the "Waste" to Long Island Sound, and The New York Metropolitan Area, the "Waste" should be packaged into containers and sent to the Nevada Desert, where it is away from any population centers or a large mass of water. This would minimize the exposure to people, and the food chain which starts in Long Island Sound.

You should make Raymark purchase the Land in the Nevada Desert where the "Waste" would be placed in, and have them pay the property tax on the land.

Sincerely,

John T. Harrigan

Use This Space to Write Your Comments

Your input on the EPA's recommended cleanup plan to control the source of contamination at the Raymark Facility is very important. Public comments assist the EPA in selecting its final cleanup plan.

You may use the space below to write your comments about the EPA's recommended plan. Comments should be directed to Michael Hill and must be postmarked by May 8, 1995. You may also telefax your comments to Mr. Hill at 617-573-9662 by close of business, 5:00 pm, on May 8, 1995. If you have questions about the comment period, contact Liza Judge at 617-565-3419 or, to avoid a long distance toll charge, use the "Boston link" by calling (203) 380-6034, leave a message, and your call will be returned. PLEASE WRITE LEGIBLY.

Mr. Michael Hill;

Thank you for the opportunity to write - I'm assuming the Raymark facility has been named a Superfund site and because of that classification is eligible for the large amount of money being considered. That being the case, and to me it is the critical classification or consideration on my part affecting the comment - I feel Alternative 3 is the best middle of the road approach that complies with your objectives and is somewhat fiscally restrained when viewed against the other possibilities. While the site is open and accessible - remove the most contaminated material thereby making the site safer for the long term. Forget if it takes somewhat longer at this point, to make the site suitable for re-development. We have lived with this eyesore and environmental black hole so long, an extra 6 months or year, in my opinion is nothing when considering the long-term value a more effective Phase 3 cleanup would bring. Thank you -

Name JOHN B. WILSON

Address 90 BITTERSWEET LANE

Town STRATFORD

State CT Zip Code 06497

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With reference to the contamination problem I feel thatAlternative 5 (On-Site Options) is best. Mainly because no other area should be burdened with our problems. HOWEVER, RAYMARK SHOULD BEAR THE BURDEN OF EXPENSE. NO ONE ELSE.

During the recent wind and rain storm we were unfortunate enough to be in the area of the property where the contaminated soil is now stored. It was blowing all over the place and I am sure both my wife and I inhaled a great amount of it.

It will be a relief when this particular problem is finally taken care of.

Name Joseph zakhar

Address 120 Cutspring Circle

Town Stratford

State Conn. **Zip Code** 06497

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I think it's better to clean out the whole factory, because it'll prove more cost effective in the future. It'll also stops ground water contamination, plus all the waste will be gone. Even if they put a capon the waste, there will always be there, it'll never go away. In the future it'll still pollute ground water. I agree with the 4th alternative even though it'll take a decade or so, it'll be better in the "Long Run". They should also dredge the lagoons that are there and then restore them to natural order, plus clean out surrounding ponds.

Name Jason Santi

Address 29 Longbranch Av

Town Stratford

State CT Zip Code 06497

TOWN OF STRATFORD

CONNECTICUT
06497

WATERFRONT AND
HARBOR MANAGEMENT COMMISSION
2725 MAIN STREET
STRATFORD, CT 06497

Mr. Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, Ma. 02203

Re: Raybestos Remediation April 13, 1995

Dear Mr. Hill;

Thank you for the opportunity to review the actions that have been undertaken and those anticipated for the Raybestos principal site. The information available on the 8th was extremely helpful. Of particular concern is the disposition of the downstream area known as Ferry Creek.

This body of water and the sediments are alluded to be contaminated with various elements from the Raybestos site as this is the primary surface and subsurface drainage path. With that in mind, we are interested to know what the remediation plans are in this regard. Again, it is our understanding that from the site to the junction with the Housatonic River there are sediments that should be addressed. As this body of water is tidal from the river to Broad Street, and was tidal to Ferry Boulevard prior to the installation of tide gates (circa 1985+/-), we understand that this is considered to be the property of the State of Connecticut below the mean high water mark.

If you would address these issues we would be most appreciative as the disposition of Ferry Creek has a significant impact of the long range plans of development of Stratford's waterfront.

Sincerely,

Robert H. Sammis

Robert H. Sammis, Chairman

INNOTECH
19 Church Hill Road
Newtown, CT 06470
(203) 270-2960
fax (203) 270-2916

fax

to: EPA

fax #: 617 573-9662

from: Barbara Heimlich

date: 4/17/95

subject: Baymark Site

pages: 2

NOTES: ATTENTION
Michael Hill

Use This Space to Write Your Comments

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My first choice for the Raymark site would be alternative #5. It is my belief that to best serve the town of Stratford and future land use that the facility should be completely decontaminated. I am not/nor have studies proven sure that capping the facility is a long term solution.

I have not seen/read any studies that indicate how effective capping is. You cannot depend on the site being paved for a shopping center - it appears that historically Stratford has not paved over pollution. What if we want to use this site for open space?

Alternative #4 is my second choice.

Thank you.

Name
Address Barbara Heimlich
91 College St.
Stratford, CT 06497
Town
State Zip Code

Dear Michael Hill (HSL-CAN5),

I writing my opinion about what should be done to the Raymark Facility and the other areas in Stratford, CT. I understand the Environmental Protection Agency is doing a good job cleaning out properties, but there are some that aren't going to be cleaned out. What I'm trying to say is that the rest of the areas, such as Raybestos Memorial Field, Ferry Creek, Housatonic Boat club/ Shore Rd, Beacon Point Rd, Clean Zone, Lordship Blvd, Honeyspot Rd, Land Fill #5, Short Beach Park Area, and 4th/Fifth Ave (?) (I'm not sure) have abestos, etc dumped there. What all these sights have in common is some type of water. Even if you cap them, you'll be spending more money in the "Long Run". For instance, you have to maintain them and monitor ground water,

lead into more money. If you take all that stuff out 100%, the water line and below it, because it will pollute the ground water any more. So if may take another decade to take all this "crap" out of there, who will mind? Maybe developers will, but safety is better than health effects on people in the future. Nobody is sure if the cap will always be "safe." The reason is because if it happens under a building or somewhere very hard to reach. I don't think many owners will spend the "money" to destroy a building or maintain a cap "forever" When the stuff stays there forever it'll produce long time cost to keep it up If the gov't cuts spending there's a problem. I think it would be better to take it out all together, that'll put it to rest forever. Eventually "hungry" developers will get their hands on this land

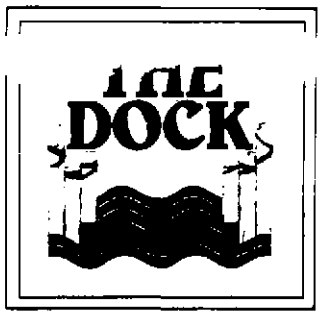
and develop it. For example, Raybestos Field, Raymark, Etc. The cap is only temporary, who knows how long it'll last. Another thing is the Raymark Factory. This factory should demolished, (which is already planned Capping is okay, but not long term You should take it "all out," 100% above + below the water line, plus cleaning out the groundwater. All the areas will eventually get polluted. The govt should "prosecute" the Raymark buisness They are responsible for this mess, the govt shouldn't be paying for it, the persons who did it should pay the BILLIONS IN COMPENSATION and reimburse the EPA for every dime spent on the clean up. They should put all other people on hold and prosecute the perpetrators, why should

be a little skeptic, but everything has gotten out of control. I think Raymark is getting away with murder. For example, People's health and the "environment." All this crap has destroyed the environment and PEOPLE'S HEALTH. Many people feel Raymark's getting away with everything they have. Who cares how much it costs but there's just so confrontation b/w Raymark & others. I strongly feel again that "justice" should be served and the EPA should not have to spend their $ to clean up other people's !!?*!. I don't know what will happen, but I strongly agree with the EPA spending at least another 2, 3 or 4 billion dollars on the Raymark site, Who cares if it takes 5 or 10 years, it'll be clean and the ones go after raymark for reimbursment. My point has been stressed now, Thanks for your time

Sincerely

A Concerned

Citizen of Stratford, CT



Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, MA 02203

April 19, 1995

RE: Request for Extension of Public Comment Period

Dear Mr. Hill,

The Dock Incorporated of Stratford Connecticut formally requests that the Public Comment Period be extended for the Proposed Cleanup Plan for Raymark Industries in Stratford, Connecticut.

Our property is very close to the Raymark Site and we need more time to study the proposed cleanup plan materials in the Stratford Library in order to objectively assess the proposed plan.

Sincerely yours,

Michael Brown Osborne
President

cc. Liza Judge

The Dock Inc. • 955 Ferry Boulevard • P.O. Pox 368 • Stratford, CT 06497 • (203) 377-2353

Mark & Michele Sparano
116 Willow Avenue
Stratford, CT 06497-6038
(203) 381-9879

April 18, 1995

Michael Hill (HSL-CAN5)
Remedial Project Manager
US EPA
JFK Federal Building
Boston, MA 02203-1911

Dear Mr. Hill,

This letter will serve as our comments related to the proposed cleanup plan for Raymark Industries, Inc., Stratford, Connecticut. Our comments are based on information, both oral and written, obtained in the well organized and delivered April 8, 1995 Informational Open House conducted the EPA in the Stratford Public Library. Our comments relate to the five alternatives proposed by the EPA.

Alternative 1

* Not a viable option in our opinion since it is not cleanup or remediation.
* Don't understand how testing ground and surface water and visiting the site every 5 years can cost 15% of the total cost of Alternative 2 which includes demolition, cap building and cap maintenance. These present value costs do not seem reasonable to us.

Alternative 2

* This option addresses all the major concerns except groundwater. How can we make an intelligent overall decision of not all facts/costs are known? No matter what, we believe groundwater testing is crucial and should be performed more frequently than every 5 years.

* When one considers that interference to the cap is a major concern, commercial/retail use of the property appears to be the highest and best use. In addition, the area around Barnum Avenue Cut-off and East Main Street is highly commercialized already and therefore, retail use of the property would be minimal disruption to the surrounding area. The proposal by the Leach Family Holdings is well received by us because it involves landscaping for beautification of the area and blacktop paving which further prevents puncturing the cap. Retail use also preempts recreational usage which may puncture the cap (digging, erosion, etc.).

Alternatives 3 to 5

* Excavation and treatment are not favored by us because the less you move the contaminants, the lower the health risks. Also, dumping sites for the highly contaminated soil were not explored. We doubt that other municipalities would embrace our problem without exorbitant charges.

* Costs do not match benefits. Off-site treatment is much too pricey.

Mark & Michele Sparano
116 Willow Avenue
Stratford, CT 06497-6038
(203) 381-9879

Of all the proposals on the table, we support Alternative 2 the most due to relative costs, short-term remediation and reuse of the property. We've concluded that each consecutive alternative gets better and better in terms of long-term safety and health. The support for whatever alternative really comes down to money - the benefits derived from the costs incurred, since safety and health issues are addressed in most options. We must stay realistic with our spending, but we wonder if Superfund moneys are available for Alternative 3 to 5. Also, funds should be exacted from Raymark for this cleanup. Improper corporate ethics, supervision and decisions need to be severely punished! The guilty should pay as much as possible!

All the proposed alternatives do not rid us of the entire problem, they only address concerns noted to date. Not to sound like alarmists, but we can't help but wonder what the future holds for the site - earthquake disruptions, flooding, etc. At least we are attempting to correct the known problems. Action is much better than inaction. It seems that one man's carelessness takes the work of an army of men from five plus agencies to correct.

We'd like to take this opportunity to thank the various community, town, state and federal agencies working on this project. To date, we have found all agencies and their representatives to be helpful, concerned and informative. This teamwork approach needs to continue to produce the proper cleanup for the generations of today and tomorrow.

Sincerely,

Mark Sparano

Michele Sparano

Mark Sparano

Michele Sparano

Stratford, Connecticut residents since 1987
Stratford, Connecticut homeowners since 1989

Use This Space to Write Your Comments

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- See attached letter dated 4-18-95 -

Name _____

Address ____ Mark & Michele Sparano
116 Willow Avenue
Stratford, CT 06497-6038 _____

Town _____

State _____ Zip Code _____

[redacted]

[redacted]

JOHN R. MORTON
4005 MAIN ST.
BRIDGEPORT, CT
06606

A BOULDER AT PARC ENTRANCE

MICHAEL HILL
REMEDIAL PROJECT MANAGER
U.S. ENVIRONMENTAL PROTECTION AGENCY
JFK FEDERAL BLD. BOSTON MA 02203

[redacted]

[redacted]

RAY MARK I WILL NOT
BE ABLE TO MAKE
PUBLIC MEETING 05/04
STRATFORD TOWN HALL.
DOES PLAN COVER RAY
BESTOS MEMORIAL FIELD
BUILT TO HONOR VETS
OF WW II ? IF SO
WITH THEIR COST TILE MEMORIAL

155 Short Beach Road, apt. 305
Stratford, CT. 06497

May 2, 1995

Mr. Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S.Environmental Protection Agency
JFK Federal Building
Boston, Mass. 02203

Dear Mr. Hill:

This letter comes to you in response to your ENVIRONMENTAL NEWS issue #95-4-10, regarding the cleanup plans for the facilities of the RAYMARK INDUSTRIES here in Stratford, as well as the area for Short Beach Park, across the street from my own residence. Your letter is asking for commentary from the public, and since, as a former Buildings Manager with the U.S. General Services Administration in New York City, I have some experience related to such efforts, - as a manager, - NOT as a scientist, I am taking the liberty of making you aware of a few points.

As a resident of Stratford, I have occasion to pass the Raymark facilities almost daily; - I know the approximate size of the area, as well as the deplorable and neglected conditions of the buildings and grounds. Perhaps there are some reasonable explanations for this, and probably you are already aware of some possible solutions. However, since you are asking for comments, Sir, here are some actions which I consider particularly important :

1. Establish priorities in the cleanup process, i.e. removal of contaminated waste; destruction and/or rebuilding of existing structures; designation for future uses.

2. Establish work standards, employee qualifications and numbers, time guidelines and time limits for work completion.

3. Carefully compare contract proposals by private contractors with a) Government established standards and b) similar proposals by competitor-contractors.

4. Follow up the eventual award of cleanup- and construction contracts with frequent Quality Control Inspections, Progress Control Inspections, technical and motivational Employee Training Programs for both Government and/or Contract personnel; continuing publication of periodic newsletters to report progress and good accomplishments to officials, employees, and to the local community.

