



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02209-2211

Superfund Records Center

SITE: New Hampshire Plating

BREAK: 2.9

OTHER: 66511

MEMORANDUM

DATE: February 18, 1994

SUBJ: ACTION MEMORANDUM - Request for a Non-Time Critical Removal Action at the New Hampshire Plating Superfund Site in Merrimack, New Hampshire

FROM: James M. Di Lorenzo, Remedial Project Manager
New Hampshire Superfund Section

THRU: Frank Ciavattieri, Acting Director Waste Management Division *Frank Ciavattieri*

Edward J. Conley, Director Environmental Services Division *EJ*

TO: John P. DeVillars, Regional Administrator

I. PURPOSE

This Action Memorandum requests and documents your approval of the Non-Time Critical Removal Action (NTCRA) described herein for the New Hampshire Plating Superfund Site (NHPC Site or Site) in Merrimack, New Hampshire. In general, the NTCRA consists of decontaminating, demolishing and disposing off-site the NHPC building and stained soils beneath the building.

Performance of this NTCRA will ensure that EPA can provide a timely response to effectively minimize threats to public health, welfare or the environment which may result from the continuing release and threat of release of hazardous substances at and from the building and underlying soils at the Site, and is consistent with EPA's Superfund Accelerated Cleanup Model (SACM).

The overall goals of this NTCRA are to: (1) control and contain the release of hazardous substances from the building and underlying soils, (2) assure adequate security to prevent public access to the building, and (3) expedite the anticipated long-term remedial action.

The NTCRA will accelerate the overall Site cleanup by removing a suspected contaminant source, reducing Site contamination and allowing adequate characterization of underlying soils. The NTCRA alone does not constitute a comprehensive cleanup plan for the NHPC Site in and of itself. EPA will select a final remedial action in a Record of Decision (ROD) which is currently scheduled for the winter of 1994 - 1995. The ROD will specify the levels of contaminant reduction necessary for long-term public health and environmental protection, and define what steps, if any, are

necessary to address the restoration of the contaminated groundwater. The ROD will also address the potential restoration of the former lagoon area as a wetland.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

CERCLIS ID: NHD 001091453
Site ID: G1
Category: Non-Time Critical Removal

1. Removal Site Evaluation

The Site was placed on the National Priorities List on October 14, 1992. Since 1987, EPA and the New Hampshire Department of Environmental Services (NHDES) have conducted several investigations and response actions at the Site. Though some activity has been directed toward the NHPC building, the majority of previous actions centered on the three on-site lagoons. EPA is currently conducting a Remedial Investigation (RI) at the Site. An RI Report is scheduled for completion in the spring of 1994.

Data collected during previous investigations indicate that various metals and organic solvents used in the plating process were discharged from the building through an underground gravity flow pipe directly into a series of three unlined lagoons. Metals and organic solvents were also discovered within the building and underlying soils. RI investigations later revealed a series of unlined trenches which were chiseled in the building floor slab, apparently to direct wastes towards the main discharge pipe. The existence of the unlined trenches increase the probability that a greater level of contaminants are present beneath the building. Preliminary RI results reveal that the building and underlying soils are a potential source of a contaminated groundwater plume.

Based upon the results of previous investigations and the RI to date, the SACM Regional Decision Team approved the initiation of an Engineering Evaluation/Cost Analysis (EE/CA) to assess alternatives to mitigate the building area as a continuing source of contamination (See Attachment 1, EE/CA Approval Memorandum).

2. Physical Location

The NHPC Site includes the 13.1 acre lot of the former NHPC on Wright Avenue in Merrimack, New Hampshire, Hillsborough County (See Attachment 2, Site Location Map). The immediate area is zoned for commercial and light industrial uses, although a relatively large parcel of undeveloped property across the street is zoned as residential. Three residential lots abut the NHPC

Site to the west and north. There are several residences located approximately 1000 feet to the south. The southerly flowing Merrimack River is located about 500 feet to the east of the Site. Horseshoe Pond, an oxbow lake which discharges to the Merrimack River, is located 900 feet south of the Site (See Attachment 3, Site Map).

3. Site Characteristics/History

From 1962 until November 1985, the NHPC provided electroplating services to local industries. Various metals and organic solvents were used in the plating process. The metals used were gold, silver, tin, copper, nickel, cadmium, iron, lead, manganese, chromium and zinc. Known solvents used were trichloroethylene, toluene and acetone. Solvent use was discontinued during the latter part of the 1970s. Process wastes included metal bath solutions, cyanide wastes, acids, and various volatile organic compounds (VOCs).

During operations, treated and untreated wastes and waste waters were directed to a pre-formed trench in the concrete floor in the main shop area of the building. The wastes gravity drained through a buried pipe to a series of unlined lagoons approximately 325 feet north of the building. Approximately 35,000 to 60,000 gallons of wastewater were discharged to the lagoons daily throughout the operating life of the facility. In addition, a series of unlined trenches within the building appear to have been used to direct waste flow to the pre-formed trench. Wastes most likely leached to the underlying soils through these trenches (See Attachment 4, Building Floor Plan).

In 1980, NHPC notified the U.S. Environmental Protection Agency (EPA) that it was a hazardous waste disposal facility according to Resource and Conservation Recovery Act (RCRA) Section 3001 regulations. The first RCRA inspection in 1982 resulted in the issuance of a Notice of Violation/Order of Abatement for failure to comply with transportation, storage, and disposal (TSD) requirements and 40 CFR, Part 265, Subparts F, G, H, and K. Subsequent visits by the New Hampshire Department of Environmental Services (NH DES) revealed that NHPC was not treating its cyanide wastewater prior to discharge. A final RCRA inspection was performed in 1985, at which time the owner indicated that he was not filing a Part B permit or certifying compliance with 40 CFR Part 265. Subsequently, operations at NHPC ceased in November 1985. No operations have been conducted since that time and the Site currently remains fenced.

Several environmental investigations have been performed at the NHPC Site since 1981. These investigations resulted in removal actions which were conducted by EPA and the NHDES between 1987 and 1992. These removal actions are discussed in further detail in Section II.B.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

Investigations of contamination within and around the NHPC building have been performed by various contractors, however, none of these investigations has fully characterized the nature and extent of contamination within the building or in subsurface media beneath the building. The investigations have determined that lagoon soils and sludges, groundwater, and soils and residuals within and beneath the building contain elevated concentrations of metals and volatile organic compounds.

A pre-formed concrete wastewater discharge trench was used to direct wastewater to the lagoon area. The trench ranges from 1 inch to 12 inches deep and is approximately 16 inches wide. At the northern end of the trench, a 4-inch diameter pipe which once carried wastewater to the lagoons remains unplugged. Several unlined trenches exist in the main shop and alstan line room. It appears that these trenches were chiseled in the floor to drain liquids toward the pre-formed discharge trench. The chiseled trenches range from approximately 6 to 20 inches in width and up to seven inches in depth, and expose soil in most areas. A narrow crack with several small and one large (6" x 12") hole exists in the floor of the zinc room. A cavity approximately 16 inches deep, 12 inches wide, and at least six feet long exists in the soil beneath the cracked floor. The soil within this cavity is visibly stained. An opening of a 4-inch pipe is visible at the western side of the cavity; the pipe appears to drain toward the southwest wall of the zinc room, however this was not confirmed. It could not be determined from visual inspection how the cavity was formed. It appears that the cavity was at least partially formed by erosion, however, it is possible that the cavity was excavated to allow for installation of drainage pipes. The unlined trenches and subsurface cavity have probably acted and may continue to act as direct pathways for plating wastes to enter the soils and groundwater beneath the building (See Attachment 5, Current Building Conditions).

Groundwater flows mainly to the east and south across most of the NHPC Site. A groundwater divide occurs near the first lagoon resulting in radial flow over a limited area. A groundwater divide also exists between Horseshoe Pond and the Merrimack River. Groundwater recharge conditions exist on the NHPC Site.

Preliminary interpretation of hydrogeologic conditions indicates that groundwater in the shallow overburden aquifer flows generally southeast, toward the Merrimack River. The deeper portion of the aquifer appears to have a southerly component which may continue underneath Horseshoe Pond. Several metals and VOCs present within the building and underlying soils have also been detected at elevated levels in groundwater downgradient of

the Site. A narrative summary of the contaminants found in the building, underlying soils and downgradient groundwater is included below. All listed compounds are hazardous substances as defined by CERCLA § 101(14) and 40 CFR § 300.5.

a. Soil

On May 27, 1987, Clean Harbors, Inc. collected five soil samples from beneath the NHPC building by coring through the concrete floor at the following locations: zinc room (Sample No. 1), alstan line (Sample No. 2), main shop [near zinc line 3 (Sample No. 3) and near zinc line 1 (Sample No. 4)] and the still plating room near the lagoon discharge pipe (Sample No. 5). Each sample was a composite collected from the soil surface to a maximum depth of 18 inches beneath the floor. Soil samples were analyzed for eight total metals and cyanide while leachate from the EP Toxicity procedure were analyzed for eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Additionally, these samples were screened for trichloroethene (TCE) and tetrachloroethene (PCE).

Six of the eight metals (arsenic, barium, cadmium, chromium, lead and silver) were detected in the total soil samples. Cyanide was detected in all five soil samples at concentrations ranging from 2 to 300 mg/kg. TCE and PCE were also detected in two of the soil samples at concentrations ranging from 14 to 65 $\mu\text{g}/\text{kg}$ and 16 to 730 $\mu\text{g}/\text{kg}$, respectively. The pH of the soils ranged from 7.4 to 11.7. EP Toxicity leachate contained barium, cadmium, chromium, lead, mercury, and silver.

On May 4, 1990, the EPA Technical Assistance Team (TAT) team, Roy F. Weston, entered the building to collect soil samples from areas of the building previously sampled, i.e., the main shop area. The soil samples were collected from an unlined trench in the NHPC building. Three of the samples were screened for metals by XRF and four samples were screened for VOCs using a gas chromatograph (GC).

Seven metals (cadmium, chromium, copper, nickel, lead, tin, and zinc) were detected in one sample. TCE was detected in three of the four samples at concentrations ranging from 7 to 516 $\mu\text{g}/\text{kg}$. PCE was detected (at concentrations of 4 and 408 $\mu\text{g}/\text{kg}$) in two of the samples containing TCE.

The soil sample results above were adequate in determining that the soils underneath the building are contaminated at a level which may be of concern, however the results do not meet the needs of a risk assessment. Subsequent soil sampling is necessary to determine the full lateral and vertical extent of contamination which will provide an adequate level of data required for a detailed site-specific risk assessment.

It is important to note that when the above samples were collected, the building, particularly the roof, had not deteriorated to its current state. The building no longer provides a safe environment from which to collect soil samples, particularly to the extent now required for the risk assessment.

In November 1992, HNUS/BEI collected surficial soils samples in 20 locations surrounding the building. The samples were analyzed for metals (cadmium, zinc, copper, chromium, tin, lead, and nickel) using XRF. Four of the twenty samples were also analyzed for VOCs, semi-volatile organic compounds, metals, cyanide, pesticides, and PCBs through the EPA Contract Laboratory Program (CLP). The analytical data is currently under review, therefore these numbers should be considered estimated values, presented for comparison purposes only.

Initial results of the XRF data indicated that the highest concentrations of metals were detected in samples collected to the north and south of the building. Maximum cadmium levels in these areas were 164 mg/kg and 144 mg/kg, respectively. The highest concentrations of metals were detected in samples collected closest to the building and near discharge pipes exiting the building through the exterior walls.

Preliminary results of the CLP analysis revealed that methylene chloride was detected at a concentration of 72 $\mu\text{g}/\text{kg}$. One other sample contained 88 $\mu\text{g}/\text{kg}$ of methylene chloride. Di-n-butylphthalate was detected at concentrations ranging from 380 (estimated) to 530 $\mu\text{g}/\text{kg}$. Both the VOC and semi-VOC compounds detected are estimated and may not be representative of the soil. Aroclor 1254 was detected in one sample collected outside the boiler room. Cyanide was detected at concentrations ranging from 0.83 mg/kg to 15.3 mg/kg in samples collected to the north of the building.

b. Dust

Interior building samples were collected by Roy F. Weston, the EPA Response Engineering and Analytical Contractor (REAC) team in October 1989 (following a "building cleanup" conducted by Clean Harbors). Samples were collected by sweeping up fines and dust from interior building surfaces in the alstan line and zinc room, main shop, and laboratory. Additionally, dust from a vacuum cleaner used by the previous building occupant was sampled. These samples were screened for six metals (chromium, lead, nickel, zinc, cadmium, and tin) using X-Ray Fluorescence (XRF).

The sample collected in the main shop area contained the highest concentrations of chromium (16,520 mg/kg), lead (820 mg/kg), nickel (3,220 mg/kg), zinc (60,650 mg/kg), and cadmium (3,430 mg/kg). The highest detection of tin (8,210 mg/kg) was in the

laboratory. Cadmium in the dust from the vacuum cleaner bag was detected at a concentration of 1,620 mg/kg.

c. Groundwater

Groundwater results from previous sampling events (April 1986 through April 1989) were compiled in the Summary of Hydrogeologic Investigations of the New Hampshire Plating Company Site Area Merrimack, New Hampshire (Roy F. Weston, Inc. - TAT contract) dated April 1990. For the purpose of this NTCRA, only groundwater analytical results from wells in the vicinity of the NHPC building and downgradient locations were reviewed. Summary tables for metal and volatile organic compounds presented only the detected compounds. Additional compounds may have been analyzed for, but were not detected and therefore not presented.

The highest levels of cadmium and chromium, both of which exceed maximum contaminant levels (MCLs), were detected in the shallow aquifer east of the NHPC building. The following volatile organic compounds were detected above MCLs: 1,1-dichloroethene; 1,1,1-trichloroethane; trichloroethene; benzene; tetrachloroethene; chlorobenzene; and total xylenes. Maximum concentrations of 1,1,1-trichloroethane; trichloroethene; and tetrachloroethene were detected in the shallow portion of the aquifer to the south of the NHPC Site.