During my previous professional experience, Sir, I have found that such steps may be fruitful in reaching the goals of this program. If you feel that I might be of further help, please contact me.

Sincerely yours,

Henry J. Themal

Encl.Resume

Henry J. Themal
P.O. Box 1042
Stratford,Connecticut 06497-8542

(203) 375-7257

Summer 1995

R É S U M É - CURRICULUM VITAE

Interested in part-time occupation based upon the following

Professional Background:

BUILDINGS MANAGER. U.S.General Services Administration, Region 2, New York, N.Y. Building maintenance, environmental control and contract-supervision. In-house training classes conducted. 1974-1984

HOSPITAL HOUSEKEEPING OFFICER. U.S. Naval Hospital,St.Albans,NY, Similar responsibilities as above. 1969-74

BUILDINGS MANAGER & DIRECTOR OF BLOOD DISTRIBUTION.
The American Red Cross in Greater New York.
Distribution of ARC Blood Supplies in NY City.
Move to new ARC Headquarters Building. 1959-69

Front Office Manager & Maitre d'Hotel in various Hotels in New York, Atlantic City,NJ; Lisbon, Portugal; Genoa and Trieste, Italy. 1935-1959

Education:

Bachelor of Science, (Business & Economics), SUNY - State University of New York, NY City 1983/4

Professional School for Hotel Management, Lausanne, Switzerland (Diploma) 1938

Specialty Courses in Business Management Subjects in New York City (appr.900 hours) 1975-80

German, French, Spanish, Italian & Portuguese languages. English-for-foreign born (Tutoring).

Current Activities:

Substitute Teacher, High School Level, Connecticut & NYC.

Hand-written CALLIGRAPHY for all occasions. Family Trees,et

Made-to-order- POETRY - for all occasions.

Photomontages , - Collages, - Translations, -Newsletters.

Available for work-at-home or temporary assignments. Recommendations and documentation upon request. Driver's License. Married, two daughters (married); two stepdaughters. U.S. Citizen.

122 Shanley St.
Stratford, CT 06497
203-375-5392

Michael Hill
Project Coordinator
USEPA
JFK Federal Building
Boston, MA 02003-1911

Dear Mr. Hill

I am writing this letter in response to the presentation at the Stratford Library on the proposed cleanup plan for Raymark Industries Inc. I've been a resident in the community for my entire life (28 years) and I am a student at Sacred Heart University where I am pursuing a Master's Degree in Environmental Chemistry. At present, I am taking a course in hazardous waste management.

In writing this response I have also read some of the extensive material included in the 21 volumes published by the EPA on all available data--of course I concentrated on the last two because of the sheer volume of material. In reviewing the data I've focused on the criteria established on p. 6 of the April 1995 New England EPA newsletter.

I concur that Alternatives 2 and 3 appear to be the best choices. Although Alternatives 4 and 5 provide long term protection they do so at the risk of exposing workers and residents in the area during the period of excavation required to remove and treat the contaminated soil. Although the technology exist to remove organics (by thermal desorption or incineration) and inorganics (by encapsulation) I doubt the taxpayer is willing to spend $1 billion on complete removal. Additionally, it would be difficult, if not impossible to guarantee 100% containment of 400,000 yd^3 of soil which would have to be excavated and treated during the project. A spill would create pandemonium because I've found that the general population is especially sensitive with chemicals, especially hazardous ones.

In contrast, alternatives 2 and 3 would still provide long term protection by removing the most contaminated sites (such as the former 1,1,1-TCA spill area) while minimizing short term risks to local residents. Any remaining leachable compounds could be addressed when EPA proposes its water remediation plan.

Sincerely

Carl Weigand

Carl Weigand

Raytech
CORPORATION

Suite 512 One Corporate Drive
Shelton, Connecticut 06484
Phone 203) 925-8000
FAX 203) 925-8088

May 3, 1995

Ms. Linda Murphy, Director
Waste Management Division
U.S. Environmental Protection Agency
JFK Federal Building
Boston, MA 02203-1911

Re: Raymark Industries, Inc.
Stratford, Connecticut, Facility

Dear Ms. Murphy:

This is in response to your letter dated April 3, 1995 addressed to Craig R. Smith, President of Raytech Corporation, in the above-referenced regard. Attached to the referenced letter was a Proposed Cleanup Plan wherein recipients of the letter were invited to make comments concerning the EPA's recommended plan.

To assure you and the entire EPA of the position of Raytech Corporation in the above regard, be advised that Raytech Corporation vehemently denies any liabilities of Raymark Industries, Inc., or any of its predecessors or affiliates, based upon any conceived or actual theories of successor liability, and further, specifically denies the unsupported allegations set forth in the sixth paragraph as well as inferred in other paragraphs of the above-referenced letter suggesting being a potentially responsible party based upon a belief of successor liability. The above-stated position of Raytech Corporation has been its position since its incorporation in 1986, and it currently is litigating similar allegations in the Federal Court system, including the Bankruptcy Court in cases begun in 1989. Be assured that Raytech Corporation will vigorously defend its position with respect to said EPA allegations including litigation if necessary.

With respect to the Proposed Cleanup Plan referenced in the letter, Raytech Corporation believes that the recited costs of cleanup are exorbitant and extremely excessive. Such belief is based upon inefficiencies observed to date at the site and inefficiencies known to exist in governmental involvement of this kind.

To prevent any misunderstanding as to the position of Raytech Corporation, this is to advise that in the event it is ever finally deemed to be a successor to the environmental liabilities in Stratford by any court, Raytech Corporation fully intends to seek recourse against all other involved parties, including individual home and property owners of sites containing fill from Raymark's Stratford facility and all other responsible parties.

As I believe you are fully aware, Raytech Corporation is currently an active participant in settlement discussions in this entire matter with the EPA, Department of Justice, other federal and state agencies and other involved parties.

Best regards,

LeGrande L. Young
Vice President, Secretary
and General Counsel

LLY:mar
cc: Michael Hill

TOWN OF STRATFORD

CONNECTICUT
06497

WATERFRONT AND
HARBOR MANAGEMENT COMMISSION
2725 MAIN STREET
STRATFORD, CT 06497

Mr. Michael Hill, (HSL-CAN5)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, Mass. 02203

May 5, 1995

Re: Raymark Industries, Inc.
Proposed Cleanup Plan

Dear Mr. Hill,

On behalf of the Commission I would like to convey to you and your organization our profound concern with regard to the disposition and remediation with regard to Ferry Creek in Stratford. As I mentioned in our letter of April 13, 1995, we expressed a desire to have an indication as to what activities would be undertaken to eliminate the contaminants found in the Creek below the high water mark. To this date we have not received a reply.

In the interim we have had an opportunity to review some of the documentation placed at the Stratford Library by your organization. A review of this material reinforces our belief that Ferry Creek is, has been and will continue to be the focal point of storm water discharge from the noted site. In fact with the "capping" of the 33 acres, it would appear that the storm water runoff will be increased as the property will no longer have retention properties. As to the ground water, this too is of some long term concern. As the Proposed Cleanup (Alternative 2), does not remove the most contaminated soils(with PCB) these and other organics will continue to leach as they are doing currently toward the river and in particular toward Ferry Creek. It is interesting to note that much of the ground water, at shallow and deep levels, is brackish. This would lead one to surmise that salt water has infiltrated this area and concludes that there is a subsurface transport system at work.

The remediation plan calls for on site testing, through wells, the ground and surface water. We would suggest that it might be prudent to establish a number of strategic wells or test sites off the property in the area of Ferry Boulevard and perhaps one or more between the site and the Housatonic River more northerly of the Creek.

We look forward to having a response to our concerns in a fashion that we can respond to it prior to the end of the comment period on June 8, 1995.

Sincerely,

Robert H. Sammis

Robert H. Sammis, Chairman

cc: Commissioners
Town Manager Barnhart

: Commissioner Sidney Holbrook, ConnDEP
Senator George Gunther
Representative Terry Backer
Representative Vincent Chase
Representative Lawrence Miller

INDUSTRIES
INSTRUMENT DIVISION

250 East Main Street
Stratford, Connecticut 06497-5145
Telephone 203-385-0536
FAX 203-385-0330

John W. Caldwell
President

May 16, 1995

Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, MA 02203

Subject: Proposed Clean-Up Plan for Raymark Industries, Inc. Superfund Site, Stratford, CT

Dear Mr. Hill:

In response to EPA's invitation to participate in the remedy selection process for the cleanup of the Raymark Site, we submit herewith our comments on the Agency's "Proposed Plan ("preferred alternative") as described in EPA's summary document dated April, 1995 (presented to me with EPA's letter dated April 3, 1995) and your presentation at the public hearing held April 11, 1995 at the Town of Stratford, CT Public Library.

Given the feasible alternatives, risk of harm, economic cost and other factors, we concur with EPA's choice of Alternative 2: Capping, and support it as a good common sense cost-effective approach to resolving the problem.

Your presentation at the public hearing was clear, thorough and more reflective of current EPA thinking that also recognizes the important of being cost effective as well as protecting public health and the environment and complying with environmental laws and regulations. Your selected plan is reasonably achievable and prudent.

The May 10, 1995 issue of our local newspaper, the *Stratford Star*, reports that the Leach Development Corp. has purchased the Raymark property and is looking forward to completing the construction of a retail shopping center there by the end of 1996. The paper also indicated that public input to EPA may lead to excavation at the site rather than a cap which would significantly delay clean-up and dramatically increase the cost and risk to the neighbors. We trust that common sense will prevail and you will go forward with your present preferred alternative 2.

We also concur with your decision to defer further expansion of groundwater monitoring until surface remediation has been fully addressed. With GB classification and the fact that this community is entirely served by public water, and there is no significant potential for use of the groundwater as a future public water supply, it is logical to treat this with a lesser priority.

We look forward to the completion of this cleanup project and the ensuing benefits.

Sincerely,

John W. Caldwell

P.S. I understand John Gloria has invited you to speak at the Dresser Corporate Environmental Council Quarterly Meeting on 6/27/95 held at the Stratford plant. Your participation is most welcome and we look forward to your presentation of the proposed Raymark cleanup plan.

JWC/cb

LEBOEUF, LAMB, GREENE & MACRAE
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SAN FRANCISCO

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LONDON
MOSCOW

May 24, 1995

VIA FACSIMILE AND U.S. MAIL

Mr. John DeVillars
Regional Administrator
U.S. EPA, Region 1
JFK Federal Building
Boston, MA 02203

Re: Comments of Raymark Industries, Inc. to EPA's Proposed Cleanup Plan for Raymark's Stratford Facility

Dear Mr. DeVillars:

Raymark Industries, Inc. ("Raymark") submits the following comments to the Environmental Protection Agency's ("EPA" or the "Agency") Proposed Cleanup Plan (the "Proposed Plan" or the "Plan") for Raymark's facility located at 75 East Main Street in Stratford, Connecticut (the "Facility") and various satellite locations (the "Satellite Sites" or "Satellites") that EPA proposes to remediate in connection with the Facility. These comments supplement Raymark's earlier comments pertaining to the EPA's proposed listing of the Facility and Satellites on the National Priorities List ("NPL") and incorporates by reference Raymark's memorandums of law as filed with the United States District Court for the District of Connecticut in United States v. Raymark Indust., Inc. (Civ. No. 3:94-CV-1872 (PCD) (Jan. 24, 1995 (D. Conn.)). Initially, it is important to note that Raymark has supported and continues to actively support all efforts by Leach Family Holdings ("Leach") to return the Facility to economically productive use. Raymark not only negotiated the sale of the Facility to Leach, but continues to work closely with Leach to achieve a timely closing.

I. Introduction

The EPA's Proposed Plan for the Facility and the Satellite Sites encompasses a broad and expensive remedy that can be summarized, in general terms, as follows: (1) Decontamination and Demolition; (2) Removal; (3) Capping; and (4) Monitoring. This methodology equates to a roughly $40 million remediation plan. The EPA believes that this methodology will achieve cleanup goals better than or as well as the other cleanup alternatives that it considered. However, as discussed more fully below, the scientific data pertaining to the Facility, and to the City of Stratford in general, clearly does not support such a remedy. Even if any supporting data did exist, the Agency has still failed to develop a sufficient amount of data upon which to rely to select a remedy. Yet, despite the inadequacy and inaccuracy of the EPA's supporting data and a host of other uncertainties pertaining to the alleged risk posed by the Facility, the Agency formulated not only the remedy described above, but several proactive alternatives ranging in cost from $110 million to $1 billion. The fact that this range is so wide tends to indicate the inability of the EPA to tie the potential remedies to any concrete scientific data.

EPA's failure to address the problems and uncertainties described more fully below militates against expenditure of the extraordinary resources proposed to be spent under the Plan (and which have already been spent on prior remediation of the Facility). Up until now, the Agency has consistently deferred a full consideration of these issues. When Raymark initially commented on the EPA's proposal to list the Facility on the NPL, the Agency deferred an evaluation of these issues because such an evaluation would be premature. When Raymark raised the same issues during the United States' litigation to expand its access to the Facility, the Government argued that such an evaluation should be postponed because CERCLA does not permit pre-enforcement review.

Even if an analysis of these issues was premature during prior stages of this matter, although Raymark does not believe that to be the case, it is clear that the time for such evaluation is <u>now</u>, prior to the implementation of a remedy. CERCLA's administrative process calls for the development of a Record of Decision ("ROD") on the remedy selected by the Agency and a full evaluation of all alternatives, including the technical data supporting or contrary to each, for the administrative record. Therefore, an analysis of the problems and uncertainties identified by Raymark can no longer be postponed. Based on currently

available information, such an analysis will demonstrate that the Proposed Plan is neither appropriate nor cost-efficient. Accordingly, Raymark requests that the Proposed Plan be re-evaluated.

II. Scientific Data Contradict The Initial ATSDR Health Advisory And Do Not Support Listing Of The Facility And Satellite Sites On The NPL

The cleanup itself stems from the Agency's identification of the Facility and the unspecified Satellite Sites as a potential candidate for listing on the NPL. The NPL identifies those sites that the EPA has determined pose the most significant threats to the public or the environment. Yet, the EPA continues to have no basis for its conclusion that the Facility and the unspecified Satellites pose a significant threat to public health and, therefore, should be listed on the NPL.

The EPA may list a site on the NPL by ranking the site according to specific EPA criteria under the Hazardous Ranking System ("HRS"). See 40 C.F.R. § 300. Under the criteria, if the site has an HRS score of 28.5 or greater, it must be listed on the NPL. See id. §300, Appendix A. The EPA also has the authority to list a site where the Agency for Toxic Substances and Disease Registry ("ATSDR") has issued a health advisory that recommends dissociation of individuals from the release or threatened release of hazardous substances, but only if two additional criteria are met. See 40 C.F.R. § 300.425(c)(3). First, the EPA must determine that the release poses a significant threat to public health. Second, the EPA must anticipate that it will be more cost-effective to use its remedial authority, rather than its removal authority, to respond to the release.

EPA usually lists a site for the NPL by conducting a ranking under the HRS. In contrast, the Agency has rarely used the health advisory procedure for listing a site. However, when the health advisory procedure has been used, the EPA has ordinarily conducted a ranking as well, so that each method for listing supports the other.

A. Absence of an HRS Ranking

In this case, however, EPA never calculated an HRS score for the Facility and the Satellite Sites under the required criteria. If such a calculation was made, the Facility and the

Satellites would not score high enough to warrant listing on the NPL. The scientific facts which support this conclusion include the following:

- Lead in the soil waste does not leach unless it is exposed to acidic conditions with a pH of less than four;

- Dioxins are considered isolated and are not statistically significant;

- PCBs are not mobile unless in the presence of solvents (and it should be noted that significant solvents do not exist off site);

- Asbestos is present in the chrystile form (which is not as significant as other forms of asbestos in terms of risk) and is not free to the atmosphere (as confirmed by analysis of the air data collected on and off the Facility);

- Assessment of local water supply contamination and impacts on the food chain yielded the following:

  1) the community uses City water rather than private wells, thus reducing the score for NPL status. In fact, there are no known drinking water supply wells within four miles of the Facility. Therefore, groundwater is an incomplete exposure pathway because there is no population which is either actually or potentially exposed to any groundwater contamination which might exist from disposal at the Facility; and

  2) Shellfish from the Housatonic River have been tested by the State and not found to be contaminated (thus eliminating the concern that the multi-million dollar shellfish industry or the health of shellfish eaters across the country are impacted). See State of Connecticut Department of Agriculture, April 12, 1994 1993 Annual Assessment for the Shellfish Growing Waters in the Town of Stratford, CT. The State Department of Agriculture, in conjunction with the EPA and the Connecticut Department of Environmental Protection, conducted excessive testing as a result of the

ATSDR advisory. Since that time, at least five additional samples per year have been collected and analyzed under adverse pollution conditions (after rainfall). The scientific evidence resulting from these efforts, collected and analyzed under the most rigorous conditions by the State's Shellfish Control Laboratory in Milford, Connecticut, shows conclusively that no chemical contamination of concern exists in shellfish growing in the Housatonic River.

Despite these findings, and without any contradictory data to support its determinations, the EPA still stands by its initial decision to implement a costly, expansive clean-up of the Facility and the Satellites. It is unlikely that even the Stratford community would support the expenditure of tens of millions of dollars on such remediation in the absence of any scientific justification or any demonstration of the health benefits to be gained.

B. Absence of a Finding of Significant Threat

Without an HRS score to rely on, the EPA instead relies solely on the basis of the ATSDR health advisory. However, the EPA has failed to meet the necessary requirements for listing a site based on an ATSDR advisory. The Agency has never determined, as it is required to under federal regulations, that the Facility and the Satellites pose a significant threat to public health.

In fact, the Facility does not pose a significant threat to public health. The same scientific facts (on lead, dioxins, PCBs, asbestos, water supply and the food chain) which prevent the Facility from scoring high enough for an HRS ranking also demonstrate why a significant threat to public health does not exist. In addition to the previously mentioned findings, detailed epidemiological analysis of Connecticut Health Department data shows that town-wide cancer rates are within the normal incidents of cancer experienced on a state-wide basis and state records also indicate that the Stratford community has not suffered rates of cancer greater than that of any town in Connecticut of equal size. In addition, no other evidence of adverse medical or environmental effects from the Facility has been identified. EPA simply has no basis for concluding that the Raymark Facility poses a significant threat to public health.

Although a full and proper risk assessment for the Facility and the Satellites has never been completed, Raymark itself conducted a draft worker risk assessment for a utility trench scenario under a limited excavation program. The risk assessment identified a risk to the workers only while they were in the trench with contaminated soil. The assessment was based on several assumptions and actual soil analytical data for the entire Facility.

Although Raymark's risk assessment was not a complete assessment of the Facility, it remains the only scenario in which any risk to human health has been shown. Importantly, this risk only exists if a person is almost physically touching the contamination. Therefore, at the worst, such risk would only apply to trench workers at the Facility or trespassers who actually fall into a trench at the Facility.[1]

On the other hand, the parameters and assumptions for a public risk assessment of the Facility would be very different than the Raymark worker risk assessment and would assuredly demonstrate little or no risk to the public. For instance, due to restricted access to the Facility, there is virtually no likelihood of exposure to the public unlike the trench workers. In addition, Raymark covered the allegedly contaminated soil at the Facility and filled in pot holes to limit possible exposure to any alleged contamination to an even greater extent. As a consequence, the upper two feet of soil at the Facility is comprised of "imported fill," which has chemical characteristics a full order of magnitude less than the lower "process fill." Obviously, the less contaminated fill covering the Facility would yield a much lower risk assessment than one performed under a utility trench scenario.

C. Inadequacy of the ATSDR Advisory

In the absence of a full risk assessment, the EPA instead relied on the preliminary data which led to the ATSDR Health Advisory. However, available evidence demonstrates that the Agency's reliance on the ATSDR data and report has been, and

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[1] However, trespassing at the Facility is highly unlikely. As discussed more fully later in these comments, the Facility is enclosed within a fence and entrance to the Facility is only possible through a locked gate. Even the early ATSDR Advisory recognized that the Facility is secure from public access.

continues to be, unjustified. The Agency's reliance on premature, unsubstantiated ATSDR data has not been, and cannot be, scientifically supported. For instance, the EPA initially requested the ATSDR to review the Facility based on its concern over dioxin data collected, in addition to data on lead and PCBs. However, EPA has since determined that the dioxin data is statistically insignificant. Raymark itself completed a risk assessment to determine the risk to drillers at the Facility. This risk assessment showed no significant risk to the drillers, even during intrusive work.

The Health Advisory enumerated a number of hypothetical pathways in which human exposure could occur. However, none of these are borne out by the actual data, and are in fact contradicted by it. Potential exposure through food or groundwater pathways has already been discussed earlier and dismissed. Other potential exposure pathways that were identified by the ATSDR are equally hypothetical. For example, the Health Advisory suggests the possibility of exposure through inhalation, direct dermal contact, or ingestion. As even ATSDR acknowledged in the Advisory, however, the Facility is secure from public access. The Facility is surrounded by a fence, with access only through a locked entrance gate. The majority of the Facility is covered with asphalt and, therefore, soil is generally inaccessible. In addition, the alleged soil contamination at the Facility only exists in the soil column below blacktop, steel reinforced concrete floors, and soil caps. Moreover, there are no residents, agriculture or grazing at the Facility. Accordingly, the risk of public contact with the alleged contamination is remote at best, and this, too, is therefore an incomplete exposure pathway. The Health Advisory itself conceded that because access to the Facility is restricted and the waste is covered, "no health hazard is currently posed by the presence of dioxins on the Raymark Facility."

Considering these facts, the EPA should have completed a full risk assessment to determine the risks present not only at the Facility, but at the Satellite Sites. In the absence of such an assessment, there is no available evidence which indicates that the Facility or the Satellite Sites pose a significant threat to public health. In fact, available evidence leads to the opposite conclusion. Yet, the Agency's basis for its Proposed Cleanup Plan relies completely on this incorrect assumption.

D. Lack of Evidence That Any Satellite Sites Pose A Significant Threat To Public Health

EPA has not demonstrated that any alleged off-site contamination is attributable to the Facility or that it poses a significant threat to public health. In fact, the Agency has refused to even identify the location of any such off-site contamination. In order to list a site on the NPL, EPA must establish with specificity the location of the site where a release has occurred. See, e.g., United States v. Conservation Chemical Co., 619 F.Supp. 162, 163 (D. Mo. 1985). In this case, the Agency has failed to do so. Instead, the EPA expects that the public will approve its $40 million proposed remedy without even knowing where the alleged contamination is and was located.

III. EPA's Proposed Plan Calls For Costly Remediation That Is Scientifically Unsupported and Economically Unjustified

Under the EPA's Proposed Plan, an estimated $40 million will be spent for remediation at the Facility beyond the substantial funds already expended on excavation at various locations throughout Stratford. However, early estimates of demolition costs alone have been estimated by government contractors to be approximately $30 million, nearly three times the estimate which Raymark has prepared for the same work. Such demolition costs were not fully taken into account in the EPA's Plan, yet they would increase the Agency's $40 million dollar proposal by 50 percent. The absence of these costs from the Proposed Plan precludes a fair and accurate assessment of it by the public. Moreover, despite the enormous costs at risk, the Agency has continued to stand by the controverted conclusions of the ATSDR advisory. As discussed above, the very basis for the Agency's cleanup of the Facility and the Satellites is scientifically and economically suspect. The EPA's Proposed Plan simply should not be adopted because it relies on "bad" science to justify a scientific determination.

However, assuming for a moment that the basis for the Proposed Plan is not at issue, a number of aspects of the Plan are still questionable. Among these is the Agency's refusal to consider the redevelopment use of the property after remediation. The EPA itself has publicly announced that the Site is targeted for redevelopment. In developing the Proposed Plan, however, the EPA never considered the probable uses for the Site pursuant to redevelopment. As a result, the Plan contains numerous costly

components which could have been eliminated had a consideration of redevelopment uses been made. Accordingly, even if the Proposed Plan had a legitimate basis, which it does not, significant portions of the Plan remain wholly inappropriate. At the very least, the Proposed Plan should be more properly scrutinized to eliminate its great potential for wasting public and private party resources.

First, EPA's Proposed Plan encompasses the excavation of various, unspecified Satellite Sites. In fact, significant excavation of Satellite Sites has already been completed and further excavation is currently proceeding. This excavation includes removal of all waste, even that below the water table. On the other hand, the ATSDR Health Advisory recommended that only the upper soils (three to four inches from the surface) need be removed to reduce the risk identified. As a consequence of EPA's requirement to remove all waste present, the costs of excavation have increased by tens of millions of dollars. Yet, these costs appear entirely unnecessary. In the absence of a proper risk assessment or NPL scoring, no scientific data has been identified which would justify the expenditure of these enormous sums.

Second, the EPA's Proposed Plan acknowledges that the waste at the Facility and the Satellite Sites does not require removal or on-site treatment, except in certain, unspecified, isolated areas. Such an acknowledgement indicates that the waste from the Satellite Sites that has already been excavated and moved to the Facility by the EPA may not have been warranted, at least not to the extent of removal that EPA has thus far taken. As a consequence, millions of dollars may have been unnecessarily spent.

The EPA's Proposed Plan further indicates that the Facility will be covered with a double thick cap and that the cap will be drained by a designed-under-cap drainage system. However, the pavement currently existing on the Facility has clearly reduced the infiltration of waste to the underlying soils. Since the infiltration is significantly reduced by the pavement, a less costly cap is appropriate rather than a double thick cap with drainage. The EPA's Proposed Plan, however, ignores this fact, once again adding to the vast resources that may be unnecessarily spent.

The Proposed Plan further encompasses the design and installation of a gas vapor extraction system, which arguably may be appropriate in solvent areas. Installing such an intrusive and

expensive system so early in the process, however, may ultimately require the expenditure of substantial additional costs to ensure that proposed foundations on the site are properly degassed. To avoid these potentially unnecessary costs, the Plan should allow the design of the extraction system to be completed in conjunction with the end-user of the property.

The Agency also plans on installing additional wells and completing additional studies to determine if groundwater remediation will be required. Yet, the Proposed Plan does not consider groundwater and the costs of the additional wells and studies has not been evaluated. This also adds to the uncertainty as to the real costs of the cleanup.

All of these questionable aspects of the Proposed Plan warrant further consideration, especially in light of the uncertainty as to the very basis for the Plan. Even if a risk assessment for the Facility and the Satellite Sites is not conducted, the validity of certain elements of the Plan, on both a technical and economic level, should be re-assessed.

IV. A Full Consideration of the Data Supporting the EPA's Proposed Plan Should Be Conducted At This Time

Raymark has raised its concerns over the listing of the Facility and the Satellite Sites in previous comments and in various litigation papers. Those concerns, as well as the issues raised in these comments, specifically question the basis for the EPA's decisions in connection with the Facility and the Satellites, including the remedy selected in the Proposed Plan. Rather than being hypothetical, like the Agency's support for many of these decisions, Raymark has identified real, specific problems which should be addressed prior to the implementation of the Proposed Plan and the expenditure of enormous resources.

In the past, opposition to Raymark's arguments has consistently relied on the position that review of the Agency's administrative determinations, including its proposed listing of the Facility on the NPL and its proposed remedy for cleanup, should be postponed until an unspecified later point in time. That time is now. The Agency is on the verge of implementing a Proposed Plan under which tens of millions of dollars may be spent in the absence of a full risk assessment or NPL study. Numerous aspects of the Proposed Plan, as identified above, remain questionable and could be addressed in a much more cost-efficient manner. Scrutiny of the

administrative record, which has constantly been deferred, is now absolutely necessary for the simple reason that the data may no longer support, and may never have supported, the extreme response that has been taken and is being called for. The Agency never fully developed the data necessary to make the determinations it is calling for. And more importantly, the data that it does rely on fails to support its determinations. Therefore, before the EPA's Proposed Plan is implemented, a full risk assessment must be completed to avoid the very likely possibility that millions of dollars will go to waste on an ambitious, yet unnecessary, cleanup. At the very least, the remedy selected under the Proposed Plan should be re-evaluated to justify the costs anticipated.

V. Conclusion

Based on the foregoing reasons, the EPA's Proposed Plan seeks to justify cleanup methods and costs which are clearly unwarranted. A number of elements of the Proposed Plan are either completely unnecessary or achievable through more efficient and less expensive means. In light of the failure to properly assess the risk associated with the Facility and the Satellite Sites, and to properly justify, scientifically and economically, the methods and costs required to effect the remediation proposed, the EPA's Proposed Plan should be withdrawn pursuant to further review.

Very truly yours,

RAYMARK INDUSTRIES, INC.