Groundwater sampling was also performed by HNUS from August 24, 1992 through September 15, 1992 as part of the Remedial Investigation. The samples were analyzed for VOCs and metals by the NHDES Laboratory and CLP laboratories. Additionally, semi-volatile and Pesticide/PCB organic compounds were analyzed by a CLP laboratory. Vinyl chloride, 1,1-dichloroethene, trichloroethene, and tetrachloroethene were detected above MCLs. The maximum concentrations of 1,1-dichloroethene, tetrachloroethene, and trichloroethene were detected in the shallow portion of the aquifer south of the NHPC Site. The maximum concentration of vinyl chloride, a contaminant not generally associated with the NHPC, was detected in a bedrock well located near the northwest corner of the NHPC building. Vinyl chloride may be a degradation product of the more complex chlorinated compounds detected.

5. NPL Status

The Site was proposed for inclusion on the National Priorities List (NPL) on July 29, 1991 (56 FR 35840) and was finalized on the NPL on October 14, 1992 (57 FR 47180). The Hazard Ranking Score for the Site is 50. In accordance with the statutory requirements for NPL Sites, the Agency for Toxic Substances and Disease Registry (ATSDR) completed a Preliminary Health Assessment for the Site on May 20, 1992. A Final Health Assessment was completed on April 27, 1993. With respect to the

building, the report recommended that the building be decontaminated prior to any subsequent use and that ongoing monitoring to assess potential exposure be conducted.

Since October 1992, HNUS has been conducting a Remedial Investigation/Feasibility (RI/FS) for EPA. Field activities associated with the RI are currently ongoing. An RI Report is expected to be complete next summer (1994) and a Record of Decision is anticipated for December 1994.

6. Maps, Pictures and Other Graphic Representations

The following figures and tables are included as attachments and are located at the end of this Action Memorandum.

- Attachment 1: EE/CA Approval Memorandum
- Attachment 2: Site Location Map
- Attachment 3: Site Map
- Attachment 4: Building Floor Plan
- Attachment 5: Current Building Conditions
- Attachment 6: EE/CA Fact Sheet (EPA's Proposed Plan)
- Attachment 7: EPA's Response to Comments on the EE/CA and EE/CA Fact Sheet
- Attachment 8: ARARs List
- Attachment 9: Enforcement Summary (Confidential)

B. Other Actions to Date

1. Previous Actions

a. NHPC Building Clean-Up

In June 1987, the NHDES contracted Clean Harbors, Inc. to conduct a cleanup of the NHPC building. As part of the scope of work, drums, jars, and other containers holding various plating solutions, cyanide salts and other materials (both liquid and solid) used in the electroplating process were removed from the building. Sludge material and other sediments which accumulated on the floors of the plating room were also removed and disposed of at a licensed off-site facility. Sections of the interior walls were sandblasted with grit and rinsed with a water and chlorine solution.

Among the wastes listed on the removal manifest are cyanide salts, cyanide solutions, nitric acid, chromic acid solutions, potassium cyanide, copper cyanide, zinc cyanide, oxidizer (oxidizing salt, calcium hypochlorite, silver nitrate), and plating shop debris (wood, glass, metal, paper, plastic).

Though the building removal was successful in meeting its objectives, post-removal sampling, as summarized in Section I.A.4

above, verified that wastes had leached into underlying soils and that dusts within the building were contaminated.

b. Underground Storage Tank

In August 1991, under the direction of EPA, approximately 800 gallons of liquid (No. 2 fuel oil) were removed from the UST by Beede Oil Company. Approximately 15 inches of sludge of unknown composition remained in the tank. The tank was not cleaned. Water was observed in the tank during pumping which may indicate the presence of a leak in the tank.

The UST is a cylindrical vessel, 8.33 feet in diameter located horizontally. The top of the tank is approximately 5 feet below ground surface and the tank itself is located underneath the building. Water level measurements to date indicate that the bottom portion (approximately 1 foot) of the UST may be subject to periodic immersion by groundwater.

c. Lagoon Area Removal Action

In 1991, EPA ESD conducted a time-critical removal action involving the excavation of soil and sediment from the lagoons. Approximately 13,600 tons of excavated material was solidified on-site in an ash-mortar mix and encapsulated on-site in a high density polyethylene (HDPE) envelope, to the rear (north) of the NHPC building. Approximately 5,600 cubic yards of material excavated from the third lagoon was placed in the southern section of Lagoon 1, and covered with a HDPE cap and 2 feet of clean fill.

d. Cost of Previous Actions

The total cost of the above previous actions, as documented in the On-Scene Coordinator Report for the NHPC Site, October 1992, was \$5,230,733.

2. Current Actions

Since October 1989, HNUS has been conducting a Remedial Investigation/Feasibility Study (RI/FS) for EPA at the NHPC Site. The objective of the RI is to determine the source and characterize the nature and extent of contamination at the NHPC Site. To date, the RI is progressing on schedule and has determined that there are two distinct plumes migrating from the Site in an easterly and southeasterly direction. The first plume appears to be discharging to the Merrimack River. The second plume is suspected to be discharging to or migrating underneath, and perhaps beyond, Horseshoe Pond. The building and underlying soils are a suspected source of the second plume.

It is anticipated that HNUS will complete their investigation for EPA sometime next fall (1994) at an estimated cost of \$1 million.

As mentioned above, the Site is currently under investigation as part of an RI/FS. At the same time, in order to mitigate the continual release of contamination to the environment, the SACM Regional Decision Team recommended that an EE/CA be conducted to support an NTCRA. The EE/CA evaluated various response actions to address contamination in the building and underlying soils.

This proposed non-time critical removal action will aid in the effective completion of the RI investigation by allowing HNUS the opportunity to fully characterize the soils in the building area and determine if the remaining post-removal soils require additional remedial actions which could be implemented as part of the Record of Decision. The need for additional post ROD studies in the building area would be eliminated and if necessary, the building soils can be remediated sooner in the remediation process, thereby expediting the overall Site cleanup.

C. State and Local Authorities Roles

1. State and Local Actions to Date

The New Hampshire Department of Environmental Services (NHDES) has assisted EPA in removal, investigative, analytical and other response activities at the NHPC Site. In a January 11, 1994 letter to EPA, the NHDES officially concurred with EPA's recommended NTCRA.

In June 1987, the NHDES contracted with Clean Harbors, Inc. to conduct cleanup activities within the NHPC building during which drums, jars and other containers holding various plating solutions, cyanide salts and other materials (both liquid and solid) were removed from the building.

During the 1991 removal action, the NHDES assisted EPA with on-site activities. During the currently ongoing remedial investigation, the NHDES has provided document review, analytical services, field support and participation in community involvement activities. Similarly, EPA has consulted with the NHDES in development of the EE/CA. The NHDES identified all potential State ARARs and publicly supports the proposed NTCRA.

Additionally, the New Hampshire Department of Public Health Services (NHDPHS) has assisted the federal Agency for Toxic Substances and Disease Registry (ATSDR) in conducting a Public Health Assessment for the NHP Site which will soon be finalized. The draft was released on March 15, 1993, and public comments are currently being addressed.

Local authorities have been actively involved in the progress of the Site. The Town Manager, Selectmen, and Health Agent have assisted EPA in the ongoing RI activities. At a November 15, 1993 informal public hearing held by EPA to solicit public comment, the Town publicly voiced support of the NTCRA as proposed in the EE/CA.

2. Potential For Continued State/Local Response

The NHDES and local authorities are expected to maintain a high level of interest in the Site. It is anticipated that the NHDES will continue to provide technical and analytical services throughout the remainder of the RI/FS and during the NTCRA. As the Site was not operated by a state or political subdivision, pursuant to section 300.525(b) of the NCP, there is no requirement for a State cost-share for the NTCRA.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Section 300.415(b)(2) of the NCP lists a number of factors for EPA to consider in determining whether a removal action is appropriate. The factors which apply in this case include:

- (i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;
- (ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- (v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- (viii) Other conditions.

The above factors are triggered at the NHPC Site by a number of conditions.

First, the release of hazardous substances from the building and the soils beneath the building appears to be a contributing source of downgradient groundwater contamination. Volatiles and metals are present in the downgradient plume at levels in excess of federal and state drinking water standards, and thereby pose a potential threat to current and future users of the bedrock groundwater.

Second, the building roof has deteriorated to a point where precipitation enters the building in most areas. As a result, residual contamination is continually released to the soils beneath the building through a series of open trenches. The precipitation may also be causing contamination to leach out of

the building and soils into the groundwater. The overall building condition is one of continuing deterioration and is currently considered unsafe to trespassers (such as children).

These Site conditions demonstrate that there is a continuing release and migration of hazardous substances from the source area (building and soils beneath) to groundwater. This release of hazardous substances has resulted in elevated concentrations of several contaminants including arsenic, chromium, lead, cyanide, TCE and PCE in the soils and groundwater beneath the building at levels which may present a risk to exposed populations. Comprehensive characterization of the underlying building soils and evaluation of any associated risk is impeded by the present condition of the building.

Consequently, based upon the NCP factors listed above, a potential threat exists to public health or welfare or the environment. A removal action is therefore appropriate to abate, prevent, minimize, stabilize, mitigate, or eliminate such threat(s). In particular, a removal action is necessary to (1) control and contain the release of hazardous substances from the building and underlying soils, (2) to assure adequate security to prevent public access into the building, and (3) expedite the anticipated long-term remedial action.

This removal action is designated as non-time critical because more than six months planning time is available before on-site activities must be initiated.

IV. ENDANGERMENT DETERMINATION:

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS:

The overall goals of this NTCRA are to: (1) control and contain the release of hazardous substances from the building and underlying soils, (2) assure adequate security to prevent public access into the building, and (3) expedite the anticipated long-term remedial action.

To achieve the NTCRA goals, the following specific objectives were developed during the EE/CA process:

- Prevent, to the extent practicable, the potential for water to contact contaminants within and beneath the building, causing migration of contamination to groundwater and underlying soils;

- Prevent direct human contact with and ingestion of contaminated soils and debris from the building;
- Facilitate characterization of the soils beneath the building which will contribute to the efficient performance of anticipated long-term remedial actions.

EPA developed the NTCRA objectives based on information gathered during previous investigations and removal actions as well as from the ongoing remedial activities at the Site. The objectives were then evaluated against specific criteria in the EE/CA. An identification and analysis of removal alternatives was then conducted and various technologies were screened for their overall applicability to meet the specified removal goals for the NTCRA.

Removal action alternatives were developed by combining the following general response actions:

- No action (which serves as a baseline);
- Limited actions which restrict access and/or limit potential exposure to contaminants;
- In-place treatment (decontamination) of the facility interior to reduce or mitigate exposure potential and pathways, and;
- Treatment, demolition, and disposal of equipment and facility.

The three NTCRA alternatives developed for the NHPC building were:

1. No Action (restricted access); [\$52,460]
2. Building and Equipment Decontamination, Limited Off-site Disposal of Materials, Restricted Access, and Repair of Roof; [\$210,177]
3. Building and Equipment Decontamination, Demolition, and Off-Site Disposal. [\$354,490]

Pursuant to EPA guidance on EE/CAs, alternatives were evaluated based upon effectiveness, implementability, cost, and compliance with ARARs. It is anticipated that none of the alternatives for this non-time critical removal action will approach \$2 million. A comparative analysis was conducted in the EE/CA among the three alternatives.

A. Proposed Actions

1. Proposed Action Description

Based on the above analysis and other information contained in the EE/CA and supporting documentation, EPA has selected alternative 3 as the proposed NTCRA. Alternative 3 involves the decontamination of the equipment and building; removal and off-site disposal of office and process equipment, and utilities and associated piping; and dismantling and off-site disposal of the building. The UST would be sampled and, if determined necessary, decontaminated and disposed of off-site. Following decontamination and removal activities, visibly contaminated soils would be excavated, tested, and disposed off-site and a temporary cover would be placed over the building site.

Decontamination of the equipment and building surfaces would be conducted. Then the pipes, wall partitions, and ceiling and roofing materials would be removed. After all equipment and interior building materials have been decontaminated and removed, the building shell would be decontaminated using a high efficiency vacuum for the floors and walls and steam cleaning for the steel structural beams. The building structure would then be dismantled. The roof and steel structural beams would be taken down and transported off-site for disposal or recycling and the concrete block walls would be dismantled and disposed off-site.

When only the concrete slab remained, the UST could then be easily accessed for sampling and cleaning. The remaining liquid and sludge in the UST would be sampled and, if necessary, the tank would be emptied and cleaned. The UST can be addressed under the NTCRA only if it contains hazardous or mixed wastes. If the UST is found to contain pure petroleum product, it will not be addressed under CERCLA authority. However, the NHDES UST program has committed to remove the tank and remediate solely petroleum contaminated soils. Following sampling of the UST, the concrete floor slab would be removed. In areas where the concrete slab was determined to be hazardous, it would be cut with a wet saw and removed to a licensed hazardous waste facility. The remaining concrete slab would be broken up with a hydraulic hammer and disposed off-site at a licensed facility. The UST and associated piping and all visibly stained soils in the trench and UST areas would be removed/excavated and disposed of off-site.

Prior to removal from the Site, demolition debris, decontaminated equipment, UST sludge, stained soils, and any other materials requiring off-site disposal will be sampled and analyzed to determine appropriate disposal options. All waste materials which are determined to be listed or characteristic hazardous waste as defined under RCRA Subtitle C will be disposed of in a licensed Subtitle C facility. Materials which are not defined as

hazardous waste under Subtitle C will be disposed of in a licensed Subtitle D (solid waste) landfill.

Following removal of the building slab and visibly stained soils, the RI contractor will collect soil samples from the building site to facilitate full characterization of the soils beneath the building. The building site would then be prepared for placement of a temporary cover. The former UST and other excavated areas would then be backfilled with clean fill and the building site would be graded and slightly sloped to prevent damage to, and control ponding on, the cover. A temporary, impermeable HDPE cover would then be placed over the building site to mitigate potential infiltration of precipitation and prevent direct contact with contaminated soils. Precipitation that accumulates in one area (diverted by graded topography) will be pumped from the cover periodically. The backfilling and grading will not prevent ponding, but is intended to promote drainage to a localized area to facilitate pumping. Since the sources of contamination (the building, some soils, and potentially the UST) would be removed, annual groundwater monitoring would not be required under the proposed NTCRA. Periodic inspections and any necessary maintenance would be conducted to monitor and assure the integrity of the temporary cover.

The cost estimate for conducting the proposed NTCRA, as developed in the EE/CA, is \$354,490. For purposes of the cost estimate, it is assumed that periodic inspection and pumping of the cover would be conducted until implementation of the final remedial action (approximately a three-year period).

At an informational meeting and formal hearing held in Merrimack on November 15, the State, Town, and the general public concurred with EPA's recommendation for the preferred alternative. Post-removal site control activities, to the extent any are necessary, will be managed by the EPA remedial program.

2. Contribution to Remedial Performance

Based upon previous investigations and the ongoing RI, it is anticipated that some level of soil and groundwater cleanup will be necessary as part of the long-term cleanup plan for the Site.

The previous removal action did not fully remediate soils in the lagoon area. Though several thousand tons of contaminated soils were removed and a clean cover placed over the area, a baseline human health and environmental risk assessment will be necessary to determine the need to remediate remaining soils. It is important to note that the lagoon system is a former wetland area and that any cleanup of that portion of the Site will probably include a wetland restoration.

Like soils, only the baseline human health and environmental risk assessment will be able to determine the need to remediate groundwater. Because several volatile and inorganic contaminants have been found at the Site at levels in exceedance of maximum contaminant levels (MCLs), it is anticipated that some form of groundwater remediation will be necessary.

The final long-term cleanup approach for all media at the Site will be documented in the Record of Decision (ROD) expected next winter (1994 - 1995).

To the extent that any future long-term cleanup is determined to be necessary at the Site, the NTCRA is expected to expedite the cleanup by characterizing potential soil contamination underneath the building before, rather than after, issuance of the ROD. It is anticipated that the soil data can then be compared with any risk-based cleanup levels developed for soils during the baseline risk assessment. This will allow the building area to be remediated, as necessary, concurrent with other areas of the Site under one comprehensive ROD.

Furthermore, the proposed NTCRA contributes to the efficient performance of future remedial activities. As a potential groundwater contaminate source area, the decontamination, demolition, and off-site disposal of contaminated equipment and building materials would probably be required components of any future remedial action. The implementation of the proposed NTCRA will eliminate the need for annual groundwater monitoring in the building area, as well as maintenance and repair of access barriers into the building.

3. Description of Alternative Technologies

Prior to selecting the proposed NTCRA, two other alternatives, no action and building decontamination/roof repair, were evaluated in the EE/CA. The no action alternative did not satisfy all of the NTCRA objectives previously identified. The building decontamination/roof repair alternative would not contribute to the efficient performance of future remedial activities and would not be expected to expedite the overall cleanup of the Site, a goal of the Superfund program under SACM.

During the EE/CA process, all three alternatives were evaluated independently based upon cost, effectiveness, and implementability. Cost is used to assess options of similar effectiveness and implementability. The direct capital, indirect capital, and post-removal site control costs (operation and maintenance) are estimated for each alternative. Effectiveness is based upon the ability of an alternative to meet the removal action objectives. The effectiveness evaluation also involves the assessment of federal and state applicable or relevant and appropriate requirements (ARARs), the short term risks associated

with each alternative, the timeliness, and the overall protection of human health in the environment. Implementability involves the assessment of constructability and operational issues.

Based on the above evaluation, the EE/CA concludes that although alternatives 1 and 2 each provided some degree of protection, alternative 3 (the proposed NTCRA) achieves the greatest overall protection of human health and the environment by eliminating the chemical hazards posed by any residuals within the building and UST, and greatly reducing the potential for migration of contaminants from the soils beneath the building and the UST into the groundwater. Alternative 1 would require the least amount of effort to implement whereas alternatives 2 and 3 would require approximately the same effort. Based on the extent of roof repair actually required (assumed to be complete replacement), alternative 2 could take longer to implement than alternative 3. Overall, Alternative 1 would be the least expensive and Alternative 3, the most expensive to implement. The total present worth costs of the three alternatives are: \$52,460 (Alternative 1), \$210,177 (Alternative 2), and \$354,490 (Alternative 3). Total present worth costs were calculated using a 7 percent discount rate over a period of 3 years.

Alternative 3 is the only one of the 3 Alternatives evaluated in the EE/CA which meets all of the identified objectives of the proposed NTCRA. For this reason, and for the greatest degree of protection to human health and the environment that it would provide, Alternative 3 has been chosen as the proposed NTCRA.

4. EE/CA

Attachment 1 is the EE/CA Approval Memorandum, Attachment 6 is the EE/CA Fact Sheet (EPA's Proposed Plan), and Attachment 7 is EPA's Response to Comments on the EE/CA and EE/CA fact sheet. The EE/CA report itself is located in the Administrative Record for the Site.

5. Applicable or Relevant and Appropriate Requirements

Through the EE/CA process, EPA has evaluated the universe of federal and state applicable or relevant and appropriate requirements (ARARs) pertaining to on-site activities which are within the scope of this NTCRA. Attachment 8 is a list of all such ARARs. The identified ARARs have been divided into three categories: chemical-specific, location-specific, and action-specific. EPA has determined that the NTCRA will be designed and implemented to attain all of the identified ARARs, in accordance with 40 CFR § 300.415(i).

Applicable requirements are those that would be legally be applicable if the NTCRA was not undertaken pursuant to CERCLA.

Applicable requirements include cleanup standards, standards of control, and other environmental protection criteria. Relevant and appropriate regulations are those that are based on scientific or technological considerations that are similar to the conditions encountered at the Site.

6. Applicable Off-Site Regulations

The following are applicable Federal and State regulations that would pertain to off-site activities. Though off-site activities relating to hazardous waste disposal are not ARARs, all off-site NTCRA activities are required to meet all applicable laws including, but not limited to: (i) Department of Transportation regulations governing the marking and labeling of hazardous materials shipments (49 CFR 192), shipping requirements (49 CFR 173), and transport of hazardous materials by motor vehicles (49 CFR 177); (ii) the Resource Conservation and Recovery Act regulations governing transporter activities and treatment, storage, and disposal facilities (40 CFR 261-264), land disposal restrictions (40 CFR 268); and (iii) CERCLA § 121(d)(3) and its implementing regulations regarding off-site response actions (40 CFR 300.440).

The Occupational Safety and Health Administration (OSHA) regulations apply to both on and off-site activities. These include regulations governing the performance of activities at hazardous waste sites (29 CFR 1910.120), general construction guidelines (29 CFR 1926), and occupational exposure to asbestos (29 CFR 1910.1001).

7. Project Schedule

Upon the Regional Administrator's signature of this Action Memorandum, EPA intends to implement the NTCRA following the schedule below:

DATE	ACTIVITY
February 1994	Statement of Work (SOW) for EPA Contractor
February to April 1994	Design/Specifications Preparation
May to June 1994	Bid process to select sub-contractor(s)
July 1994	Initiate Removal Action
September 1994	Anticipated completion of RA

Any post-removal site control activities will be conducted by EPA until a remedial action is implemented as selected in the ROD.

8. Estimated Costs

The costs detailed below assume that the NTCRA will be performed as a Fund-lead. The cost components include intramural (inter-agency) and extramural components.

Component	Cost
EPA Level of Effort	\$43,200
Intramural Total (includes 20% contingency)	\$51,840
EPA Contractor	\$348,323
Post-Removal Site Control (PRSC) ¹ (Present worth for 3 yrs @ 7%)	\$6,167
Extramural Total (includes 20% contingency)	\$425,388
Total Estimated NTCRA Cost (Intramural + Extramural Total)	\$477,228

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the NTCRA is not conducted, water will continue to infiltrate the building and mobilize contaminants. Contaminants would continue to migrate into the overburden and bedrock groundwater below, causing further contamination. Also, potential threats related directly to the building would remain at the Site for an extended period and completion of the RI would be impeded by the lack of adequate soil data in the building area. Delayed action could also increase the time and expense required for any aquifer restoration.

VII. OUTSTANDING POLICY ISSUES

This NTCRA is one of the first actions taken in Region I pursuant to SACM. Through the implementation of SACM, remediation at this Site has been streamlined as compared with the traditional Superfund process in that an anticipated source control portion of the overall cleanup will be performed earlier in the remedial process through the use of removal authority. This will be the first fund lead NTCRA to be implemented by the remedial program through SACM.

¹ Consistent with OSWER guidance, all post-removal site control costs will be funded through the EPA remedial program.

VIII. ENFORCEMENT

To date, the only potentially responsible parties (PRPs) identified at the NHP Site are Aldo and Ida D. Bracci, the current property owners, and Jack O. Labovitz, co-owner of the New Hampshire Plating Company, Inc (NHPC) from 1962 to 1972. Aldo and Ida D. Bracci do not appear to be viable PRPs. Jack O. Labovitz has emigrated to Isreal and all attempts to contact him have been unsuccessful. A formal PRP search will be conducted as part of the RI/FS process.


Additional enforcement information for this case is contained in Attachment 9 (Enforcement Confidential).

IX. RECOMMENDATION

This decision document represents the selected removal action for the New Hampshire Plating Superfund Site in Merrimack, New Hampshire, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record for the NTCRA.

Conditions at the Site meet the NCP criteria for a removal action as specified in 40 CFR § 300.415(b)(2). I recommend your approval of the proposed removal action. The total project cost, if approved, is estimated to be \$477,228. The NTCRA is expected to be Fund-lead.

Approve Disapprove

 (fu)

 John P. DeVillars
 Regional Administrator

2-18-94
 Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J.F. KENNEDY FEDERAL BUILDING, BOSTON, MA 02203-2211

MEMORANDUM

DATE: July 14, 1993

SUBJ: New Hampshire Plating Superfund Site - Approval Memorandum to Perform an Engineering Evaluation/Cost Analysis for a Non-Time Critical Removal Action

FROM: Jim Di Lorenzo, RPM *JMD*
Jill Metcalf, ORC *JM*

TO: Paul Keough, Acting Regional Administrator

THRU: Dennis Huebner, Chief *DHuebner*
New Hampshire and Rhode Island Waste Management Branch

Don Berger, Chief *DBerger*
Emergency Planning and Response Branch

I. Subject

This memorandum memorializes the decision to proceed with an engineering evaluation/cost analysis (EE/CA) for a non-time critical removal action at the New Hampshire Plating Superfund (NHP) Site. The EE/CA will be limited to evaluating alternatives for a source control action at this Site. The decision to proceed with an EE/CA was concurred on by the SACM Regional Decision Team and is consistent with EPA guidance documents regarding SACM early actions.

This memorandum is not a final Agency decision regarding the selection of a removal action for this Site.

II. Background

A. Site Description:

The NHP Site is located on a 13.1 acre lot on Wright Avenue in Merrimack, New Hampshire in Hillsborough County. The immediate area is zoned for commercial and light industrial uses, though a relatively large parcel of undeveloped property across the street is zoned as residential. Three residential properties abut the NHP Site to the west and north. There are several residences located approximately 1,000 feet to the south. The southerly flowing Merrimack River is located to the east of the Site. Horseshoe Pond, an oxbow lake located 900 feet to the south of the NHP property, discharges to the Merrimack River.

The NHP building is a one-story building located on the Site, with an adjoining paved parking lot. To the north of the

building is a lagoon system into which plating solution wastes were discharged during the New Hampshire Plating Corporation's operation of the Site. Additionally, there is a 6,000 gallon underground fuel oil storage tank (UST) beneath the southwestern corner of the building. According to State of New Hampshire Department of Environmental Services (NHDES) records, this tank is at least thirty years old.

The 13,070 square foot building is constructed of concrete block, wood and steel beams and columns. The roof is slightly pitched and consists of tar and gravel underlain by plywood. The building is divided into several rooms formerly used for plating processes, equipment maintenance, chemical storage and office space. Currently, the building condition is in a state of continuing deterioration. During building surveys conducted on December 10, 1992 and March 12, 1993, several holes were observed in the roof throughout the building and wooden roof supports appeared to be rotting. Consequently, the building interior was soaked. Several open, unlined trenches (formerly used for plating operations) were also discovered within the building interior.

B. Site History:

From 1962 until November, 1985, the New Hampshire Plating Corporation (NHPC) provided electroplating services to local industries. The metals used in this process included gold, silver, tin, copper, nickel, cadmium, iron, lead, manganese, chromium and zinc. Solvents used in the process included trichloroethylene, toluene and acetone. Solvent use was discontinued during the latter part of the 1970's. Process wastes included cyanide and various volatile organic compounds (VOCs), acids, metal bath solutions and solvents.

Treated and untreated wastes and wastewaters were directed to a pre-formed trench in the concrete floor in the Main Shop area of the building. The wastes then gravity drained via a pipe to the unlined lagoons located approximately 325 feet north of the building. Approximately 35,000 - 60,000 gallons per day of wastewater were discharged to the lagoons. Though the pre-formed trench was concrete lined, it nevertheless may have caused the leakage of wastes to the underlying soils. In addition, unlined trenches appear to have been used to direct waste flow to the pre-formed trench.

In 1980, NHPC notified the U.S. Environmental Protection Agency (EPA) that it was a hazardous waste disposal facility according to Resource and Conservation Recovery Act (RCRA) Section 3001 regulations. The first RCRA inspection in 1982 resulted in the issuance of a Notice of Violation/Order of Abatement for the failure to comply with treatment, storage and disposal (TSD) requirements and 40 CFR, Part 265, Subparts F, G, H, and K.

Subsequent visits by the New Hampshire Department of Environmental Services (NHDES) revealed that NHPC was not treating its cyanide wastewater prior to discharge. A final RCRA inspection was performed in 1985, at which time the owner indicated that he was not filing a Part B permit or certifying compliance with 40 CFR Part 265. Subsequently, operations at NHPC ceased in November 1985.