By _____
James A. Thompson, Jr
Attorney for Raymark
Industries, Inc.

cc: The Honorable Jerry Lewis, U.S. House of Representatives
The Honorable Michael G. Oxley, U.S. House of Representatives
The Honorable John G. Rowland, Governor of Connecticut
Sidney J. Holbrook, Commissioner, Connecticut Department of Environmental Protection
Michael Hill, U.S. EPA Region 1, Remedial Project Manager

355 Mt. Pleasant Ave.
Stratford, Ct. 06497

May 30, 1995

Mr. Michael Hill (HSL-CAN5)
U.S. Environmental Protection Agency
JFK Federal Building
Boston MA 02203

Re: Wooster Middle School athletic field cleanup, Stratford, Ct.

Dear Mr. Hill:

I reside in close proximity to the Wooster Middle School and am interested in returning to full operation the athletic field bordering the school on the northwest. I do not know the precise area of the field, but, prior to the summer of 1993, it supported two baseball diamonds with separate outfields, used primarly by Stratford's budding athletes.

Prior to the spring of 1993, the EPA, and perhaps the Connecticut DEP, suspected that PCBs and asbestos brake linings were buried in the field. In the spring and summer of that year, the top four feet of dirt was scraped off the field and stockpiled. The exposed surface was then covered with two feet of gravel and a plastic blanket, topped with two feet of the original soil. When the job was completed, the children and their parents expected to resume play, but a barrier fence was erected around the perimeter and the interior became a hayfield. That condition persisted in 1994 and to date in 1995.

Stratford officials state that the Town cannot open the field until the underground hazardous waste is disinterred and trucked to the Raymark parking lot about 1½ miles east. The present delay is because legal experts are trying to determine who will get sued if this comes to pass, a study which could continue into the next century. Meanwhile, The Dock Shopping Center located east of Raymark, for rather baffling reasons, is protesting the transfer of PCBs and brake linings to the lot on which a competing shopping center may be located.

If the buried junk at Wooster is contaminating underground water, that water is not entering residential taps. There are no wells between Wooster and Long Island Sound. Youngsters cannot be harmed playing four feet above the nearest contamination.

Please advise whether the EPA has objection to the immediate opening of the northwest field at Wooster Middle School. The next meeting of the Stratford Town Council is June 12th. I hope you will be able to provide an answer by that date.

Yours very truly

J. Roger Shull

Wiggin & Dana

Counsellors at Law

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203.782.2889

TELEFAX TRANSMITTAL

Date:

June 6, 1995

To:

Michael Hill (HSL-CAN5)
EPA

Telefax number:

1 617 573 9662

From:

Abbie Eremich, Esq.

Telephone number:

1 203 498 4397

Client/matter code:

9204/2500;9676/702;4895/4137

Please copy:

We will copy:

Special instructions:

PLEASE DELIVER TO MICHAEL AS SOON AS POSSIBLE. THANK YOU.

5 pages follow this page

Wiggin & Dana

Counsellors at Law

Offices in New Haven and Hartford

One Century Tower
New Haven, Connecticut
06508-1832
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Abbie Eremich
203.498.4397

BY FAX AND OVERNIGHT MAIL

June 6, 1995

Michael Hill (HSL-CAN5)
Remedial Project Manager
United States Environmental
Protection Agency
John F. Kennedy Federal Building
Boston, MA 02203-0001:

Re: Utility Comments to Proposed Cleanup Plan --
Raymark Sites, Stratford, Connecticut

Dear Mike:

Attached are the comments to the Proposed Cleanup Plan for the Raymark Facility in Stratford, Connecticut submitted on behalf of The Bridgeport Hydraulic Company, Southern New England Telecommunications Corporation, The United Illuminating Company and the Southern Connecticut Gas Company. I have sent another copy to you through the overnight mail to ensure that you receive these comments before June 8, 1995, which is the date when the public comment period closes.

Please call me if you have any questions or concerns relative to these comments or more generally to utility issues in and around Stratford.

Best wishes.

Very truly yours,

Abbie Eremich

Attachment

cc: all by regular mail:

Eric Conrad
Jim Hart
Robert Silvestri
Anne O. McCrory, Esq.

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FOR INCLUSION IN THE
ADMINISTRATIVE RECORD

COMMENTS SUBMITTED ON BEHALF OF:

1. The Bridgeport Hydraulic Company ("BHC");
2. Southern New England Telecommunications Corporation ("SNET");
3. The United Illuminating Company ("UI"); and
4. The Southern Connecticut Gas Company ("SCGC")

COMMENTS SUBMITTED BY:

Abbie Eremich, Esq. - Wiggin & Dana for BHC, SNET and UI
Anne O. McCrory, Esq. - Counsel for SCGC

COMMENTS SUBMITTED BY OVERNIGHT MAIL TO:

Michael Hill (HSL-CAN5)
Remedial Project Manager
United States Environmental Protection Agency
John F. Kennedy Federal Building
Boston, MA 02203-0001

COMMENTS TO:

Proposed Cleanup Plan
Final Source Control Feasibility Study Report
Remedial Investigation/Feasibility Study ("RI/FS")
Raymark Industries, Inc. Facility
Stratford, Connecticut
Dated in April 1995

COMMENTS DATED, SENT BY OVERNIGHT MAIL AND SUBMITTED ON:

June 6, 1995

1. Introduction

The four above-referenced Utilities submit these comments in response to several specific aspects of the Proposed Cleanup Plan for the Raymark Industries, Inc. Facility (the " Raymark Facility") located in Stratford, Connecticut (the "Site") as set forth in the Final Source Control Feasibility Study Report, Remedial Investigation ("RI")/Feasibility Study (the "FS", "Cleanup Plan" and ""RI/FS", respectively). The comments set forth herein are directed, as applicable, both to the United States Environmental Protection Agency ("EPA") and the Agency for Toxic Substances and Disease Registry ("ATSDR"), but for convenience, reference below is only to EPA. The comments are directed at the following topics and will be addressed below in the same order:

a. The Risk Assessment and the so-called residential excavation protocol employed or alleged by the EPA to be employed during the residential excavations in and around Stratford (the "Protocol"), as both documents relate to utility worker safety and residential health and safety issues at and around residential areas where EPA has left, or will leave, behind at depth certain wastes containing at a minimum any two of the following constituents: asbestos; lead; and/or polychlorinated biphenyls ("Raymark Waste");

b. Disposition of Raymark Waste-contaminated soils left behind at depth and the question of the Utilities' obtaining access to, and performing utility servicing in and around residential areas if, as, and when it becomes necessary in connection with routine and/or emergency utility servicing of the subject residential areas to excavate such Raymark Waste-contaminated soils.

2. EPA's Risk Assessment and Protocol

EPA's Risk Assessment addresses the health threat to utility workers who may contact contaminated surface and subsurface soils during repair or excavation activities at the Raymark Facility.

The Risk Assessment concluded that the potential for adverse human health effects exists for utility workers both on the Raymark Facility and off-site in the vicinity of the Raymark Facility.

EPA has conducted, and is in the process of conducting, a series of removal actions from residential properties in and around Stratford which were/are contaminated with Raymark Waste. These waste materials were removed, and will be removed, from the residential properties, and apparently were studied together with the wastes on the Raymark Facility as part of the Feasibility Study.

EPA's excavation of Raymark Waste-contaminated soils from the residential properties is ongoing, occurring both during and after this public comment period for Operable Unit One as set forth in the Cleanup Plan. However, the health effects to both Utility employees, agents or representatives and homeowners relative to EPA's Protocol for the

residential excavation is not evaluated in the FS or in any other document available for public comment. The significance of this omission from the RI/FS - Risk Assessment is as follows.

EPA's Risk Assessment relative to utility workers on the Raymark Facility proper indicates a potential threat to utility workers on the Raymark Facility and in the area of the Raymark Facility. In EPA's Protocol for residential excavation, EPA apparently has decided to leave behind Raymark Waste-contaminated soil -- in some cases the very same type of soil studied at the Raymark Facility and as to which EPA concluded there is a potential threat to utility workers -- at certain depths at certain Stratford residences. Utility infrastructures may run through and beneath the depths at which EPA elected to leave Raymark Waste-contaminated soils behind. Accordingly, when these utility infrastructures require routine or emergency maintenance, the Utilities' employees, agents or representatives will have to dig into, and thereby disturb, the Raymark Waste-contaminated soils thus left behind by EPA. Not only will the Utilities' employees, agents or representatives be at risk (as EPA's Risk Assessment could be read to conclude in this context), but the homeowners also will be subject to the potential for health risk or actual health risk due to the disturbance of the Raymark Waste-contaminated soils EPA decided to leave behind.

The Utilities believe that EPA should have evaluated these risks to the Utilities' employees, agents or representatives and homeowners in connection with both the development of the Protocol, and the Risk Assessment evaluation in the FS.

3. **Disposition of Raymark Waste**

EPA has not addressed the case when the Utilities must service the Stratford residents upon whose property EPA either has not excavated the Raymark Waste-contaminated soils that exists thereon, or has left behind Raymark Waste-contaminated soils thereon. Such utility servicing requires accessing such properties through the streets and curbs, including areas where utility poles servicing the residences may be located. EPA has not given the Utilities the sampling/analytical data regarding such properties and areas. The Utilities do not know the exact identity of the residential lots or other areas where EPA has identified Raymark Waste-contaminated soils, the extent of contamination thereon, and precise information as to the nature and extent of Raymark Waste-contaminated soils left behind on and around these residential properties.

Based upon the limited information the Utilities have been able to collect from the Town of Stratford relative to EPA's residential sampling and excavation activities, it appears that the Utilities may have to disturb Raymark Waste-contaminated soils in the course of utility operations at and around such properties.

The Utilities believe that EPA should have involved the Utilities in the development of the residential excavation Protocol. Such involvement would have acknowledged both the ongoing need to the homeowners of utility servicing and the potential or actual health-based risk to utility employees, agents or representatives and the homeowners if

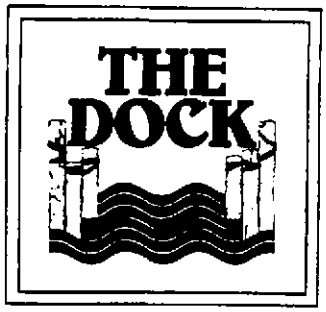
the Utilities have to perform their operations through Raymark Waste-contaminated soils on and around residential properties and areas where utility poles necessary to service the homeowners may be located. The Utilities also believe that EPA should have studied this issue as part of the Risk Assessment to develop a clear and complete understanding of the source of the Raymark Waste-contaminated soils being brought onto the Raymark Facility and the potential or actual health risk to all individuals who may now or in the future first or ever come into contact with such Wastes. Unlike concerns expressed as to the reasons for not having studied groundwater at the Raymark Facility and around Stratford, the potential or actual health risks herein described will not be studied and evaluated by EPA at a later time, for example, in connection with operable unit two as will groundwater. Therefore, this is the correct and only time to effectively study and evaluate these issues.

The Utilities believe that EPA needs to develop a method to provide for EPA's or the Lead Agency's removal off-site of Raymark Waste-contaminated soils from such areas when Utilities encounter same during utility servicing operations now and in the future. The Utilities believe that such EPA method should include reserving space under the proposed cap at the Raymark Facility for such Wastes and having the On-Scene Coordinator arrange for the removal, transportation and off-site disposal of such Wastes, whether directly, or indirectly through an appropriately trained contractor retained by EPA or the Lead Agency, when called to do so by the Utilities. In connection with this issue, the Utilities also believe that EPA inadequately evaluated and under-estimated the volume of Raymark Waste from the residential excavations that need to be disposed of at the Raymark Facility and that a revised estimate needs to be developed to account for the volumes accumulated during utility operations herein described.

4. Summary

As set forth above, EPA inadequately studied and evaluated the risk to utility employees, agents and representatives and homeowners relative to necessary utility servicing in and around the residential properties and in areas servicing those residences at which EPA has sampled and found Raymark Waste-contaminated soils. Further, EPA underestimated the amount of Raymark Waste necessary to be disposed of at the Raymark Facility because it did not estimate the amount of such Waste that will need to be disposed of at the Raymark Facility when the Utilities perform routine or emergency maintenance work at, in and around the subject residences and in areas servicing those residences as set forth above.

The Utilities believe that EPA should re-evaluate, re-study and redevelop the Protocol and the Risk Assessment and FS associated with the issues raised herein so as to be appropriately protective of the health and safety of the Utilities' employees, agents or representatives and homeowners described in this comment. The Utilities also believe that EPA should ensure that adequate space is reserved at the Raymark Facility for the disposal of Raymark Waste-contaminated soils encountered during utility operations in and around Stratford.



June 7, 1995

Richard Cavagnero
Raymark Team Leader
U.S. E.P.A.
Northeast Region
J.F. Kennedy Federal Building
Boston, MA 02203-2211

Dear Mr. Cavagnero:

Enclosed are the comments of The Dock regarding EPA's Proposed Cleanup Plan for Raymark Industries, Inc., Stratford, Connecticut. If you have any questions, please call my attorney, Mr. Thomas F. Harrison, at 203-275-0480.

Very truly yours,

J. Robert Osborne

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Comments of The Dock on EPA's Proposed Cleanup Plan

Introduction

The Dock's preparation of Comments on EPA's Proposed Cleanup Plan has been made more difficult because of the government's failure to respond in a timely manner to requests for information made under the Freedom of Information Act ("FOIA"), 5 U.S.C. § 552.

FOIA requests were submitted to EPA on May 16, 1995 and May 24, 1995; to The Department of Justice on May 23, 1995; and to The Agency for Toxic Substances and Disease Registry, Centers for Disease Control on May 24, 1995. The Dock reserves the right to submit additional comments once the above information has been provided.

As discussed more fully in Section 9.00 below, the administrative record located in both Boston, Massachusetts, and in Stratford, Connecticut was missing 113 key pages of information until late May 1995. The lack of this vital information in the administrative record deprived the public of important information necessary for preparing comments. EPA refused to extend the comment period, thereby restricting the public's ability to provide constructive comments.

The following comments have been prepared as best as possible, given the delay in obtaining information.

1.00 Overview of Proposed Cleanup Alternative (SC-2)

EPA in its April 1995 Proposed Cleanup Plan stated that it will "begin additional studies to further evaluate the groundwater contamination ... to identify potential groundwater cleanup options *in the future, if necessary.*" (Emphasis added). This approach is both technically unsound and unworkable as well as contrary to EPA's laws and guidance. A rational decision at this site cannot be made which treats one operable unit (on-site soils and NAPL) without determining the appropriate remedial options for the other operable units (groundwater and surface water) which by both legal and technical necessity should be related to the remedy for the on-site soils and NAPL.