C. Actions to Date:

Several hydrogeological studies have been performed at the NHP Site from 1981 to the present. During this time monitoring wells and piezometers were installed; soil borings were completed; soil, sediment, surface water and groundwater samples were collected; and geophysical surveys were conducted. As a result of the various studies performed at this Site, EPA has determined that lagoon soils and sludges contain concentrations of metals and cyanide well above background levels.

In June 1987, the NHDES contracted with Clean Harbors, Inc. to conduct a cleanup of the NHP building. As part of the scope of work, drums, jars and other containers holding various plating solutions, cyanide salts and other materials (both liquid and solid) used in the electroplating process were removed from the building. Sludge material and other sediments which accumulated on the floors of the plating room were also removed and disposed of at a licensed offsite facility. Sections of the interior walls were sandblasted with grit and rinsed with a water and chlorine solution.

In 1991, EPA conducted a time-critical removal action involving the excavation of soil and sediment from the lagoons. Approximately 13,600 tons of excavated material was solidified in an ash mortar mix and encapsulated on-site in a high density polyethylene (HDP) envelope, to the rear (north) of the NHP building. Approximately 5,600 cubic yards of material excavated from the third lagoon was placed in the southern section of Lagoon 1, and covered with a HDP cap and two feet of clean fill.

Currently, HNUS/BEI is performing a Remedial Investigation/Feasibility Study (RI/FS) on behalf of EPA at the NHP Site. As part of the study, field activities, such as monitoring well installation, surficial sediment, soil, groundwater and surface water sampling, and a building survey have been or will be performed. At the completion of these activities, an RI/FS report will be generated detailing the results of the investigation and presenting the remedial action alternatives for the Site. EPA anticipates issuing a Record of Decision for the Site in the fourth quarter of fiscal year 1994.

D. Quantities and Types of Substances Present:

Preliminary groundwater sampling at the Site revealed elevated concentrations of volatile organics and metals in excess of federal and state drinking water standards. Specifically, TCE and PCE were found at 1110 and 17 ppb, respectively. Metals detected included arsenic, cadmium, chromium, and lead at concentrations ranging from 3 to 225 ppb (all above MCLs). The contamination forms a plume which is migrating in a southerly direction towards Horseshoe Pond directly downgradient of the building. These same contaminants were identified inside and underneath the building during the investigations described below, thus indicating that the building and the soils beneath are potential sources of the downgradient groundwater contamination.

In May 1987, five cores were drilled through the floor within the building to obtain soil samples. Six different metals, including arsenic, barium, cadmium, chromium, lead and silver were detected at concentrations ranging from 1 to 540 ppm. Cyanide was detected at concentrations ranging from 2 to 300 ppm and VOCs (TCE and PCE) were detected at concentrations ranging from 14 to 65 ppb and 16 to 730 ppb, respectively.

Dust samples taken from within the building in October 1989 (after the building cleanup conducted by Clean Harbors) were analyzed using X-Ray Fluorescence (XRF) which revealed elevated levels of metals (chromium, lead, nickel, zinc, cadmium and tin) ranging from 390 to 60,650 ppm.

In May 1990, additional soil samples were taken from the main discharge trench within the building. Seven metals (cadmium, chromium, copper, nickel, lead, tin and zinc) were detected at concentrations ranging from 101 to 8,945 ppm. TCE and PCE were detected at concentrations ranging from 7 to 516 and 4 to 408 ppb, respectively.

E. State and Local Authorities' Role:

The New Hampshire Department of Environmental Services (NHDES) has assisted EPA in removal, investigative, analytical and other response activities at the NHP Site.

In June 1987, the NHDES contracted with Clean Harbors, Inc. to conduct cleanup activities within the NHPC building in which drums, jars and other containers holding various plating solutions, cyanide salts and other materials (both liquid and solid) were removed from the building.

During the 1991 removal action, the NHDES assisted EPA with on-site activities. During the currently ongoing remedial investigation, the NHDES has provided document review, analytical services, public relations participation and field support.

Additionally, the New Hampshire Department of Public Health Services (NHDPHS) has assisted the federal Agency for Toxic

Substances and Disease Registry (ATSDR) in conducting a Public Health Assessment for the NHP Site which will soon be finalized. The draft was released on March 15, 1993, and public comments are currently being addressed.

III. Threat to Public Health, Welfare, or the Environment

Section 300.415(b)(2) of the NCP lists a number of factors for EPA to consider in determining whether a removal action is appropriate, including:

- (i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;
- (ii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- (v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- (viii) Other conditions:

These factors are triggered at the NHP Site in a number of ways. First, the release of hazardous substances from the building and the soils beneath the building appears to be the source of downgradient groundwater contamination. Volatiles and metals are present in the downgradient plume at levels in excess of federal and state drinking water standards, and thereby pose a potential threat to current and future users of the bedrock groundwater.

Second, the building roof has deteriorated to a point where precipitation enters the building in most areas. As a result, residual contamination is continually released to the soils beneath the building through a series of open trenches. The precipitation may also be causing contamination to leach out of the building and soils into the groundwater. The overall building condition is one of continuing deterioration and is currently considered unsafe to trespassers (such as children).

These Site conditions demonstrate that there is a continuing release and migration of hazardous substances from the source area (building and soils beneath) to offsite groundwater. This release of hazardous substances has resulted in elevated concentrations of several contaminants including arsenic, chromium, lead, cyanide, TCE and PCE in the soils and groundwater

beneath the building at levels which may present a risk to exposed populations. Comprehensive characterization of this risk is impeded by the present condition of the building.

Consequently, based upon the NCP factors listed above, a potential threat exists to public health or welfare or the environment. A removal action is therefore appropriate to abate, prevent, minimize, stabilize, mitigate, or eliminate such threat(s). In particular, a removal action is necessary to (1) control and contain the release of hazardous substances from the building and soils beneath the building and (2) to assure adequate security of the building to prevent access.

This removal action is designated as non-time critical because more than six months planning time is available before on-site activities must be initiated. As a result, EPA is required to complete an engineering evaluation/cost analysis (EE/CA) pursuant to 40 C.F.R. § 300.415(b)(4).

IV. Proposed Scope of EE/CA and Costs

A. Scope of EE/CA

The purpose of the EE/CA is to evaluate alternatives for source control response measures related to the building, and soils beneath the building, at the NHP Site. The EE/CA will consider alternatives which will meet the following removal action objectives:

- Prevent direct contact with and ingestion of contaminated soils and debris within the building;
- Prevent, to the extent practicable, the potential for water to contact contaminants within the building;
- Eliminate risks to potential trespassers by restricting access to the building;
- Facilitate characterization of the soils beneath the building.

Pursuant to EPA guidance on EE/CAs, alternatives will be evaluated based upon effectiveness, implementability, cost, and compliance with ARARs. It is anticipated that none of the alternatives for this non-time critical removal action will approach \$2 million.

B. Estimated Costs:

The EE/CA for the NHP Site will be developed by an EPA contractor under the Alternative Remedial Contract Strategy (ARCS). The selected contractor has recently prepared an EE/CA for another

Superfund Site in Region I and is currently conducting a Remedial Investigation for the NHP Site. The EPA contractor's experience in preparing the EE/CA and knowledge of the NHP Site should expedite the process and hold costs at a minimum.

Extramural costs associated with the preparation of an EE/CA for the NHP Site, including community relations activities and development of an Administrative Record, are expected to be less than \$30,000. Intramural costs for review of the EE/CA, preparation of the Action Memorandum, and related community relations activities should total about \$20,000.

Other Considerations

-- It is already known that elevated levels of contamination exist in the soils beneath the building and that residual contamination still remains within the building itself. Based on this preliminary information, the soils beneath the building need to be addressed as part of the ongoing Remedial Investigation in order to characterize and, if necessary, to contain or remediate the soils pending future remedial actions.

-- The building condition, particularly the roof, has deteriorated to the point where it is now a safety concern to trespassers who may enter the building.

-- There is a 6,000 gallon underground petroleum storage tank which may be leaking and should be sampled for mixed waste.

-- The State supports a SACM early action at the Site.

-- The citizens and local government strongly support demolition and removal of the building at the earliest opportunity.

-- The current schedule is to have a ROD for the Site signed by September 1994, with design completed by March 1996 and RA beginning in the summer of 1996. If a non-time critical removal action were initiated, an Action Memorandum could be issued in September 1993, with design completed by December 1993 and the action beginning early spring in 1994. A SACM early action could save two years in addressing the building and save at least several months in overall Site cleanup by allowing for the characterization of soils beneath the building prior to the ROD rather than during the remedial design phase.

VI. Regional Recommendation:

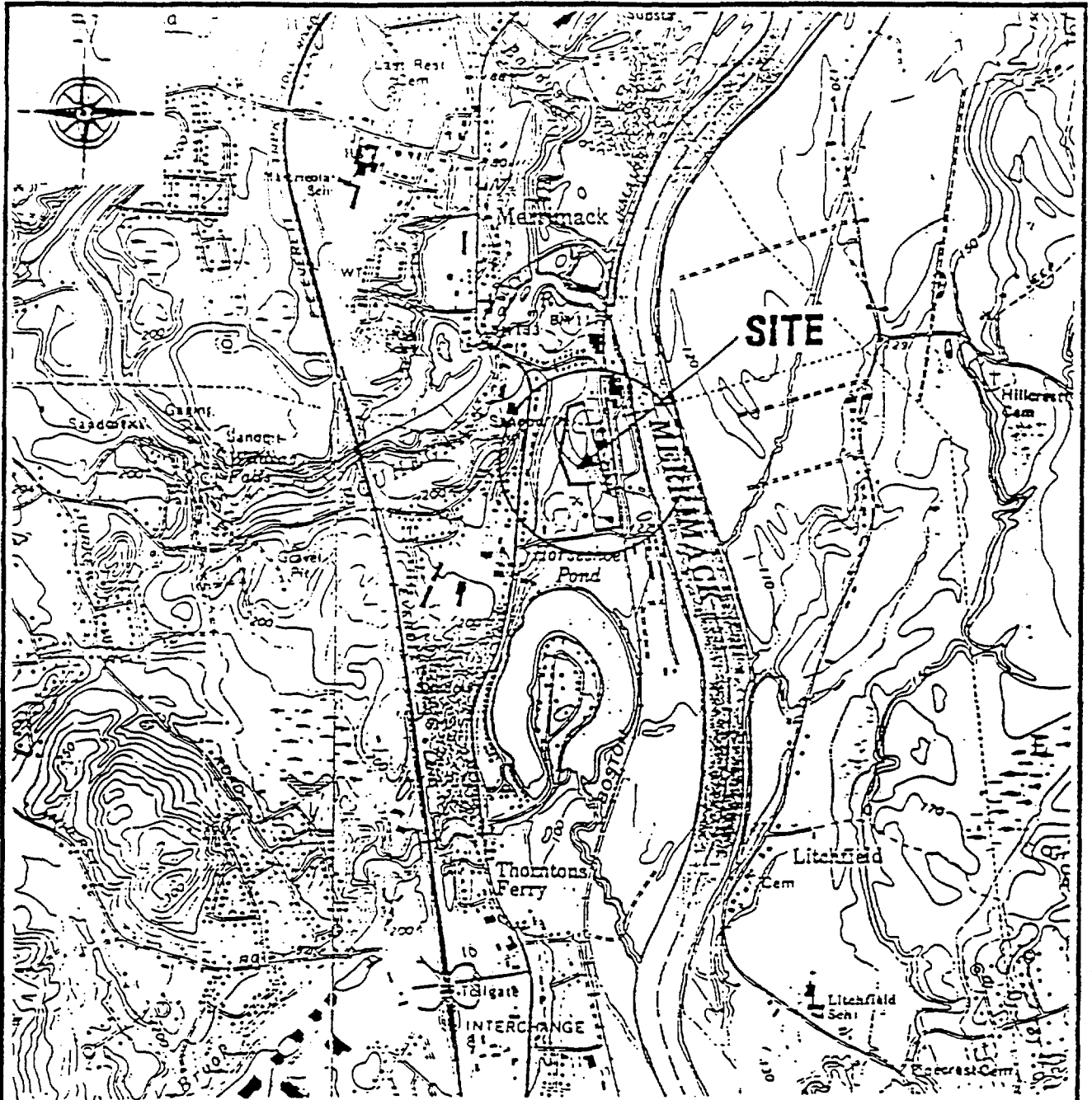
Ongoing investigations have determined that there has been a release of hazardous substances to the environment. Consistent with Section 104(b) of CERCLA, further investigation is necessary to plan and direct future response actions. We recommend your approval of the engineering evaluation/cost analysis (EE/CA) request. The estimated total cost of performing the EE/CA is \$50,000. You may indicate your approval or disapproval by signing below.

Approve: Paul Krupf

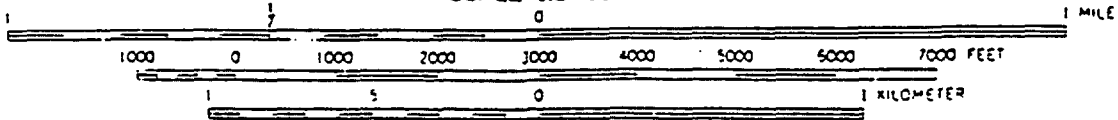
Date: 8-2-93

Disapprove: _____

Date: _____



SCALE 1:24 000

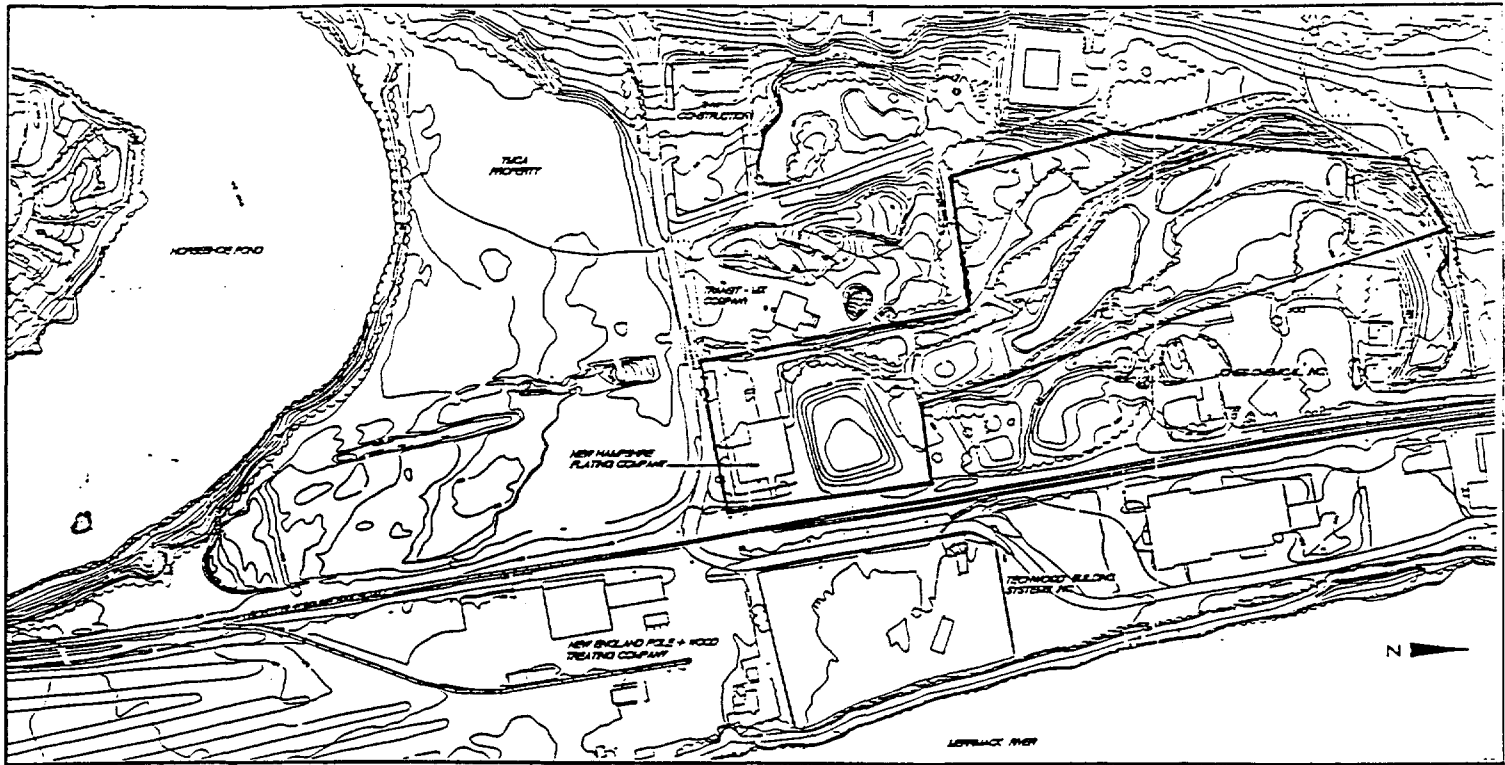


CONTOUR INTERVAL 10 FEET

SITE LOCATION MAP
NEW HAMPSHIRE PLATING COMPANY
MERRIMACK, NEW HAMPSHIRE



HALLIBURTON NUS
Environmental Corporation

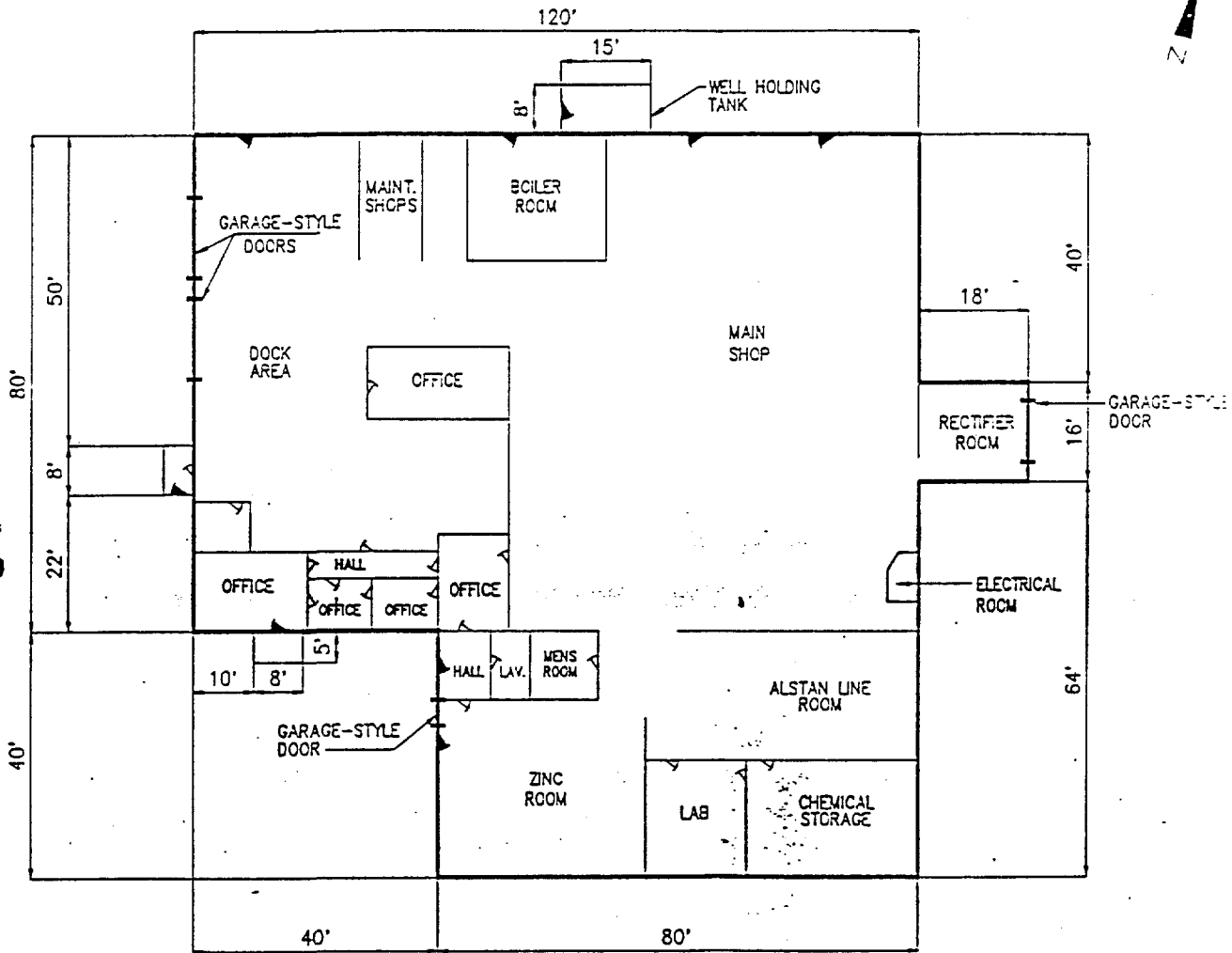


100' 200' 300' 400' 500' 600' 700' 800' 900' 1000'
 LEGEND
 POWER POLE
 TRAIL
 WAREHOUSE
 OPEN AREA
 BRIDGE
 BUILDING TRAIL
 TREE LINE
 LIGHT POLE
 FENCE
 ELEVATION SURFACE
 ELEVATION CONTROL
 LINE
 UNDESIGNED SITE BOUNDARY

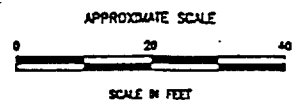
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FIGURE 2-2
 SITE MAP
 ENGINEERING EVALUATION/COST ANALYSIS REPORT
 NHPC SITE - MERRIMACK, NEW HAMPSHIRE

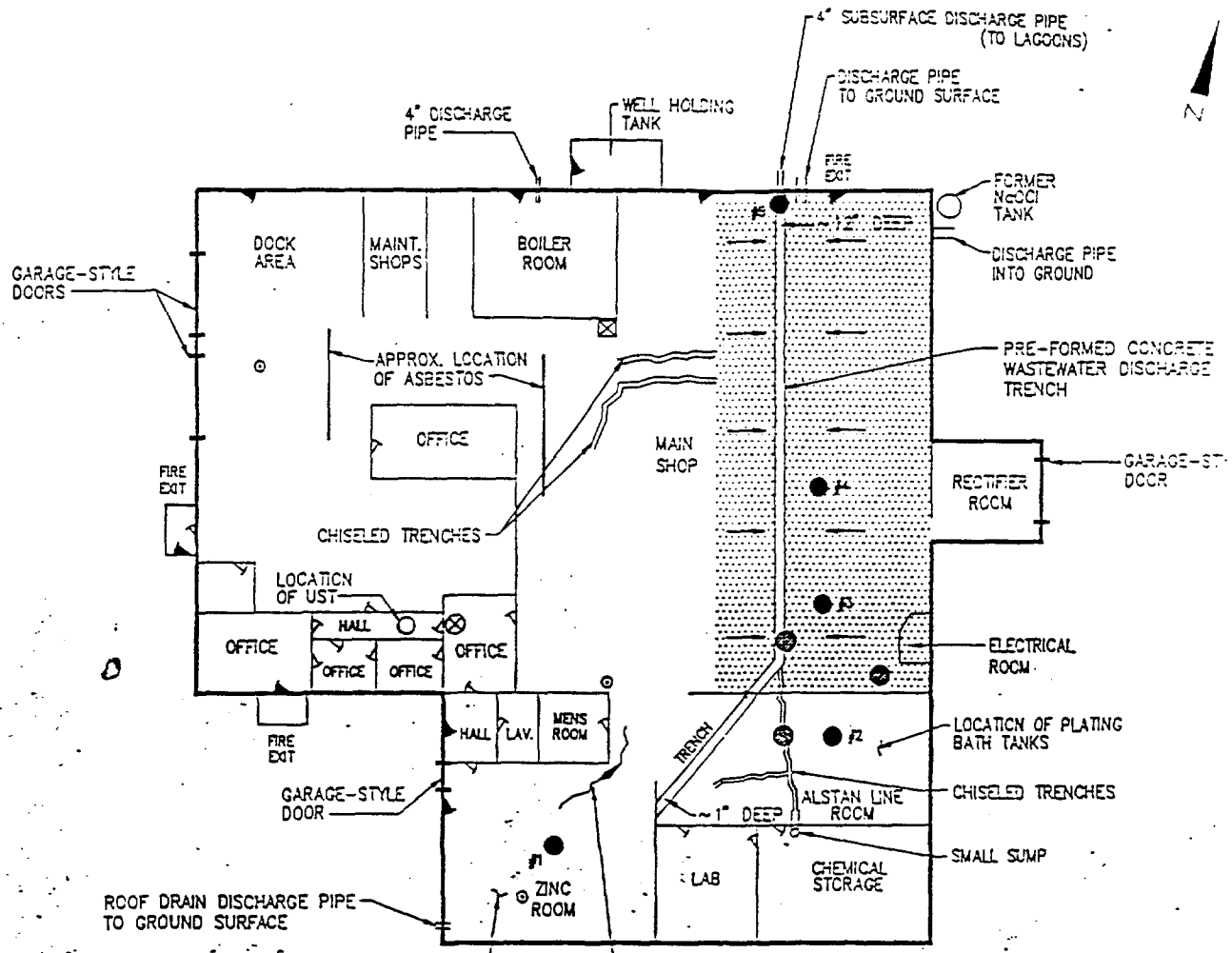
ATTACHMENT 4



LEGEND
 ▲ INTERIOR DOORS
 ▲ EXTERIOR DOORS



ATTACHMENT 5



LEGEND

- ▲ INTERIOR DOORS
 - △ EXTERIOR DOORS
 - ⊠ CIRCUIT BREAKERS
 - APPROX. LOCATION OF HOLE IN CEILING (ROOF DAMAGED BUT INTACT)
 - APPROX. LOCATION OF ROOF DRAIN OR VENT
 - ⊙ APPROX. LOCATION OF HOLES THROUGH CEILING AND ROOF
 - ⊗ SOIL SAMPLE CORE LOCATIONS (#1-#5)
 - MANHOLE ACCESS TO UST
 - ▨ CONCRETE FLOOR SLOPING TOWARD TRENCH (-4% SLOPE)
- NOTE: ALL LOCATIONS ARE APPROXIMATE



Superfund Program
Fact Sheet



*New Hampshire Plating Company Superfund Site
Merrimack, New Hampshire*

November 1993

**EPA PROPOSES ACTION TO MINIMIZE MIGRATION OF
CONTAMINATED GROUNDWATER AND TO REDUCE SOIL
CONTAMINATION AT THE NEW HAMPSHIRE PLATING COMPANY SITE**

INTRODUCTION

The Environmental Protection Agency (EPA) has prepared an Engineering Evaluation/Cost Analysis (EE/CA) to support selection of a proposed short-term action to address contamination at the New Hampshire Plating Company (NHPC) Superfund Site in Merrimack, New Hampshire. The objectives of this action, the alternatives considered to meet the objectives, and EPA's preferred alternative are described below.

Based on information developed as part of the Remedial Investigation (RI), currently underway for the NHPC Site, a portion of the contaminated groundwater is flowing south toward and possibly underneath Horseshoe Pond.

Public Information Meeting

New Hampshire Plating Superfund Site

Public Meeting at 7:00 pm and

Public Hearing at 8:00 pm

Monday, November 15, 1993

Courtroom at Town Hall

6 Baboosic Lake Road

Merrimack, New Hampshire

EPA will hold a public meeting to explain the preferred alternative identified in the EE/CA and a public hearing to accept public comment on the proposal.