Since the Proposed Cleanup Plan also states that "contaminated groundwater is suspected to be flowing beyond the facility boundary," EPA's expectations without having undertaken any off-site studies must comply with 40 C.F.R. § 300.430(a)(1)(iii)(F), i.e., that groundwaters will be returned "to their beneficial uses where practicable," and otherwise "to prevent further migration of the plume, prevent exposure to the contaminated ground water, and evaluate further risk reduction." The Dock believes that EPA's Proposed Cleanup Plan for the on-site soils and NAPL will impede, be inconsistent with and ultimately preclude implementation of this expected final groundwater remedy in violation of 40 C.F.R. § 300.430(a)(1)(ii)(B). Once the site is capped and a building is constructed thereon, it will be impractical to collect or contain contaminated groundwater on-site in a technically sound and cost-effective manner.

EPA should not sign a Record of Decision (ROD) until the appropriate on-site and off-site investigations have taken place. At that time, it will be clear, for example, whether recovery wells are required on-site and where they should best be located, whether a barrier wall is required around part or all of the site, etc. The Dock believes that the EPA will not be able to compress the schedule for all further studies of on-site and off-site conditions between the period June 1995 and anticipated construction of the cap in late 1995 or early 1996. The requirement for the necessary on-site and off-site investigations and associated modeling of complex groundwater and surface water flow conditions cannot be effectively completed in this short time frame. Installation of a barrier wall or monitoring wells must be done before construction of the cap. Based on EPA's Proposed Cleanup Plan, it appears EPA envisions

allowing construction of a building on the site before the remedy for other operable units is selected. If this were to happen, at best the integrity of the cap would be compromised during the installation of recovery wells or removal of soils. At worst, contaminated soil or groundwater beneath the building would require removal, which would be nearly impossible.

To date, EPA has not made clear who will be responsible for inspecting and maintaining the cap. Conceivably, EPA, the current owner, Raymark, or the prospective owner, Leach Development, may bear this responsibility. It is important for accountability purposes that the public be provided this information.

In addition, the EPA contractor chose not to present off-site data when available. In Section 2.1.2 of the Remedial Investigation conducted by Haliburton/NUS, reference is made to off-site sediment sampling conducted as part of an EPA Site Inspection Visit. These data must be made available to the public before a ROD is signed so that an adequate evaluation of study area natural resources can be conducted.

Without the appropriate off-site studies, we can only estimate the environmental areas of concern. The following areas of concern may require additional on-site and off-site remedial or removal activities which would be impeded by, inconsistent with and precluded by capping:

- Groundwater quality off-site is likely several orders of magnitude above maximum contaminant levels (MCLs) in certain areas.
- The Raymark site drainage is discharging contaminated materials to Ferry Creek. This surface discharge and current groundwater discharge may be causing adverse impacts to Ferry Creek and the Housatonic River and their associated sediments and aquatic ecosystems.
- Contaminated groundwater may be discharging to surface water, wetlands, and residents' basements.
- Residents may be eating homegrown food grown in contaminated groundwater.
- LNAPL vapors (e.g., toluene) may be entering homes creating a health and explosion hazard.
- People may be eating fish/shellfish contaminated by the site groundwater discharges to surface water/sediments.
- Contaminated groundwater may be reaching homeowners' wells (potable) or more likely their swimming pools (non-potable use).
- There may be industrial/commercial pumping wells causing exposure to the public (e.g., car wash).

The EPA must determine which of these are of concern before an appropriate alternative is selected.

2.00 Selection of Proposed Cleanup Alternative without Consideration of the Relationship Between Affected Soil and Groundwater

The EPA failed to consider in its selection of the Proposed Cleanup Alternative the effect that soils are having and will continue to have on groundwater. On December 30, 1994, EPA released to the public its Draft Soil Screening Guidance (Federal Register, Volume 59, No. 250, p. 67706). Although the numerical levels and detailed implementation outlined in this document may be subject to change, this document clearly reflects EPA's policy of 1) setting appropriate remedial objectives for soil and 2) considering the potential impact of contaminated soil on groundwater. In fact, analysis of contaminant fate and transport, and of the pathways whereby contaminants move from one medium to another, are central to a Remedial Investigation. As such, the effect of contaminated soils on groundwater should have been considered in both the RI and the FS as well as in the ROD.

The Haliburton/NUS RI states in Section 3.3.1 that the groundwater quality, classified by CT DEP as GB, is unsuitable for treatment based on Reference 7 (Final Site Inspection Report for Raymark Industries, Roy F. Weston, Inc., 1993), presumably due to salt-water intrusion. However, before signing a ROD, EPA must articulate its position regarding the most beneficial use of the groundwater. Based on the investigations to date, restoration to potability (i.e., MCLs) should be the primary objective with elimination of adverse surface water and sediment effects as a secondary objective. If these objectives are impracticable, containment of groundwater must be implemented to prevent further migration of the plume. EPA must state how this can be achieved if a cap is to be installed on the site.

3.00 Management and Disposal of PCB-containing Soils

EPA's proposed remedy would violate its own PCB Spill Cleanup Policy. 40 C.F.R. Part 761. Under this policy, "PCB's at concentrations of 50 ppm or greater must be disposed of in an incinerator which complies with § 761.70." 40 C.F.R. § 761.60. Sections (a)(2) through (5) contain various exceptions to this requirement, only one of which applies to contaminated soil. Under (a)(4), PCB-contaminated soil may be disposed of in either an incinerator or "in a chemical waste landfill which complies with § 761.75." This language is mandatory--it does not allow for disposal of PCB-contaminated soils at the Raymark Site. Clearly, under this policy, EPA may not dispose of soils containing greater than 50 ppm of PCBs on the Raymark Site. But in the face of this unambiguous policy, EPA intends to dispose of such PCB-contaminated soils, which were excavated off-site, at the Raymark Superfund Site.

In addition, the PCB Spill Cleanup Policy requires that sites of PCB spills having a concentration of PCBs greater than 50 ppm must be remediated. 40 C.F.R. § 761.60(d). Although the policy purports to apply to "spills which occur after May 4, 1987," according to EPA and the case law, the PCB Spill Cleanup Policy applies to spills occurring before the regulations were promulgated. In the Matter of Standard Scrap Metal Company, TSCA Appeal No. 87-4, 1990 LEXIS 10 (August 2, 1990); accord In the Matter of City of Detroit Public Lighting Department, TSCA Appeal No. 89-5, 1991 LEXIS 1 (February 6, 1991). Thus, under these precedents, EPA is required to clean up the PCB-contaminated soil on the Raymark Superfund Site by either incineration or by meeting the requirements applicable to a chemical waste landfill.

4.00 Issues Relating to Bringing Off-Site CERCLA Wastes Back to the Site

In short, EPA's management of the CERCLA wastes removed from off-site locations and brought back to the site is a violation of EPA's Off-site Rule as well as RCRA's regulations concerning land disposal restrictions ("LDRs"). The EPA's actions have in effect converted the Raymark site into a RCRA treatment, storage or disposal facility subject to regulations under subtitle C.

EPA promulgated its Off-site Rule in 1993. 58 Fed. Reg. 49,200 (1993). The rule "applies only to actions being taken under a CERCLA authority or using CERCLA funds." Id. at 49,203. It mandates that a facility used for off-site management of CERCLA wastes "must be in compliance with RCRA or other applicable Federal and State laws" and must meet the following criteria:

> • Units receiving CERCLA wastes at RCRA subtitle C facilities must not be releasing any hazardous wastes, hazardous constituents or hazardous substances;
>
> • Receiving units at subtitle C land disposal facilities must meet minimum technology requirements;
>
> • All releases from non-receiving units at land disposal facilities must be addressed by a corrective action program prior to using any unit at the facility; and
>
> • Environmentally significant releases from non-receiving units at Subtitle C treatment and storage facilities, and from all units at other-than-Subtitle C facilities, must also be addressed by a corrective action program prior to using any unit at the facility for the management of CERCLA wastes.

Id. at 49,202

EPA is clearly in violation of this policy. EPA has excavated or will excavate, and allowed other parties (including the State of Connecticut) to excavate, contaminated soil from numerous locations in Stratford, Connecticut, and has moved this soil to the Raymark site, where EPA plans to dispose of the waste by landfilling. Since the Stratford Superfund Site does not meet the requirements discussed above for a facility used for the management or disposal of CERCLA wastes, to do so will violate the Off-site Rule.

EPA clearly states in the Preamble to the Off-site Rule that the purpose of the rule is to avoid having CERCLA wastes contribute to future environmental problems.

> Congress and EPA have always believed that a CERCLA cleanup should be more than a relocation of environmental problems, and have attempted to ensure the proper treatment and disposal of CERCLA wastes removed from a CERCLA site. EPA believes that the process set out in this rule **for ensuring that CERCLA wastes are transferred only to properly-permitted facilities that have no relevant violations or uncontrolled releases,** assures that the receipt of CERCLA waste will not pose adverse effects on the environment.

58 Fed. Reg. at 49,201.

In addition, EPA is required to comply with land disposal restrictions ("LDRs"). According to EPA's guidance, LDRs are applicable when 1) placement occurs (EPA has conceded that placement occurred--see EPA Memo dated April 5, 1995 from Kathleen E. Woodward and Michael Hill), 2) of a RCRA hazardous waste, and 3) the RCRA hazardous waste is restricted under the LDR. Superfund LDR Guide #5, "Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions," dated July 1989.

EPA concedes that the LDRs are applicable but argues that it would be impracticable to comply with them. See EPA Memo. Further, EPA argues that waste excavated from residences and "placed on the site during the removal action did not trigger LDRs during the remedial action so long as the waste remained within the area of contamination." EPA Memo. According to the NCP,

> placement occurs . . . when waste is moved from one [area of contamination ("AOC")] to another. Placement does not occur when waste is consolidated within an AOC, when it is treated in situ, or when it is left in place.

55 Fed. Reg. at 8758.

EPA appears to be arguing that contaminated soil that was excavated from residences and temporarily stored at the Raymark facility can now be disposed of at the site without complying with LDRs because the contaminated soil was "placed" at the site and thus is now within the same AOC as the on-site waste. This would only be the case if LDRs were complied with when the waste soil was "placed." EPA should not be allowed to avoid LDRs in the first instance and then argue that because the waste soil was "placed" on the site, that LDRs need not be complied with because of the AOC concept. [1]

The excavated soil was removed by EPA and placed on the Raymark site without complying with LDRs because the removal was considered to be a Time Critical Removal Action. See EPA Memorandum From Michael Hill Regarding "Raymark Industries, Inc.: Waste Subject to the RCRA Land Disposal Restrictions (LDRs) And Addressed Through The Raymark Time-Critical Removal Action Does Not Trigger LDR For The Remedial Action At The Raymark Site" dated March 17, 1995. However, the justification for concluding that compliance with the LDRs was impractical--that is, that "[t]he time required to treat the waste would delay the Removal Action at residential properties, thereby compromising the protection of public health"--no longer exists. Since the immediate threat to the public is over, EPA must now comply with the LDRs during the remedial phase.

Further, the area of contamination concept applies only to the movement of waste within a single AOC; it does not apply to wastes that are consolidated from different AOCs into a single AOC. See Superfund LDR Guide #5. EPA is attempting to "boot-strap" its way out of

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[1] See also Section 2.4.3.6 of the FS, which states that soils containing contaminants restricted under LDR and not already "placed" would have to be treated to acceptable levels prior to landfilling. This contradicts the statements in the Proposed Cleanup Alternative (page 5) and elsewhere in the FS (section 3.2.2) which imply that off-site soils would be placed without further treatment.

complying with LDRs by asserting that by "placing" off-site contaminated soil on the Raymark site, EPA has somehow converted "off-site" waste into "on-site" waste.

Finally, EPA's disposal of a hazardous waste after RCRA requirements became effective mandates that RCRA closure requirements be complied with. In addition, EPA's Proposed Cleanup Alternative constitutes landfill closure. As such, postclosure care as specified in 40 C.F.R. §§ 264.117, 264.228(b) should be included in EPA's Proposed Cleanup Alternative. Without these prescriptions, EPA's Proposed Cleanup Alternative violates both CERCLA and RCRA.

5.00 Scope of the Remedial Investigation

An RI/FS, such as that completed for the Raymark Superfund Site, that does not consider impacts of soil and NAPL to groundwater, surface water and human receptors both on and off-site is inherently inadequate. The RF inadequately characterizes the soil and groundwater under the existing buildings: limited soil sampling was carried out, and no groundwater monitoring was conducted. One clear example is illustrated by Figures 4-2 and 4-9 of the RI. In Figure 4-9 the concentration of trichlorethylene (TCE) in monitor well M2 on the southern boundary of the site was 1,100 μg/kg (ppb), which is a concern because it is 220 times the MCL and because no soil sample to the north or northwest (i.e., presumed upgradient) contained such high levels of TCE. This result suggests that either the groundwater flow direction was characterized inadequately, or more likely, that there is another area of high soil TCE concentrations or NAPL that has not been found. From the location of M2, this TCE source could very likely be under a building. This example emphasizes the need to conduct further sampling before deciding on a final remedy for the soils.

Another problem compounding the failure to characterize the potential impact of soils on groundwater is the lack of reliable hydraulic conductivity data for any horizontal or vertical portion of the site. All hydraulic conductivity data have been established by slug test, a notoriously unreliable method as indicated by the fact that, for example, the reported hydraulic conductivity for the Stratified Silty Sand Unit as reported in Table 3-3 of the RI varied from 0.075 to 96.4 ft/day i.e., more than a factor of 1,000. This is not indicative of a singly homogeneous geologic unit. Since no off-site studies have been carried out nor attempts been made to ascertain how soil contaminants will migrate to groundwater, it is not clear how errors in the hydraulic conductivity would affect the groundwater or surface water remediation. However, it is clear that the on-site characterization has been inadequate.

6.00 Public Involvement Process

The materials presented at the public meeting are of necessity brief summaries of the overall RI/FS. However, the small color figures representing contamination of groundwater are misleading. Although off-site studies had not been conducted, the clear message of the figure "Highest Toluene Concentration in Groundwater" is that contamination is an on-site problem and that contamination is moving southwest. Neither is correct. The use of the "Site Planner" program at this site was invalid for the following reasons. First, the method of interpolation used was linear and restricted to the site itself, which was inappropriate. A geostatistical variogram-based approach would be more appropriate and would probably give a very different picture of the contamination, including the ability to predict off-site concentrations. Additionally, the "contouring" for both soil and groundwater contamination was based on samples at many different depths. Contouring for soil should only be carried out with samples

taken at the same depth, whereas for groundwater, the samples should be in the same geologic unit.