The dilapidated NHPC building, and the soils and underground storage tank (UST) beneath the building, are potential continuing sources of contamination to soils and groundwater. As a result, EPA has performed an EE/CA to evaluate short-term actions to reduce these potential sources of contamination and to limit contaminant migration into soil and groundwater, while continuing the RI studies necessary for long-term comprehensive Site cleanup. The proposed short-term action is referred to as a non-time-critical removal action. While the proposed non-time-critical removal action will accelerate overall Site cleanup by containing and reducing a portion of the contamination, it does not alone constitute a complete cleanup plan for the Site. After the RI and Feasibility Study (FS) are completed, EPA anticipates that a final Site cleanup plan, detailed in a document called a Record of Decision (ROD), will be signed during the winter of 1994-1995. The final plan will define the level of contaminant reduction necessary for long-term human health and environmental protection, as well as outline the strategy to address the remaining contamination at the Site.

The objectives of the non-time-critical removal action are to:

- Prevent water from mobilizing contaminants inside and beneath the NHPC building
- Prevent direct human contact with, and the ingestion of, contaminated soils and debris from the building
- Characterize the soils beneath the building to facilitate the efficient performance of the long-term cleanup

ALTERNATIVES EVALUATED

EPA analyzed three alternatives in the EE/CA report. Alternative 1, the No Action alternative, consists of maintaining the existing physical barriers that restrict access to the building. Alternative 2 includes decontaminating the building and its contents, sampling and possibly decontaminating the UST, repairing the building roof, and maintaining the existing physical access barriers. Alternative 3 consists of decontaminating the building and its contents, demolishing the building and disposing of the building materials and stained contaminated soils offsite. The UST would then be sampled and possibly excavated and disposed offsite. The remaining soils beneath the former building location would then be sampled. A decision on cleanup of the soil will be made in the ROD. A temporary cover would be placed on the former building site.

Altern.	Alt. 1	Alt. 2	Alt. 3
Capital Cost	\$0	\$157,717	\$348,323
Annual O&M	\$19,990	\$19,990	\$2,350
Total Present Worth	\$52,460	\$210,177	\$354,490
Time to Complete	--	45 days	40 days

EPA'S PREFERRED ALTERNATIVE

Based on the evaluation described in the EE/CA report, EPA's preferred alternative is Alternative 3, which involves:

- Decontaminating the equipment and the NHPC building
- Dismantling and disposing offsite the NHPC building, its contents, and potentially the underground storage tank
- Excavating and disposing offsite the stained contaminated soils beneath the NHPC building
- Sampling the remaining contaminated soils beneath the building to facilitate the performance of the on-going RI activities

EPA has determined that Alternative 3 best satisfies all of the objectives of the proposed non-time-critical removal action.

THE PUBLIC'S ROLE IN EVALUATING ALTERNATIVES

Public Comment Period

EPA is soliciting public comment on this proposed action and the technical alternatives evaluated in the EE/CA. EPA will conduct a 30-day public comment period, from November 3, 1993, through December 2, 1993, to provide an opportunity for public involvement in selecting the short-term action. During that period, EPA will conduct a public meeting to explain the EE/CA and the preferred alternative and an informal public hearing to accept oral comments on the cleanup alternatives. Both events are scheduled for the evening of Monday, November 15, 1993 at the Town Hall Courtroom, 6 Baboosic Lake Road in Merrimack. The public meeting will begin at 7:00 p.m.; the public hearing will commence no earlier than 8:00 p.m. The hearing will be transcribed; a copy of the transcript will be added to the Administrative Record for this action available at the Information Repositories.

EPA will also accept written comments on the EE/CA. They may be delivered to EPA at the public hearing or be mailed (postmarked no later than December 2, 1993), addressed to James Di Lorenzo, Remedial Project Manager, U.S. EPA, Region I, JFK Federal Building (HSN-CAN5), Boston, Massachusetts 02203; (617) 223-5510.

EPA will review all public comments as part of the process of reaching a final decision on the selected alternative for the non-time-critical removal action. The final decision for conducting this removal activity will be announced in an Action Memorandum, anticipated in December, 1993. Concurrently, EPA will issue a Responsiveness Summary responding to comments received during the public comment period. Both the Action Memorandum and the Responsiveness Summary will become part of the Administrative Record.

Additional Public Information

The public is encouraged to consult the Site Administrative Record, which contains the EE/CA and other materials relating to this action. These documents provide a detailed description of the Site and all the alternatives considered.

The Administrative Record for this action will be available during the public comment period at the following Site Information Repositories:

Merrimack Public Library
470 Daniel Webster Highway
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Contact: Jim Kyed

Hours: M-F 10:00am-1:00pm
2:00pm-5:00pm

If you have questions about the EE/CA or would like more information, please call or write:

James Di Lorenzo (HSN-CAN5)
Remedial Project Manager
Waste Management Division
US EPA
JFK Federal Building
Boston, MA 02203
(617) 223-5510

or

Corrinne Van Alstine (REA)
Community Involvement Coordinator
Office of External Affairs
US EPA
JFK Federal Building
Boston, MA 02203
(617) 565-2428

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If you or someone you know would like to be added to (or deleted from) the New Hampshire Plating Company Superfund Site mailing list, please fill out and mail this form to:

Corrinne Van Alstine
Community Involvement Coordinator
U.S. Environmental Protection Agency
JFK Federal Building (REA)
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RESPONSIVENESS SUMMARY

NON-TIME-CRITICAL REMOVAL ACTION

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

**NEW HAMPSHIRE PLATING SUPERFUND SITE
MERRIMACK, NEW HAMPSHIRE**

**Halliburton NUS Environmental Corporation
and
Badger Engineers, Inc.**

EPA Work Assignment No. 33-1LG1

EPA Contract No. 68-W8-0117

HNUS Project No. 0772

December 1993



HALLIBURTON NUS
Environmental Corporation

RESPONSIVENESS SUMMARY

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- B. TRANSCRIPT OF THE NOVEMBER 15, 1993 INFORMAL PUBLIC HEARING
- C. COMPLETE TEXT OF COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD

PREFACE

The U. S. Environmental Protection Agency (EPA) held a 30-day public comment period, from November 3, 1993 to December 2, 1993, to provide an opportunity for interested parties to comment on EPA's Preferred Alternative for the conduct of a Non-Time-Critical Removal Action (NTCRA) at the New Hampshire Plating Company (NHPC) Superfund Site in Merrimack, New Hampshire. The Preferred Alternative was selected after EPA developed an Engineering Evaluation/Cost Analysis (EE/CA) that scrutinized various options for addressing groundwater contamination resulting from contamination under and around the NHPC building. EPA identified its preliminary recommendation of a Preferred Alternative for an interim Site cleanup in a Fact Sheet, issued in November 1993, at the start of the NHPC public comment period. On the evening of November 15, 1993, EPA conducted a public meeting to discuss the EE/CA and the Preferred Alternative. Later that same evening EPA held an informal public hearing at which eight commenters spoke. Ten commenters responded during the public comment period, two of whom responded both in writing and 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. EPA has considered all of the comments summarized in this document before selecting an interim removal action to address soil contamination under and near the NHPC building in Merrimack, New Hampshire.

The Responsiveness Summary is divided into the following sections:

Section I. Overview. This section discusses the Site history, outlines the objectives of the NTCRA, identifies the treatment alternatives evaluated in the EE/CA, and identifies and summarizes general reaction to EPA's Preferred Alternative.

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

Section III. Comments Received During the Public Comment Period and EPA's Response to those Comments. Each written and oral comment from the public and interested parties on the EE/CA and NTCRA are repeated and responded to directly.

ATTACHMENT A - This attachment provides a list of the community relations activities that EPA has conducted for the NTCRA at the NHPC Site.

ATTACHMENT B - This attachment is the transcript of the November 15, 1993, informal public hearing held in Merrimack, NH.

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

I. OVERVIEW

The NHPC Superfund Site is located on Wright Avenue in Merrimack, New Hampshire, a community midway between Nashua and Manchester. The NHPC Site is a 13.1 acre lot where NHPC provided electroplating services to local industries from 1962 to 1985. Plating process wastes, including metals and organic solvents, were disposed by discharging to unlined trenches in the building's concrete floor which directed wastes through a discharge pipe to four lagoons in a wetland behind the building.

In the early 1980s, the New Hampshire Department of Environmental Services and EPA began attempts to regulate NHPC's hazardous waste disposal activities under the Resource Conservation and Recovery Act (RCRA). The State issued a Notice of Violations and Order of Abatement in which New Hampshire Plating was required to treat its wastes prior to discharge into the lagoons. NHPC ceased operations in 1985 because it was unable to meet the financial assurance provisions of RCRA and continue to pursue the field investigation necessary to determine the nature and extent of the contamination it caused.

In 1987, a contractor for the State stabilized the plating waste in the lagoon system with lime and a sodium hypochlorite solution; removed debris, drums, and plating tank liquids; and conducted a limited decontamination of the NHPC building. The EPA emergency removal action, conducted from 1989 to 1991, confirmed that a number of volatile organic compounds (VOCs) including trichloroethylene (TCE) and 1,1,1-trichloroethane (1,1,1-TCA); inorganics (metals) such as arsenic, cadmium, chromium, lead, zinc; and cyanide were present in the lagoon system. Since these contaminants were detected in monitoring wells on and around the Site, in July 1991, EPA proposed to add the Site to its National Priorities List (NPL), making it eligible for funds for long-term cleanup. Final NPL listing occurred in October 1992. EPA is currently conducting a Remedial Investigation (RI)/Feasibility Study (FS) to determine how best to address the remaining contamination on and under the Site.

Based on information developed as part of the on-going Remedial Investigation, a portion of the contaminated groundwater is flowing south toward and possibly underneath Horseshoe Pond. The dilapidated NHPC building (particularly the holes in the roof), and the contaminated underlying soils resulting from the use of unlined trenches for waste disposal are potential continuing sources of contamination to soils and groundwater. As a result, EPA has prepared an Engineering Evaluation/Cost Analysis (EE/CA) to support selection of a short-term action, referred to as a Non-Time-Critical Removal Action (NTCRA), which allows EPA to spotlight and

address portions of Superfund sites that lend themselves to short-term cleanup approaches. The goal of the proposed NTCRA is to reduce these sources of contamination thereby limiting contaminant migration into underlying soil and groundwater, while continuing the RI studies necessary for long-term comprehensive Site cleanup.

The objectives of the NTCRA are to: 1. prevent the potential for water (precipitation) to contact contaminants within and beneath the building, causing migration of contamination to groundwater and underlying soils; 2. prevent direct human contact with and accidental ingestion of contaminated soils and debris; and 3. facilitate characterization of the soils beneath the building which will contribute to the efficient performance of anticipated long-term remedial actions.

Based on these objectives, EPA developed and evaluated removal alternatives to address the NHPC building area. The removal alternatives which were evaluated in the EE/CA report are described briefly below.

A. NTCRA Alternatives

Based on the results of the EE/CA, EPA's Preferred Alternative is Alternative 3, which includes the following components as the most effective for addressing the area in and beneath the NHPC building:

- Decontaminating the equipment and the NHPC building
- Dismantling and disposing off-site the NHPC building, its contents, and sampling and potentially removing the underground storage tank
- Excavating and disposing offsite of stained contaminated soils beneath the NHPC building
- Sampling the remaining contaminated soils beneath the building to facilitate the performance of the on-going remedial activities
- Placing a temporary cover over the former building location until a decision is made about how to clean up the entire Site

EPA identified general response actions that might be taken to satisfy the objectives detailed above. The general response actions include: no action, which serves as a comparative baseline; limited actions which restrict access or limit potential exposure to contaminants; in-place treatment (decontamination) of the building interior to reduce or mitigate exposure potential and pathways; and treatment, demolition, and disposal of equipment and the building. Based on these general response actions, EPA identified the three specific alternatives evaluated in the EE/CA:

1. No Action
2. Building and Equipment Decontamination, Limited Off-Site Disposal of Materials, and Repair of the Roof
3. Building and Equipment Decontamination, Demolition, and Off-Site Disposal

Implementation of Alternative 3 would prevent the continuing migration of contaminants to groundwater and underlying soil by removing the source of contamination within the NHPC building. Alternative 3 would prevent human exposure to the contamination by removing the building and stained soils and placing a temporary cover over the former building location. Finally, Alternative 3 would facilitate the remedial effort to characterize the soils beneath the building by removing and disposing the structure off-site. Alternative 3 is the only one of the three alternatives evaluated in the EE/CA which meets all of EPA's identified objectives of the NTCRA. EPA has selected its Preferred Alternative, Alternative 3, to be implemented.

B. General Reaction to the Preferred Alternative

There is nearly unanimous support for selection of the Preferred Alternative. Each of the eight people who testified at the public hearing indicated support for Alternative 3, the Preferred Alternative. Written comments from two of the eight people who spoke at the public hearing were received during the public comment period.

II. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

The level of community concern about the Site was highest in 1990 and 1991, toward the end of the emergency removal action, when Town officials learned that waste would remain stored on-site indefinitely.

In March 1993, the Agency for Toxic Substances and Disease Registry (ATSDR), a branch of the U. S. Public Health Service, issued a draft Public Health Assessment, a document that evaluates data and information on the release of contaminants from the Site to assess any current or future impact on public health. ATSDR anticipates releasing the final Health Assessment early in 1994. That document and responses to comments on the draft will be included in the Assessment's Administrative Record.

As a result of these activities, the themes that were prevalent during the interviews for the Community Relations Plan included the credibility of the federal bureaucracy; public health issues (including the NHPC building itself), future uses for the NHPC Site, contamination from other sites, and water supply quality.

Implementation of the NTCRA will address the first two of these concerns: by decontaminating, dismantling, and disposing the NHPC building off-site, the public's concern about its safety and public health implications will be reduced. In addition, the fact that tangible progress has been made to remove a source of contamination should enhance the credibility of EPA officials.

III. COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA'S RESPONSE TO THOSE COMMENTS

Eight people testified at the public hearing, all indicating support for Alternative 3, the Preferred Alternative. Two of these individuals, on behalf of their respective Town boards, also forwarded written statements in support of Alternative 3.