7.00 Scope of the Feasibility Study

Four problem areas were noted in the FS:

1. By considering the soil/NAPL separately from the other operable units and not considering soil/NAPL impacts on groundwater and surface water, the alternatives contained are incomplete. Slurry walls or groundwater containment/treatment were not investigated fully. These alternatives, theoretically, could be installed after the cap, but in practice would be impeded by and inconsistent with early installation of a cap.

2. Even ignoring problem 1) the alternatives considered are incomplete. For example, because of the high levels of soil contamination in the overburden, EPA should consider building a slurry wall, dewatering, and excavating below the water tables because of the high levels of soil contamination in the overburden (this approach is ongoing at Schuykill Metals Superfund Site in Florida). In Section 2.4.3.3 of the FS slurry walls were eliminated from consideration because of "concerns about the effectiveness." Although a slurry wall is less effective when the bedrock is somewhat fractured, this alternative should be re-examined because it could significantly reduce groundwater flow through the waste material in the more permeable overburden. This alternative must be properly considered and a supplement to the FS issued for public comment.

3. The areas to be excavated are not equivalent to the areas requiring treatment/disposal. For example, in Appendix B of the FS in the table "Volume Calculations by Location - Subarea 1," the first entry for location MW-B4 shows only 1,926 cubic yards are contaminated but 3,852 cubic yards need to be removed because the contamination is 4 feet below grade. Thus, treatment/disposal costs should have been based on an estimate of 1,926 cubic yards rather than 3,852 since the top 4 feet can likely be used on-site as fill. With the limited time available for comments, it has not been possible to recalculate the exact volume of soil for which treatment/disposal costs were estimated.

4. The costs for all alternatives were significantly overestimated. The most significant error (although almost all costs seem to be overestimated, e.g., $90,000 decontamination of a trailer that only cost $30,000) is in off-site treatment and disposal costs for PCB-contaminated soil. For example, in Appendix C of the FS (SC-4) the cost of hauling and disposing of 612,000 tons of PCB material is given as $1,035,311,997, including subcontract cost, profit, health & safety monitoring, contingency and engineering costs. This is equivalent to $1,691.69 per ton.

   Soil removal and disposal estimates have been obtained by the Dock's consultant for both the Wooster Middle School and the Raymark site. Cost estimates for soil removal, off-site disposal and placement of clean backfill at the Wooster Middle School site should not exceed $200/ton or $8,400,000 total. Approximately 42,000 tons of contaminated soil is present at the Wooster Middle School site.

The EPA has estimated that between 420,000 and 700,000 tons of contaminated fill is present at the Raymark site. Soil removal, off-site disposal and placement of clean backfill at the site according to EPA estimates would cost $1,092,100,754 or about $2,600/ton. The Dock's consultant estimates that a value of $300,000,000 or $428/ton is more realistic.

In addition, Appendix C to the Feasibility Study (Volume XXI of the Administrative Record), unrealistically estimates the costs of the various remedial alternatives. Inaccuracies in the cost estimates include the following:

- There is no basis for using these costs for comparing alternatives because they do not include the additional costs of groundwater treatment and containment systems, which will be incurred. The cost of a complete removal option, above and below the water table, should be calculated by EPA and compared with the cost of Alternatives SC-1 through SC-4, including appropriate on-site and off-site groundwater treatment, before a remedial alternative is eliminated based on cost.

- The flat estimate of Health and Safety Monitoring (percentage of Total Direct Costs) is unrealistic. For example, in Alternative SC-4 health and safety costs for hauling PCB soils and off-site incineration disposal is over $16 million even though most of this activity requires minimal EPA contractor oversight. Assuming the excavation takes 5 years, as set out in the Assumptions of Alternative SC-4, this is over $3 million per year for one or perhaps two people to watch trucks.

- The $10,000,000 cost for decontamination and demolition of the on-site buildings and structures is not justified in any way other than Raymark Industries Quote to EPA. An independent evaluation or review by EPA is necessary.

- No reason is given for taking 200 groundwater samples per year for 30 years at an annual cost of $428,000 per year under all alternatives. It is clear the number would probably be reduced after, say, 5 years, especially for the alternatives involving removal of significant amounts of soil.

- Many estimates are based on a soil density of 1.5 tons/cubic yard. No justification for this high density could be found. Cost estimates should be prepared based on real field data rather than this overly conservative estimate.

- The costs for thermal desorption/solidification stabilization represent reasonable estimates for small quantities, but significant economies of scale would likely exist for treating over 600,000 tons of soil. EPA should cite costs for comparable sized thermal desorption/solidification stabilization operations.

- All alternatives include laundry costs, but standard procedure is to use disposable clothing.

8.00 Decontamination and Demolition of the Buildings On-Site

No plan was presented in the Proposed Cleanup Alternative or in the RI/FS to explain how the buildings currently on-site will be decontaminated and demolished. As stated in Section 3.2.2 of the FS: "To date, a comprehensive environmental assessment of these buildings and structures has not been conducted." Without this information, it is not clear what quantity and

type of additional hazardous materials would require on-site or off-site treatment/disposal. Since 1) decontamination and demolition of the buildings must occur before the cap is built, and 2) these materials might affect the selection of a preferred remedial alternative, EPA should not have chosen a preferred alternative until a detailed environmental assessment had been carried out. Additionally, the safety precautions and monitoring that will be enacted during decontamination and demolition should be specified and made available for public review as part of the Proposed Cleanup Alternative.

9.00 Missing Pages

According to our detailed review of Phase IIB to date, 113 pages of information were missing from the administrative record in Boston. The entire affected section including the initially provided 137 pages consisted of 250 pages. After discussion with EPA personnel in Boston, the missing 113 pages were sent via overnight mail.

The Dock's consultant checked the Stratford Library data on May 25, 1995 and found that the missing 113 pages were present. However, Ms. Connie Dewire of the EPA indicated that she had reviewed the affected section of the Stratford file and believed that it was always complete with a total page count of 137 pages not 250. The EPA has either added the missing pages to the Stratford file prior to May 25, 1995 but after Ms. Dewire had counted the pages, or has neglected to thoroughly review this section of the file.

In Volume III of the Administrative Record, the table "Preliminary Summary Statistics for Groundwater Data" is missing the final page: Page 6 of 6. The Dock's consultant confirmed that this page was missing in the Stratford Library file after the EPA file review.

10.00 Possible State CERCLA Liability

The Dock has one final concern with EPA's Proposed Cleanup Plan -- that is, the possibility that the state of Connecticut will be named a potentially responsible party ("PRP") at some time in the future and be sued by EPA or private parties for all of the response costs at this site. This draconian scenario is entirely possible.

EPA has named only two PRPs at this site: Raymark and Raytech, the purported successor to Raymark. Both of these entities are in bankruptcy proceedings, and may therefore escape liability for the costs of remediation.

At the same time, the state of Connecticut plans to excavate soil containing hazardous substances from the Wooster Middle School and from a state-owned property and dispose of these wastes on the Raymark site. EPA's documents refer to an estimated additional 8,000 cubic yards of "off-site fill to be consolidated onto the Raymark property." We understand that a portion of that fill will be excavated from state-owned land located near Longbrook Avenue, south of the railroad. If the state does excavate either that fill or fill located at the Wooster Middle School and dispose of it at the Raymark site, the state could be held liable as a PRP in future cost recovery actions. Given that the only named PRPs are in bankruptcy, the state could be left as the only PRP at the site and thus responsible for the entire cleanup cost.

11.00 Suggested Actions for EPA

At this time, EPA should not sign a ROD for any operable unit. It is clear that the inadequacy of on-site data and the total absence of off-site data preclude selection of any kind of final

remedy. An appropriate action at this point should be either an interim remedial action or a removal action. These actions would include collecting the NAPL data and limiting access to soils that are grossly contaminated and present the most significant health risks. The EPA should publish, in detail, the scope and schedule of the other on-site and off-site studies to be completed and obtain public comments on these studies before signing the ROD.

DBH804
/usr2/wpc/mcfadden/work/KMM011
June 7, 1995 5:39pm

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

June 8, 1995

Mr. Michael Hill (HSL-CAN5)
Remedial Project Manager
US EPA
JFK Federal Building
Boston, MA 02203-1911

RE: Proposed Cleanup Plan for Raymark Industries, Inc., Stratford, Connecticut

Dear Mr. Hill:

The staff of the Permitting, Enforcement and Remediation Division of the Connecticut Department of Environmental Protection have reviewed the Proposed Cleanup Plan for Raymark Industries, Inc. (the proposed plan). Following are comments related to the proposed plan.

In general, the State supports the remedial approach described as Alternative 2 in the proposed plan. The proposed cleanup plan would decontaminate and demolish all buildings and structures on the Raymark Facility, remove highly concentrated pockets of solvents (Non Aqueous Phase Liquids, or NAPLs) from contact with groundwater, cover the entire facility with a multi-layer impermeable cap (incorporating residential and Wooster School soil-waste and some building debris under the cap) and ensure the long term integrity of the cap.

NON AQUEOUS PHASE LIQUID REMOVAL

Although the State supports the approach described as Alternative 2 in the proposed plan, there is concern over the implementation of the NAPL removal as discussed in the Feasibility Study. The Feasibility Study notes that NAPL recovery would be initiated by bailing the NAPL from existing monitor wells. While we agree that NAPL removal is a necessary and appropriate element of any remedy selected for this site, and that the approach described as Alternative 2 is consistent with the Proposal for the Connecticut Clean-Up Standard Regulations, we do not consider the specific measures discussed in the Feasibility Study, such as the use of an existing 2" monitoring well to remove NAPL by bailing, to be an appropriate level of effort. It is our position that the need for NAPL recovery in the vicinity of the toluene spill and the former acid pit area (the MW-J well area) has been confirmed, and that any recovery well or wells should be specifically designed for this purpose.

We also believe that the areal extent of the NAPL should be delineated to the extent practicable, and that the wells and/or other facilities designed for the removal of NAPL should be installed prior to the installation of the cap and incorporated into the cap design. Since NAPL removal could continue for an extended period of time, the design of any recovery, collection, and treatment system should be consistent with site re-use possibilities.

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARs)

Connecticut's Coastal Management Regulations (§§22a-90 through 22a-112, CGS inclusive) were omitted from the ARARs tables in the Feasibility Study. Staff of the Office of Long Island Sound Programs have reviewed the proposed plan and Feasibility Study and have indicated that the proposed work is consistent with the substantive requirements of the regulations, but noted that the regulations were not included in the table of Location Specific ARARs (see attached).

The following regulations should also have been identified as ARARs in the Feasibility Study. These regulations are discussed in the attached letter from Ron Skomro to Arthur Clarke dated May 22, 1995.

- **Asbestos Abatement regulations (§§19a-332a-1 through 19a-332a-16 Regulations of Connecticut State Agencies)**
- **Asbestos Licensing and Training regulations (§§19a-332a-17 through 19a-332a-23, Regulations of Connecticut State Agencies)**

Despite the above comments, I wish to again reiterate our support of the remedial approach described as Alternative 2 in the Proposed Cleanup Plan for the Raymark Site. If you have any questions regarding these comments please contact me at (203) 424-3764.

Sincerely,

Ronald H Curran

Ronald H. Curran
Environmental Analyst
Permitting, Enforcement & Remediation Division
Bureau of Water Management
Department of Environmental Protection

RHC:rc
attachment

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF LONG ISLAND SOUND PROGRAMS

MEMO

To: Ron Curran, DEP-Water Management Bureau

From: Margaret L. Welch

Subject: Final Source Control Feasibility Study Report
Remedial Investigation/Feasibility Study
Raymark Industries, Inc. Facility
Stratford, CT

Date: May 23, 1995

Thank you for the opportunity to review and comment on the document noted above. As we discussed, the project is subject to the federal coastal consistency review process set forth in 15 CFR 930 Subpart C. As such, a determination of project consistency with the standards and policies set forth in the Connecticut Coastal Management Act must be made by the federal agency responsible for the proposed activity. Because the project is intended to contain and alleviate existing environmental hazards and it is a substantial distance from sensitive coastal resources, particularly tidal wetlands, intertidal flats and beaches and dunes, we do not believe there are substantive coastal management issues regarding the selection of any of the proposed alternatives. Nonetheless, as a procedural matter, a consistency review must be conducted.

To assist the federal agency in conducting this review, I have provided a copy of the Connecticut Coastal Management Act and a copy of the Reference Guide to Coastal Policies and Definitions for their use. I trust you will pass them, and these comments, along to the appropriate contact in the U.S. Environmental Protection Agency. They may also be encouraged to contact me directly at 203-424-3034 for more information or assistance in this process.

If you have any questions regarding this memo, or any other coastal management issues, please do not hesitate to contact me at extension 2773.

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH AND ADDICTION SERVICES

May 22, 1995

MAY 2 5 1995

Arthur J. Clarke, J.D.
Manager, Regulatory Affairs
Foster Wheeler Environmental Corporation
1290 Wall Street West
P.O. Box 661
Lyndhurst, New Jersey 07071-0661

RE: Comments Concerning May 9, 1995 Meeting Minutes, Raymark Demolition Superfund Project, Stratford, CT

Dear Mr. Clarke:

I am in receipt of your May 17, 1995 correspondence containing minutes of our May 9, 1995 meeting concerning the Raymark Demolition Superfund Project located in Stratford, CT. The following comments are provided concerning these meeting minutes.

1. The Connecticut Department of Public Health and Addiction Services (DPHAS) Standards for Asbestos Abatement regulation (Section 19a-332a-1 to Section 19a-332a-16, inclusive of the regulations of Connecticut State Agencies) became effective in August of 1988. The regulation has been enforced since that time. It was revised effective December 27, 1990.

2. The DPHAS regulation concerning licensing and training requirements for persons engaged in asbestos abatement and asbestos consultation services (Section 19a-332a-17 to Section 19a-332a-23, inclusive of the regulations of Connecticut State Agencies) became effective February 9, 1989. This regulation was initially partially implemented by the review and approval of training providers/courses required for asbestos abatement workers, site supervisors and the four consulting disciplines. DPHAS established November 1, 1994 as the date to enforce the requirements for contractor and consultant licenses. To date, 148 contractors and 356 individual consulting licenses have been issued. The number of consultant license application currently pending initial review is four (4).