Those testifying at the hearing did not provide lengthy speeches but specifically indicated support for Alternative 3. A copy of the transcript of the hearing is attached as Appendix B.

The two written comments received were from the Merrimack Board of Selectmen and from the Merrimack Conservation Commission.

The Board of Selectmen confirmed their support for Alternative 3 offered by Selectman Silva at the public hearing. The Conservation Commission formalized the support Mr. Kirby provided at the public hearing but offered three concerns.

Comment: The Board of Selectmen also encouraged any activities which would lead to expedite the remediation of the Site.

EPA response: EPA will endeavor to complete the proposed NTCRA in a timely manner.

Comment: The Board of Selectmen is anxiously awaiting the results of the fish tissue studies EPA conducted at Horseshoe Pond.

EPA response: As indicated at the November 15, 1993 public meeting by Mr. Richard Goehlert, the EPA Remedial Project Manager, the results will be provided to the NH DES and the Merrimack Health Agent for distribution once all analytical results have been reviewed to ensure that quality control criteria (accuracy, precision, completeness, etc.) have been met.

Comment: The Conservation Commission expressed concern that removal activities may aggravate the migration of subsurface and groundwater contamination. The Commission requested that EPA ensure that a temporary cap or lining be installed over the former building location to reduce the threat.

EPA response: As stated at the November 15, 1993 public meeting, and as described in the EE/CA report, a temporary cover would be installed once the building has been demolished and removed, and a

round of soil samples has been conducted to characterize contaminant presence.

Comment: The Commission requested that EPA install monitoring wells in and around the location of the former underground storage tank as part of its overall groundwater investigation.

EPA response: Monitoring well locations will be considered in the Remedial Investigation. Placement of a monitoring well within the area of the former underground storage tank needs to be considered carefully. The goal is to avoid accidental contaminant migration as the result of aggressive drilling techniques.

Comment: The Commission requests that EPA instruct Halliburton NUS/Badger Engineers to consult with the State Water Supply and Pollution Control Division to obtain information about their experiences with characterizing, excavating, transporting, and treating petroleum-contaminated soils.

EPA response: As presented at the November 15, 1993 public meeting and in the EE/CA report, once the contents of the underground storage tank sludge and underlying soils have been analyzed and characterized, decisions will be made as to whether the NH DES or the EPA will have the authority to address the underground storage tank and contaminated soils.

If the underground storage tank sludge and soils contain only petroleum products, then the NH DES will perform the necessary actions, including characterization, excavation, transport, and disposal. If the underground storage tank sludge and soils contain other contaminants in addition to the petroleum products, then these materials may be considered a mixed waste and will be addressed by EPA as part of the NTCRA. Applicable waste removal and disposal regulations will be followed. Experienced personnel or contractors will be employed for a safe and efficient removal.

ATTACHMENT A

COMMUNITY RELATIONS ACTIVITIES CONDUCTED AT THE NEPC
SUPERFUND SITE IN MERRIMACK, NEW HAMPSHIRE

COMMUNITY RELATIONS ACTIVITIES CONDUCTED AT THE NHPC
SUPERFUND SITE IN MERRIMACK, NEW HAMPSHIRE

Community relations activities conducted at the NHPC Site relevant to the Non-Time-Critical Removal Action include:

- EPA conducted local interviews to assist in developing a Community Relations Plan (April/May 1993).
- EPA issued the NHPC Community Relations Plan (July 1993).
- EPA published notices in early November 1993 in the Nashua Telegraph, Union Leader, Village Crier, and Bedford-Merrimack Bulletin announcing the establishment of the Administrative Record for the NTCRA and the date of the public meeting and public hearing to discuss the NTCRA preferred alternative and solicit public comment on the preferred alternative.
- EPA released a fact sheet, dated November 1993, discussing the EE/CA and its preferred alternative for the NTCRA.
- EPA conducted a public meeting to discuss the Preferred Alternative and a public hearing to solicit public comment on the Preferred Alternative. Both activities were held on November 15, 1993. Twenty-six people signed the sign-in sheet; eight people testified during the public hearing. A copy of the hearing transcript is included in the Administrative Record at the Information Repositories at the Merrimack Public Library and at the EPA Records Center.
- EPA conducted a public comment period from November 3 through December 2, 1993. Two people submitted written comments.

ATTACHEMENT B

TRANSCRIPT OF THE NOVEMBER 15, 1993 INFORMAL PUBLIC HEARING

NEW HAMPSHIRE PLATING COMPANY
EPA ENGINEERING EVALUATION COST
ANALYSIS

Public Hearing held November 15, 1993, at the Town Hall, Baboosic Lake Road, Merrimack, New Hampshire, commencing at 8:12 p.m. and ending at 8:30 p.m. Moderated by Mr. Richard Goehlert.

LEGAL DEPOSITION SERVICE
31 STORES STREET, CONCORD, NEW HAMPSHIRE 03301
(603)225-4301
ROBERTA A. METALIOUS, TRANSCRIBER

1 MR. GOEHLERT: Let me ask the stenographer if she's
2 all set. You're all set? They are
3 using a recorder to record the
4 statements as well as my statement so
5 I would ask that you just come up here
6 and these microphones will pick it up
7 and then everybody else can hear also,
8 because if you came up here and faced
9 this way, you might not be able to
10 hear. Good evening. I've got to say
11 this for the record so you're going to
12 get some of the same things that I
13 said before. We don't normally hold a
14 public meeting and a hearing in the
15 same night, but this was an unusual
16 circumstance and we're trying to do
17 this not only because it saves us
18 money and time, but we believe that we
19 have read the sense of the Town and
20 the community. If you have a public
21 meeting and then come out a month
22 later or three weeks later and have a
23 public meeting, it's sort of a waste
24 of your tax dollars and mine and a

1 waste of your time. So I think we
 2 were correct in doing that. Good
 3 evening, ladies and gentlemen. My
 4 name is Richard Goehlers. I'm the
 5 remedial project manager in the New
 6 Hampshire Waste Management Branch, the
 7 New Hampshire Superfund section, and I
 8 and Jim Di Lorenzo are responsible for
 9 this site, the New Hampshire Plating
 10 Site. I work for the United States
 11 Environmental Protection Agency in
 12 Region I in Boston. I will serve as
 13 chairman of this hearing. Also
 14 present tonight and on this panel are
 15 Jim Di Lorenzo. He is the EPA site
 16 manager and Mike Robinette. He is the
 17 New Hampshire Department of
 18 Environmental Services site manager,
 19 my counterpart and Jim's counterpart
 20 in the Waste Management Engineering
 21 Bureau. The purpose of this hearing
 22 is to formally accept your comments on
 23 the New Hampshire Plating Engineering
 24 Evaluation/Cost Analysis, also known

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as an EE/CA. The EPA conducted a public information meeting right here on the EE/CA earlier this evening. We are here to accept comments on the preferred alternative for the removal of the building at the New Hampshire Plating site. The comment period began on November 3, 1993, and will end on December 2, 1993. Before beginning, I'd like to describe to you the format for the hearing. Essentially, the evening will be structured as follows: first, Jim Di Lorenzo will give a brief overview of the EE/CA and the preferred alternative. Following his presentation, we will accept any oral comments you may wish to make for the record. Those of you wishing to comment, should have already indicated your desire to do so by filling out the index cards available from the EPA representatives. Also available, if you don't already have one, are copies

1 of the fact sheet for the site. If
2 you've not completed a card and wish
3 to comment, please do so now or at any
4 time during the course of the hearing.
5 Does anyone need a card? After Jim's
6 presentation I will call on those of
7 you wishing to make a statement in the
8 order which you signed this evening,
9 unless you have indicated a need to
10 speak earlier. I think Jim's
11 presentation will be fairly brief, so
12 I don't think we've had any requests
13 on that. I ask that you give your
14 comments for tonight's hearing on the
15 proposal that addresses the building.
16 Your comments should only address the
17 removal of the building tonight. When
18 called on, I ask that you come to the
19 front and identify yourself. The
20 microphones will then be able to pick
21 up your voice and the members of the
22 audience would also be able to hear
23 your statement. If anybody wishes to
24 speak longer than fifteen minutes, I'd

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ask that you summarize what you have
and then place something in the
written record. The text of this
hearing and any written comments
submitted during the official comment
period will be transcribed and will
become part of not only the hearing
record, but the Responsiveness
Summary, which will be placed in the
Administrative Record. Following your
comment, I or a member of this panel
will have an opportunity to ask a
clarifying question if necessary
regarding your comment so that it may
assist us in considering your
statement. After all comments have
been heard, I will close the formal
hearing. If you wish to submit
written comments--and I encourage
anybody who wishes to do so, to please
do so--they must be postmarked no
later than December 2, 1993, and
mailed to our office in Boston. The
appropriate address can be found on

1 page three of the fact sheet and the
2 person that it should be addressed to
3 is Mr. Di Lorenzo. At the conclusion
4 of the hearing, please see any of us
5 up here. We will be glad to answer
6 any questions you have or any
7 questions about the process of making
8 written statements. All oral comments
9 we receive tonight and those we
10 receive in writing during the comment
11 period will be responded to in the
12 Responsiveness Summary as I said. The
13 summary will be included in a decision
14 document. That decision document is
15 known as an Action Memorandum that EPA
16 prepares at the conclusion of the
17 comment period and it is that decision
18 document which will allow us to act
19 and take action. Again, I encourage
20 each of you wishing to comment to do
21 so now or in writing before December
22 2nd. Jim will now present a brief
23 overview of the EE/CA.
24 MR. Di LORENZO: Thanks, Dick. Good evening. As Dick

1 said, my name is Jim Di Lorenzo and
2 it's kind of deja vu right now, but
3 for the benefit of those of you who
4 came in late, I'll briefly go through
5 what I discussed earlier at the 7:00
6 public meeting. Basically, the
7 Engineering Evaluation/Cost Analysis,
8 or EE/CA as just referred to, which is
9 this document right here, which is the
10 subject of tonight's meeting and
11 hearing, is associated with dealing
12 with contamination in the building and
13 in the building area of the New
14 Hampshire Plating Site and that's the
15 sole purpose of tonight's hearing.
16 The EE/CA is used to evaluate
17 alternatives to address that
18 contamination and the alternatives
19 were evaluated as follows:
20 Alternative one is what is more
21 commonly referred to as a "no action
22 alternative". It essentially deals
23 with the physical barriers that are at
24 the site, which would remain in

1 place--the fence around the site, the
2 boarding of the exits to the building
3 to keep kids and the public in general
4 out of the building and for public
5 safety those would remain in place and
6 we would maintain them. Under
7 alternative two, we would
8 decontaminate the interior of the
9 building and any of the contents
10 remaining in the building. We would
11 sample and, as discussed earlier, we
12 would possibly remove the underground
13 storage tank or close it in place, if
14 it's determined that it contains
15 contamination other than pure
16 petroleum product because of the
17 Petroleum Exclusion Act. Thirdly, we
18 would repair the building roof to
19 eliminate the continuing infiltration
20 of precipitation into the building,
21 which we believe is causing additional
22 migration of contamination to the
23 groundwater, so that would eliminate
24 that and then maintain the existing

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physical barriers. Along with that, we would monitor any wells around the building on a continual basis and maintain the existing physical barriers until such a time as a final decision is made on the site in the Record of Decision, which would at that point address whether or not further action is necessary on the building. And then the third alternative, which the EPA is proposing tonight, is to decontaminate the building and its contents, such as in alternative two, but additionally to demolish the building and dispose of the building material and any visibly stained soil, which we know is contaminated, at an off-site licensed facility. Additionally, the underground storage tank would be sampled and then it would be excavated either by EPA if it's determined to have contamination other than petroleum product, or if it has pure

1 petroleum product, it would be
2 excavated by the New Hampshire
3 Department of Environmental Services.
4 So one way or another, the underground
5 storage tank would most likely come
6 off site. Thirdly, the remaining
7 soils, the soils that aren't stained,
8 would then be sampled and
9 characterized as part of the EPA's on-
10 going remedial investigation for the
11 overall site and then once that's done
12 a temporary cover will be placed over
13 the former building area to eliminate
14 groundwater...to eliminate rain water
15 infiltration and to protect anyone who
16 may enter the site from coming in
17 contact with potentially contaminated
18 soils. That's the scope of the
19 alternative we're proposing tonight.
20 SPEAKER: Could you push it up? [Referring to
21 overhead graphic.] I'm sorry, we
22 moved the machine and so we can't see
23 the bottom of it.
24 MR. Di LORENZO: Oh, I'm sorry. And that's what we're

1 here to take comment on tonight. So
2 without any further ado, I think we'll
3 ask people to make comments in the
4 order that we received them. Thank
5 you.

6 MR. GOEHLERT: We will now begin accepting comments
7 from the audience and I'd like to call
8 on Mr. Silva, a selectman from the
9 Town of Merrimack.

10 MR. SILVA: Thank you, Dick. My name is Ed Silva
11 and I'm one of the selectmen of the
12 Town of Merrimack and the Board of
13 Selectmen would like to go on record
14 as supporting the EPA's preferred
15 alternative number three and that's as
16 it was presented here this evening--
17 removing of the building, any
18 equipment...decontaminate any
19 equipment that's at the site, and
20 disposing of any stained contaminated
21 soils beneath the building and
22 sampling the remaining contaminated
23 soils beneath the building to
24 facilitate the performance of the on-

1 going activities that are at the site.

2 MR. GOEHLERT: Does anyone on the panel have

3 questions? All right. I would now

4 like to call on Mr. Anderson of Island

5 Drive in Merrimack.

6 MR. ANDERSON: My name is Robert Anderson. I would

7 like to go record as supporting

8 alternative three, removal of the

9 building. Thank you.

10 MR. Di LORENZO: Thank you.

11 MR. GOEHLERT: Thank you, Mr. Anderson. I would now

12 like to call on Mr. Kirby.