3. DPHAS training requirements mirror those of the initial EPA Model Accreditation Plan. However, the requirements for initial worker and supervisor training are a 32 hour course and a 40 hour course respectively. Additionally, DPHAS regulations detail requirements for Project Monitors. The Connecticut Legislature is currently considering a statutory change to authorize DPHAS to adopt regulations consistent with the revised EPA Model Accreditation Plan.

4. The removal of roofing and siding material would be subject to the requirements of Section 19a-332a-3.

5. The phone number for the Bridgeport OSHA office is (203) 579-5581.

6. Alternative work practice approvals allowing the demolition of facilities prior to the removal of ACM have not typically been granted based upon serious space restrictions. Serious space restrictions have served as justification for alternative work practice approval such as that allowing no polyethylene sheeting on wall or floor surfaces.

7. The statement that CTDHS believes that there is no true reoccupancy in the case of the Stratford demolition is inaccurate. The exact scope and sequence of work has not as yet been determined to provide a final determination.

8. DPHAS would require that a no visible residue criterion be achieved within the established work areas.

9. DPHAS will make efforts to review any alternative work practice application as soon as possible. A site visit can typically be conducted within five (5) working days of receipt of such application with a final determination typically made within ten (10) working days.

I hope that you will find these comments helpful in ensuring the accuracy of the meeting minutes. Please contact me should you have any further questions or comments.

Sincerely,

Ronald Skomro

Ronald Skomro
Supervising Environmental Sanitarian
Asbestos Program
Environmental Health Services Division

c: Mr. Ronald H. Curran, CT DEP

May 24. 1995

Mr. Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S. Environmental Protection Agency
Region 1
JFK Federal Building
Boston, MA 02203

Re: Raymark Industries Superfund Site,
Stratford, Connecticut

Dear Mr. Hill:

I am writing on behalf of Brake Systems, Inc. ("BSI") to request a 90-day extension of time (from June 8 to September 8) in order to provide written comments on EPA's proposed cleanup plan for the Raymark Industries Superfund Site (the "Site"). As you know, BSI leased a portion of the Raymark property for a short period during the mid-1980's and undertook extensive measures to comply with both EPA and DEP environmental upgrading efforts while it operated and subsequently moved the automotive brake production. Thus, BSI is interested in EPA's findings, conclusions, and actions regarding the facility.

The additional time requested is necessary to provide BSI a reasonable and meaningful opportunity to review and comment upon the plan and the voluminous technical materials (including analytical data, site investigation reports, and risk assessments) which EPA will rely upon to select its remedial actions. Much of this information has become publicly available only recently. By way of example, the final remedial investigation report and the final feasibility study were published in April 1995, and the Administrative Record Index was compiled on April 5, 1995. BSI is still in process of obtaining copies of key documents for its own use. Further, BSI anticipates that it will require the assistance of a consulting firm having expertise in multiple environmental disciplines in order to evaluate the highly technical and complex matters addressed in those

documents.[1/] This time is also necessary because of the length of time since BSI last had access to its leased areas and because of the extensive operations which have been conducted on the property since then.

BSI understands that the EPA is interested in proceeding expeditiously with work at the Site; as such we intend to place a high priority on our review of this matter and are optimistic that comments can be submitted by September 8. Completing this review during this short extension of time will place a considerable strain on our resources given the volume and complexity of the pertinent documentation. In this regard, we note that the facility investigation report prepared by Environmental Laboratories, Inc., which served as the basis for the remedial investigation report prepared by Halliburton NUS Corp., took over five years to complete; therefore, an extension of the public comment period to September 8 is reasonable in the context of the overall project schedule.

We appreciate your consideration of this request, and hope to receive a favorable response. Please call me if you have any questions concerning this.

Very truly yours,
BRAKE SYSTEMS, INC.

Randall J. Foster

Randall J. Foster
Director of Safety and
Environmental Compliance

1/ From BSI's preliminary review of the materials placed at the Stratford Public Library, it appears that some important documents are not yet on file there. These include the laboratory data sheets for all samples collected as part of the work performed by Environmental Laboratories, Inc. and Halliburton NUS Corp. (including date on field blanks), and the quality assurance/quality control and data validation reports prepared during the course of those firms' work. BSI would appreciate receiving a copy of all such materials directly from EPA or, at the least, receiving notification when they are available at the Stratford Library.

SCAC
Stratford Citizens Advisory Council
2730 Main Street • Stratford, CT 06497

June 7, 1995

Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, MA 02203

Dear Mr. Hill,

The SCAC would like to respond in writing, for the record, on the proposed cleanup plan for Raymark Industries as outlined by EPA. As we stated at the public hearing on May 4, 1995, the group is in favor of Alternative 2: Capping the site. We see this as the most viable and effective option presented. While we realize comparisons were done between each alternative, we are also aware that the engineering details of how to implement the chosen plan and its' four principal components, have not yet begun. When the engineering, health and safety plans are finalized by EPA, we would like to request that ATSDR, DPHAS, Stratford Town Management, and SCAC have the opportunity to review the plans prior to the start of the remediation. We would also like to request the plans be available for public review and a public comment period before the remediation proceeds.

The SCAC would like to reiterate the following points made at the public hearing on May 4, 1995, and have them kept in mind when EPA develops the engineering, health and safety plans as they relate to the four principal components outlined by EPA:

Component #1 Decontaminate and demolish facility buildings and structures

A. SCAC would like to review final plans:
- To make sure all safety points are covered.
- To see plans for communication with both residents of affected area(s) and the town in general.
- EPA to commit to specific dates and times for demolition and capping.

B. Public safety during demolition and remediation
- Be aware of young children at shopping center and Wooster School exposed to ambient fallout during demolition, removal of waste and capping process.
- Older children curious about the site may try to get in and explore the area.
- Measures to contain all debris (including airborne fugitive dust) during all phases -- monitoring will be necessary at the site and on the property perimeter.
- Need for security guards

C. Notifying the public when demolition and capping will take place
- Billet neighborhoods telling residents when demolition will take place.

- Post signs in and around the shopping center warning parents to keep young children away from the area.
- Post numerous items in the local papers indicating ***specific dates*** and ***times*** when work will be done and indicate when conditions will be most critical.
- Notify PTA's at surrounding schools warning of the dangers at these particular remediation sites to children.
- Possibility of late night scheduling for demolition to minimize public exposure -- less traffic from cars, trains, planes -- fewer people in the shopping areas and roads?

Component #2 Remove the highly concentrated pockets of Liquid (solvent) contamination from contact with groundwater

Since groundwater is of <u>major</u> concern -- in regard to monitoring the groundwater on and off the Raymark facility:

- Who will do this testing and monitoring -- who will be responsible for cost?
- Since there are no plans to address the groundwater issue before the cap is put in place--can groundwater problems be taken care of after the cap is in place?
- The Housatonic and the Sound should be tested for contamination before, during, and after remediation.

Component #3 Cover the entire facility with an impermeable cap

Test the clean ground fill being brought into the Raymark site. This is New England...any soil could be contaminated. We don't need a cap that is more contaminated then what is already there.

- How frequently? e.g. every truckload, every 100 cubic yards?
- Who will test?
- What contaminants will the fill be tested for?
- Sewer line running under Raymark property. Concerns re: Utility worker safety / access -- creation of a worker safety zone?

Component #4 Ensure the integrity of the cap

Policing the new owners--details need to be worked out:

- Who will make sure they maintain the integrity of the cap?
- What penalties will be implemented if they fail?
- What are the deed restrictions to the Raymark property?
- If the deed is broken who will be the responsible party?
- Who would assume ownership of the property?

The SCAC would like to support viewpoints that were raised by other concerned parties at the public hearing. In particular Elaine O'Keefe stated that one of her primary concerns of the proposed cleanup plan is the tenuous nature of the groundwater contamination under the Raymark facility and the extent of the contamination that has migrated beyond the perimeter of the Raymark site. While removing the pockets of liquid solvents, will reduce the amount of contaminants that could be available and mobile, it is only a partial remedy. Because the end receptor is the

Housatonic River, we cannot know what the long-term impact will be once the contamination plume meets the river, and what will occur in the next 15 to 20 years. Ms. O'Keefe also stated that the uncertainties that surround the groundwater contamination poses public safety issues as well. SCAC also feels it is imperative that some assurances be given to the Town that the groundwater issue will be thoroughly addressed with expedience due to the fact we face a very real possibility of diminishing Superfund monies and regressions in environmental regulations needed to clean up the site.

Our group is also concerned with Ferry Creek and the position presented by Mr. Sammis of the Waterfront Harbor Management Commission. A concern was expressed about Ferry Creek and the downstream accumulation of sediments from Raymark since Raymark first started discharging. Mr. Sammis also addressed the fact that everything below the high water mark happens to be state controlled, state property, and felt the CTDEP should be highly concerned about the remediation work which is being done upstream as well as on state property. The SCAC would like to request that information on what activities would be undertaken to eliminate the contaminants found in the Ferry Creek below the high water mark be sent to the Waterfront Harbor Management Commission for their input. We support their suggestion to establish a number of strategic wells or test sites off the property since the proposed remediation plan only calls for on-site testing.

One final concern. The Raymark site is currently the recipient of the residential waste, as well as the possible recipient for some municipal waste (e.g.Wooster School) until the cap is in place. The Proposed Cleanup Plan however, does not address how to deal with a discovery of Raymark waste on residential property after the final cap at the Raymark site is implemented. The SCAC believes an alternative plan must be develop as a contingency to the possible discovery of Raymark waste. We feel there may be more waste that has gone undetected so far.

The SCAC still supports Alternative 2 of the Proposed Cleanup Plan as outlined by EPA. We feel if **engineered and executed properly**, that it is the most intelligent and effective solution for this site and for Stratford. Thank you for your consideration.

Sincerely,

The Stratford Citizen's Advisory Council

Janet Carlucci
Co-Chair, SCAC

cc: The Honorable Rosa DeLauro
The Honorable Joseph Lieberman
The Honorable Christopher Dodd
Jacobi, Kappel & Case, P.C., *Legal Advisors to SCAC*
Mark Barnhart, *Town Manager, Town of Stratford*
Elaine O'Keefe, *Director of Health, Town of Stratford*

TOWN OF STRATFORD

Mark S. Barnhart
Town Manager

2725 MAIN STREET
CONNECTICUT 06497

203-385-4001

June 8, 1995

CERTIFIED MAIL # P 241 423 989

Michael Hill (HSL-CAN5)
Remedial Project Manager
USEPA
JFK Federal Building
Boston, MA 02203-1911

re: Raymark Industries Site

Dear Mr. Hill:

On behalf of the Town of Stratford, I offer the following comments with regard to the proposed remedial plan for the above-referenced site.

Groundwater:

I understand the parameters and limitations of the proposed clean-up plan, and that issues related to groundwater contamination will comprise a separate phase of your agency's on-going investigation and remediation of this Site. I understand, too, that groundwater in this general area is not intended to be a potable source either at present or in the future. Nevertheless, the likelihood that contaminants are continuing to migrate from this Site via groundwater provides much cause for concern within this community. In light of these well-founded concerns, I urge your agency to thoroughly investigate and address this issue in the near term. It is especially troubling when one considers that the true nature and extent of groundwater contamination beyond the perimeter of this Site is largely unknown. While the evidence collected to date has been positive and generally consistent with EPA's approach--witness the data collected from shellfish in the Housatonic River, which exhibited no signs of Raymark-related contamination--it is far from a complete picture. Only the establishment of monitoring wells and the collection of data from points immediately beyond the perimeter of the Raymark property can fill this data void.

At the same time, I welcome your agency's decision to extract and remove the highly concentrated pockets of liquid solvents that can be found throughout virtually all of the Site. To the extent that PCBs, in particular, dissolve more readily into groundwater in the presence of these solvents, this

proposed action may alleviate concerns regarding the mobility and potential off-site migration of these dangerous compounds. Moreover, the solvents themselves continue to be primary contributors to groundwater contamination due to their mobility, and removing these so-called "hot pockets" will be an important first step in addressing the larger groundwater issue. Nevertheless, I urge your agency to commence its groundwater remedial phase as soon as possible.

Site Utilities:

Also of concern to the community is the presence of a 48" RCP sanitary trunk sewer which presently traverses the Site. Relocation of this sewer line may not only be cost-prohibitive, but may not even be feasible for a variety of other reasons. Alternatively, proposed slip-lining of this sewer may be effective in the short-term, but may prove counter-productive in the long run, as eventually, I suspect that the sewer line will require either replacement or abandonment. The latter option, abandonment, is also not feasible at present. Slip-lining may alleviate some of our concerns regarding the present condition of the trunk line, as well as forestall any decision regarding replacement. But, the condition and integrity of the pipe's exterior is suspect, and may have been compromised already due to its being situated in a highly acidic and corrosive environment. If so, slip-lining would not prove effective. In any event, it seems likely that circumstances will eventually dictate that replacement is necessary. In that eventuality, I am concerned for both the long-term integrity of the cap and for the future health and safety of workers who will have the responsibility for performing this work. I am recommending, therefore, that you give consideration to the creation of a worker safety zone around this sanitary trunk sewer to provide workers with unencumbered access to the pipe.

Site Demolition:

I understand that no permits would be necessary should your agency proceed with site demolition or construction work under CERCLA and in accordance with a Record of Decision issued for this Site. I am also aware of your agency's obligations to substantively comply with the standards and requirements contained in all applicable Federal or State laws. I would urge you to go a step further by providing advance copies of your site demolition, cap engineering and health & safety plans to appropriate State and local officials for substantive review and comment. Furthermore, I would encourage you and your colleagues to continue to meet periodically with these officials to provide status reports on work in progress and to respond to any questions or concerns that may arise. I believe that all parties have found these meetings and the exchange of information to be productive and mutually beneficial. To date, I have been pleased by the level of coordination and cooperation displayed by your agency's representatives. I note that this perspective is shared by many others in the community. We trust that this close working relationship will continue.

It is imperative that your agency enact appropriate monitoring and containment measures before any work commences. I have been informed that air sampling units will be established both on-site and around the perimeter of the Site and that precautions will be taken to ensure that all debris, including airborne fugitive dust, are adequately contained and will not pose a threat to abutting property owners or passersby. I trust that your agency will also make arrangements for on-site security during all

phases of this operation. I believe that all of these measures are necessary to safeguard public health and safety and to minimize to the extent possible the disruption to people's lives.

Public Communication:

Communication has been--and will continue to be--critical to the ultimate success of this project and to the public's acceptance of your agency's proposed actions. I urge you to keep open the lines of communication through on-going sponsorship of a community-wide newsletter; continued participation in neighborhood forums; and periodic briefings with Federal, State and Local elected officials and representatives of SCAC. I sincerely hope that you will also continue to hold regular meetings with other State and local officials. As work gets underway, it will be necessary to post notices and otherwise inform residents as to schedules and work plans.

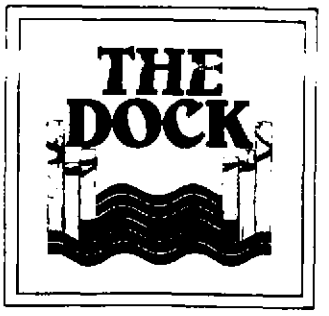
While we are anxious to see this project completed in a timely fashion, we are mindful that our actions will have a lasting effect on our community. We are not prepared to sacrifice the health and safety of future generations of Stratford residents for the sake of expediency or cost-effectiveness. While we believe that the proposed clean-up plan, if properly engineered and executed, is a responsible one and represents the most viable option presented to us, we have concerns nonetheless. We have attempted to delineate those concerns above. We ask that you give these comments full consideration, and continue to bear in mind your responsibility to effect a permanent and lasting solution to the unique problems presented by this Site.

Thank you again for the opportunity to comment upon the proposed remedial plan.

Sincerely,

Mark S. Barnhart

cc: Town Council
E. O'Keefe, Director of Health & Welfare



June 8, 1995

VIA FACSIMILE AND FIRST CLASS MAIL

Richard Cavagnero
Raymark Team Leader
U.S. E.P.A.
Northeast Region
J.F. Kennedy Federal Building
Boston, MA 02203-2211

Dear Mr. Cavagnero:

This letter supplements The Dock's June 7, 1995 comments regarding EPA's Proposed Cleanup Plan for Raymark Industries, Inc., Stratford, Connecticut.

The Dock is concerned that EPA's Proposed Cleanup Plan could create potential CERCLA liability for the Town of Stratford and for the owners of residential properties from which contaminated soil was excavated and disposed of at the Raymark Superfund Site. As discussed in section 10.00 of The Dock's comments, EPA has named only two PRPs at this site, both of which are in bankruptcy proceedings. Thus, it is possible that the Town of Stratford and the individual residential owners could be found to have arranged for the disposal of hazardous wastes at the Raymark Superfund Site and be held liable in future cost recovery actions.

We would like to have this issue resolved before the issuance of the ROD.

If you have any questions, please call my attorney, Mr. Thomas F. Harrison, at 203-275-0480.

Very truly yours,

J. Robert Osborne (by RM)

J. Robert Osborne

TOWN OF STRATFORD

CONNECTICUT
06497

WATERFRONT AND
HARBOR MANAGEMENT COMMISSION
2725 MAIN STREET
STRATFORD, CT 06497

Mr. Michael Hill, (HSL-CAN5)
Remedial Project Manager
U.S. EPA
JFK Federal Building
Boston, Ma. 02203

Re: Raybestos Remediation June 7, 1995

Dear Mr. Hill,

On behalf of the Waterfront and Harbor Mangement Commission, I can assure you of our disappointment that you or your office has not had the courtesy to respond to what we believe was a legitimate and reasonable request to address a part of the "Raybestos" problem which is of particular concern to this local agency.

Our letters of April 13 and May 5 have not elicited a written response and if we are to effectively fulfil our mandate to regulate and to assist in the orderly development of Stratford's waterfront, we need and expect other governmental agencies to provide a modicum of assistance and minimum of curteous dialogue.

We continue to see EPA sponsored remedial action at Housatonic Avenue Extension and at the terminus of Stratford Avenue near Bond's Dock. Although we can only speculate as to the cost of these actions, we can feel comfortable that these costs run into the many hundreds of thousands of dollars. We have simply asked that a modest amount of the funds available be diverted to the testing of the waters of Ferry Creek to determine what, if any, toxins are present and in what dimension. Further that if toxins are present, what action will be taken to remediate this area.

If Ferry Creek was not the downstream path of the surface and ground water from the Raybestos site, we would be considerably less concerned. Further, land on either side of the Creek is instrumental to the long range development of Stratford's waterfront and the renaissace of the Shakespeare Theater so that the postponement of remediation (if necessary) will adversely affect considerably more than just water quality.

We are also disappointed that the State of Connecticut whose property we are discussing (below the hihg water mark) is strangely silent on this topic. We would have assumed that they would be in the forefront for adequate testing and appropriate follow through.

A timely and detailed response is once again requested at the earliest.

Sincerely,

Robert H. Sammis

Robert H. Sammis, Chairman

cc: Congresswoman Rosa DeLauro
Commissioner Sidney J. Holbrook, ConnDEP
Senator George Gunther
Representative Terry Backer
Representative Vincent Chase
Representative Lawrence Miller
Town Manager Mark Barnhart
Commissioners

DIRECT FAX NUMBER: (203) 481-6485
DIRECT TEMCOM NBR: 420-4250

DATE: 6/8/95

FACSIMILE TRANSMITTAL

TO: Michael Hill
(Name)
US EPA
(Company)
FAX NBR.: 617 - 573 - 9662

FROM: Randall J. Foster
ECHLIN CORPORATE HEADQUARTERS

TOTAL NUMBER OF PAGES 5, INCLUDING THIS COVER LETTER

IF ALL PAGES ARE NOT RECEIVED, PLEASE CALL: _____
(NAME)
(203) 481-5751, Ext. 4244

Friction Operations Headquarters

By Facsimile and
Federal Express

June 8, 1995

Michael Hill (HSL-CAN5)
Remedial Project Manager
U.S. Environmental Protection Agency
Region 1
JFK Federal Building
Boston, MA 02203

Re: **Raymark Industries, Inc. Superfund Site, Stratford, Connecticut**

Dear Mr. Hill:

I am responding on behalf of Brake Systems, Inc. ("BSI"), to the U.S. Environmental Protection Agency's request for public comments on the proposed cleanup plan for the Raymark Industries, Inc. Superfund Site at Stratford, Connecticut. Due to the relatively short period of time available to BSI to review the voluminous technical materials included in the Administrative Record, the following comments are necessarily preliminary in nature and are directed to the documentation supporting the proposed cleanup plan. BSI anticipates submitting a more detailed evaluation within the timeframe suggested by my letter to EPA of May 23, 1995.

First, to clarify a matter of corporate identity, EPA should note that BSI and not Echlin Inc. is the company that leased a portion of the Raymark property in the mid-1980s. In the past some correspondence from EPA has been directed to Echlin Inc. which never owned or leased any portion of the Raymark property and which never conducted any operations there. Insofar as EPA has any questions concerning BSI's activities, inquiries should be directed to BSI itself and, specifically, to my attention.

Second, BSI is concerned that confusion has arisen regarding the limited operations it conducted on the leased property. By way of background, it should be noted that BSI first leased manufacturing space at the Raymark property in 1985 for the purposes of automotive brake production. Within three years, this manufacturing activity ceased and BSI vacated the premises. During its brief tenure at the site, BSI operated in compliance with state and federal environmental standards, including those

applicable to the handling, storage and disposition of materials and wastes.[1] Unfortunately, BSI did experience a spill, quite possibly due to vandalism in late 1987. The details of this spill incident are not reported accurately in either the Remedial Investigation ("RI") or Feasibility Study ("FS") completed (dated April 1995 prepared for the Raymark site) by EPA's contractor.[2]

BSI used an above-ground storage tank containing 111 trichloroethane ("TCA") located in the area of Building 44. In September 1987, during the period after BSI had announced the closure of its operations and, prior to the planned tank removal associated with the shutdown, a tank transfer line was severed, possibly as an act of vandalism. From manifested delivery records, BSI determined that about 600 gallons of TCA were released. At the time of the spill, the ground was frozen and the TCA flowed over land in an easterly direction to local storm basins and drainage lines. BSI responded to this incident by reporting it to the Connecticut Department of Environmental Protection and by calling a spill response contractor to the scene. BSI conducted a recovery of the TCA from storm basins and drainage lines and removed several drums of contaminated soil in the immediate vicinity of the above-ground tank. Clean up records establish that over 1,000 gallons of a TCA and water mixture (approximately 50/50 solvent/water mixture) was removed from the storm drain system. Therefore, most if not all of the material appears to have been captured from the storm drains where it was pumped out and disposed of by a licensed waste disposal company.

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[1] It should be noted that BSI had no involvement with the shipping of waste manufacturing materials or sludge offsite to local properties including residential and commercial locations in Stratford. These practices had been discontinued long prior to 1985.

[2] References to the incident in the RI and FS reports incorrectly state that 6,000 gallons rather than 600 gallons were spilled, and sometimes misstate the year as 1984 rather than 1987. See, e.g., RI at ES-4, 4-5, 4-36 and 4-45; FS at ES-2 and 1-7.

The RI and FS state that groundwater samples taken downgradient of the 1987 TCA spill show the presence of this substance in groundwater. It is unlikely, however, that the source of this TCA is the 1987 BSI spill. As noted above, the frozen ground conditions at the site were such that the TCA was not absorbed into soils but flowed into the storm drain system. The more likely sources of any TCA contamination in groundwater is the historical operational practices of Raymark noted below which occurred, at least in part, at Building 44 and adjacent areas.

Third, from our initial review of the RI and FS reports, it appears that EPA has not gathered a detailed knowledge of the manufacturing activities that took place at the property during the seven decades prior to 1985 that Raymark conducted its business there. For example, BSI believes that Raymark engaged in large scale degreasing operations for several decades in order to clean transmission plates and other metal parts. These operations were discontinued prior to 1985. Some of these degreasing operations took place in or adjacent to Building 44, which undoubtedly accounts for the detection of solvents in the soil and groundwater in that vicinity. A more comprehensive understanding of Raymark's practices (particularly in the decades before stringent environmental regulations were in effect to govern waste storage and disposal) should help to focus EPA's future remedial actions by pinpointing potential sources of contamination.[3/]

Finally, BSI has just been advised that its request for additional time to comment upon the proposed plan has been denied by EPA. BSI disagrees with EPA's rationale for this decision, since a short public comment period cannot be adequate or meaningful where the complexities of the site are such that it took over four years just to complete the RI and FS. Nevertheless, the company appreciates EPA's willingness to make available the technical documentation in EPA's possession that is necessary for BSI to undertake its review of this matter. With respect to the technical documents that are being held by contractors or other governmental agencies, we are hopeful that EPA will obtain this material shortly and will then notify BSI of its availability for inspection and copying.

[3/] In a very preliminary fashion, the RI identifies the presence of a solvent recovery plant with extensive daily waste water discharges generally into the acid neutralization pit and lagoon network. See, e.g., RI at 2-2.

BSI's submittal of this letter is not a waiver of any rights it may have to provide additional detailed comments on the record or cleanup proposal once a thorough review has been completed.

Very truly yours,

for **BRAKE SYSTEMS, INC.**

Randall J. Foster

Pledge for a safe and sound Raymark cleanup (Resident)

As a resident of Stratford, I favor the following regarding the cleanup of the Raymark Superfund site:

1) I am pro health and safety. I favor removal of dangerous PCBs and other toxins from the site. I also favor safe demolition of the buildings, and review of demolition plans in advance by our town and state health officials. Right now, there are no plans.

2) I am pro environment. I favor removal of the dangerous chemicals that could ruin the Housatonic River, Ferry Creek and Long Island Sound.

3) I am pro taxpayer. Unless an iron-clad hold harmless agreement is produced by the EPA, I oppose transporting toxic waste from town-owned sites, such as Wooster School, to the Raymark site for burying, as currently proposed. Based on past similar cases, this could link the town as a third party to the Raymark site and make it liable for damages. The town should not take such a risk unless it has absolutely no risk or exposure for taxpayers.

4) I am pro economic development. I favor removal of PCBs and other toxins before they destroy the town's opportunity to develop its waterfront by polluting the river. I also do not want to see developers shy away from Stratford in the future for fear that their property could need expensive environmental cleanup as the result of dangerous toxins left in the ground from Raymark that could leach onto their property.

5) I am pro common sense. I favor cleaning up the site now, not in 30 years. The EPA wants to place a temporary cap and make this our children's problem. I want to fix this now, while Superfund money is available, and while it is possible. The EPA is willing to allow development over a temporary cap, reasoning that the site could be dug up later. I favor simple logic that says no one wants to knock down a new shopping center to dig up and remove PCBs. Let's address the problem before the site is developed.

6) I am pro Stratford. I have a vested interest in the health and well being of the area. I'm tired of seeing Stratford get the short end of the stick. The EPA is trying to take the cheap way out instead of fixing the problem correctly. I favor fixing the problem and giving Stratford the first-class treatment it deserves.

7) I am pro development of the Raymark property, and I am in favor of removing this eyesore as quickly as possible. I favor cleaning the property and having it developed properly in accordance with our local planning and zoning and permit process. However, I favor a correct cleanup that is not done in haste at the expense of the town's future, either in terms of the best interests of Stratford's economic or environmental well being.

Signed,

Nancy Cassella

Nancy Cassella
114 High Park Ave
Stratford, CT 06497

Note: *Public comment period ends June 8. Send comments and/or Pledge to Michael Hill, Remedial Project Manager, US EPA, JFK Federal Building, Boston, Mass. 02203-1911.*

Also received from:

Leonore Santucci
Fedelia Cook
J.W. McGibbon
David & Deborah Tvardzik
Angela Notarino
Denise Nalezynski
Steven Law
Elizabeth McNamara

APPENDIX B

STATE OF CONNECTICUT
CONCURRENCE LETTER

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

June 29, 1995

John P. DeVillars
Regional Administrator
U.S. EPA Region I
J.F.K. Federal Building
Boston, MA 02203

Dear Mr. DeVillars:

The Connecticut Department of Environmental Protection (CT DEP) concurs with the remedial action for source control selected by EPA for operable unit #1 of the Raymark Industries Inc., Superfund Site, in Stratford, Connecticut. The source control remedial action for operable unit #1 is described in detail in the Proposed Plan dated April, 1995 and in the Record of Decision dated June 1995.

Concurrence with EPA's selected remedial action for source control at the Raymark Facility shall in no way affect the Commissioner's authority to institute any proceeding to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of any permit issued by the Commissioner.

Sincerely,

Sidney J. Holbrook
Commissioner

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