13 MR. KIRBY: My name is Gregory Kirby and I

14 represent the Merrimack Conservation

15 Commission for the Town and I would

16 like to go on record to say that we

17 will be filing formal written comments

18 once we've summarized the meeting at

19 our next hearing.

20 MR. Di LORENZO: Thank you.

21 MR. GOEHLERT: Thank you, Mr. Kirby. Do you have any

22 questions, panel? Mr. Stewart.

23 MR. STEWART: My name is Ron Stewart and I'd like to

24 go on record in support of alternative

1 three with the continued monitoring of
2 the contaminants until we're sure that
3 all the risks are removed to the
4 residents in the area.

5 MR. GOEHLERT: Thank you, Mr. Stewart. The last card
6 I have is Mr. Turcotte.

7 MR. TURCOTTE: Phil Turcotte, Island Drive. I'd like
8 to go on record as supporting
9 alternative three. It just seems to
10 me that to leave a potential source of
11 contamination there would be kind of
12 the same thing as sitting in your
13 living room watching a dead tree
14 waiting for it...wondering when it's
15 going to come down on your roof.

16 MR. GOEHLERT: Well put, Mr. Turcotte. Does anyone
17 else wish to make a comment? Mr.
18 Mulligan?

19 MR. MILLIGAN: Milligan.

20 MR. GOEHLERT: Milligan. I'm sorry. I need reading
21 glasses.

22 MR. MILLIGAN: I should have put in a card. I don't
23 write very well. My name is
24 Representative Robert Milligan from

1 Merrimack. I'd like to go on record
 2 as supporting alternative three and I
 3 have one question. What does a
 4 temporary cover do? What
 5 happens...what...you used the word
 6 temporary. What does a temporary
 7 cover do?

8 MR. Di LORENZO: The sole purpose of the temporary
 9 cover is to prevent precipitation from
 10 infiltrating the area and to prevent
 11 anyone, you know, such as kids, who
 12 would most likely possibly transverse
 13 the site, from coming in contact with
 14 that soil. That temporary cover would
 15 remain until a final determination on
 16 the overall site is made. We don't
 17 know how contaminated the soils are
 18 until we get the building down and
 19 adequately sample them, so the
 20 temporary cover will be put in place
 21 until we determine if the soils need
 22 to be remediated or not.

23 MR. MILLIGAN: And once this remediation is done or
 24 anything, then the...there will be no

1 danger to life or limb of anybody, is
2 that correct? You people will make
3 sure of that?

4 MR. DI LORENZO: That's the intent.

5 MR. MILLIGAN: Thank you.

6 MR. DI LORENZO: Thank you.

7 MR. GOEHLERT: Thank you, Mr. Milligan. Yes, Ma'am?

8 MS. FRENCH: I'm Norma French, Island Drive. I
9 also would like to have on record that
10 I support number three.

11 MR. GOEHLERT: Ms. French, thank you. Is there
12 anybody else who'd like to make a
13 comment? Yes, sir.

14 MR. KNOWLTON: I'm Ken Knowlton. I live at Horseshoe
15 Pond Condo. I want to support
16 alternative number three. It's not
17 just an Island Drive issue. This is a
18 Horseshoe Pond and Merrimack issue.

19 MR. DI LORENZO: Thank you.

20 MR. GOEHLERT: Thank you, Mr. Knowlton. Is there
21 anybody else who'd like to make a
22 comment? I would like to thank you
23 all for your participation this
24 evening and with that I hereby declare

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2
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this hearing closed and if anybody has
any more questions, please come up.

HEARING CLOSED

LEGAL DEPOSITION SERVICE

31 STORRS STREET, CONCORD, NEW HAMPSHIRE 03301

(603)225-4301

ROBERTA A. METALIOUS, TRANSCRIBER

STATE OF NEW HAMPSHIRE
MERRIMACK, SS.

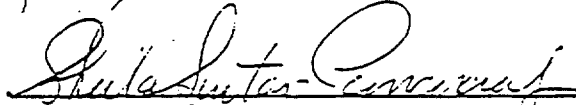
I, Roberta A. Metalious, do hereby certify that I transcribed from a tape recording, the foregoing 16 pages and that the same is a true, full and correct transcript of all of the testimony at the hearing, to the best of my knowledge and belief.

I further certify that I am neither attorney nor counsel for, nor related to or employed by any of the parties to the action in which this hearing was taken, and further that I am not a relative or employee of any attorney or counsel employed in this case, nor am I financially interested in this action.

IN WITNESS WHEREOF, I have hereunto set my hand this 17th day of November 1993.



Roberta A. Metalious



Sheila Santas-Cassavaugh
Justice of the Peace/Notary Public

LEGAL DEPOSITION SERVICE
31 STORES STREET, CONCORD, NEW HAMPSHIRE 03301
(603)225-4301
ROBERTA A. METALIOUS, TRANSCRIBER

ATTACHEMENT C

COMPLETE TEXT OF COMMENTS RECEIVED DURING THE
PUBLIC COMMENT PERIOD



Town of Merrimack, New Hampshire

TOWN HALL
P.O. Box 940
Merrimack, New Hampshire 03054

6 Baboosic Lake Road
TEL: 603/424-2337
FAX: 603/424-1760

November 17, 1993

James Di Lorenzo (HSN-CANS)
Remedial Project Manager
Waste Management Division
U.S. Environmental Protection Agency
JFK Federal Building
Boston, MA 02203

RE: New Hampshire Plating Site

Dear Mr. Di Lorenzo:

On behalf of the Town of Merrimack, we would like to take this opportunity to comment on your agency's preferred alternative.

As articulated by Selectman Silva at the hearing, the Board of Selectmen fully supports EPA's preferred Alternative 3 which includes:

- 1) Decontaminating the equipment and the NHPC building.
- 2) Dismantling and disposing offsite the NHPC building, its contents and the underground storage tank. We understand the tank would be removed via the CERCLA program or the State UST program depending upon its contents.
- 3) Excavating and disposing offsite the stained contaminated soils beneath the NHPC building.
- 4) Sampling the remaining contaminated soils beneath the building as part of the on-going remedial investigation activities.



12/27/93 11:41 U. S. ENVIRONMENTAL PROTECTION AGENCY 225
James Di Lorenzo (HSN-CANS)
Redmedial Project Manager/Waste Management Division
U.S. Environmental Protection Agency
RE: New Hampshire Plating Site
November 17, 1993
Page Two

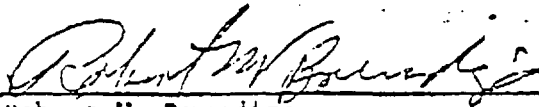
We encourage and will support any activities which will lead to expedite the remediation of this site and anxiously await the results of the fish tissue studies performed at Horseshoe Pond.

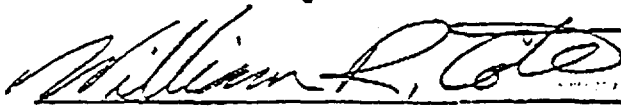
Very truly yours,

Board of Selectmen
Town of Merrimack, NH


Richard E. Dumont, Chairman


Edward J. Silva


Robert W. Brundige


William R. Cote


Leonard C. Worster



Town of Merrimack, New Hampshire 03054

Conservation Commission, P.O. Box 940
Town Hall, West Wing, 8 Baboosic Lake Road

603/424-3531
603/424-3931
FAX 603/424-0461

November 30, 1993

Mr. Richard Goehlert
Remedial Project Officer
NH Superfund Section
JFK Federal Building
Environmental Protection Agency
Region 1
Boston, MA 02203

SUBJECT: Corrective Action Plan, NH Plating, Merrimack, NH

Dear Mr. Goehlert:

Thank you for allowing the Merrimack Conservation Commission (Commission) to offer comments regarding the US EPA and NH DES proposal for destruction of the NH Plating building as part of the Corrective Action Plan (CAP) for the site. The Commission wishes to make formal its unanimous approval for EPA to follow Option 3 as the preferred option for destruction of the building.

However, the Commission also has concerns regarding the site following completion of this phase of the project. They are as follows:

1. The Commission has concerns regarding the potential threat of vadose zone and groundwater migration of the contamination source once the building and foundation are removed. We request that EPA's contractor install a temporary impermeable cap or lining (preferably clay) within the perimeter of the building to reduce this threat.
2. The Commission requests that your contractor install monitoring well(s) within the former underground storage tank excavation for part of the overall groundwater investigation and monitoring program.
3. The Commission requests that your contractor contact the Water Supply and Pollution Control Division of the NH Department of Environmental Services to

obtain information regarding their in-situ soil sampling program for disposal of petroleum-contaminated soils. This program could be useful for soil characterization in anticipation of excavation, transport and treatment of these soils.

Thank you for your time regarding these issues. We look forward to hearing from you. If you have questions, please feel free to call.

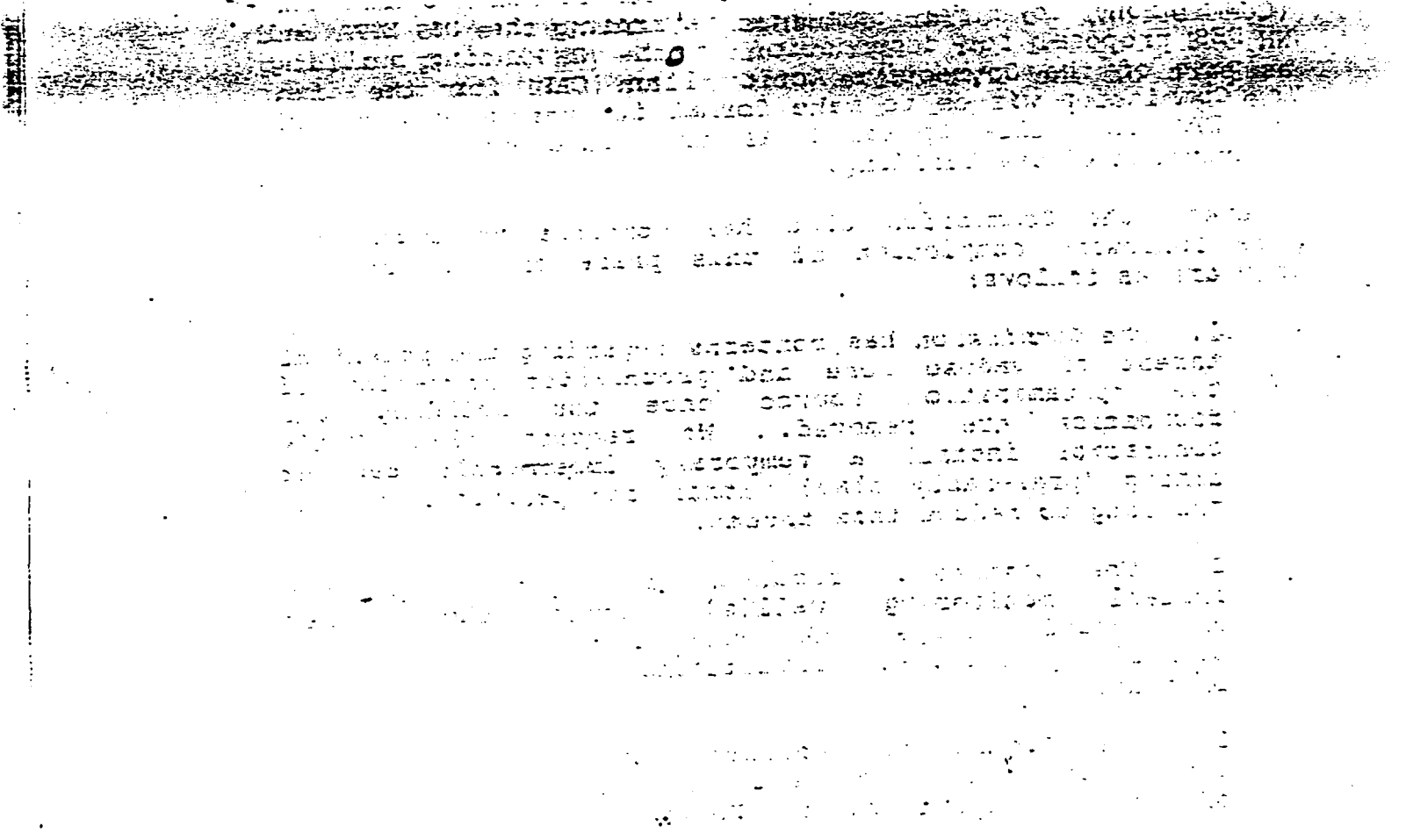
Sincerely,

Gregory A. Kirby/lbw

Gregory A. Kirby, Vice Chairman

/lbw

CC: Michael Robinette, NHDES
Halliburton/NUS
Richard S. Borden, Jr.,
Merrimack Town Manager



ATTACHMENT 8

POTENTIAL CHEMICAL-SPECIFIC ARARs AND TBCs
 NON-TIME-CRITICAL REMOVAL ACTION
 NEW HAMPSHIRE PLATING COMPANY SUPERFUND SITE
 MERRIMACK, NEW HAMPSHIRE

Authority	Requirement	Status	Requirement(s) Synopsis	Action To Be Taken To Achieve ARAR
Federal Regulatory Requirements	Clean Air Act (CAA) National Emissions Standards for Hazardous Air Pollution (NESHAP) (40 CFR 61.145, 61.150, 61.152)	Applicable, based on quantity of asbestos to be removed during demolition or decontamination.	Specify applicability and notification requirements, documentation and records, control of asbestos emissions, use of air cleaning devices, and prohibits visible emissions to ambient air.	During asbestos abatement, for demolition or renovation, asbestos emissions will be controlled using control equipment and procedures, as necessary. All required documentation will be prepared and maintained.
State Regulatory Requirements	State of New Hampshire, Air Resource Division Rule, Env-C 400, 401, 402, 403, and 404	Applicable, based on quantity of asbestos to be removed during decontamination.	Specify requirements including notification and record keeping, and control of air emissions and work practices during asbestos abatement.	During asbestos abatement activities, air emissions will be monitored and control equipment and procedures will be used, as necessary.
State Regulatory Requirements	State of New Hampshire, Air Resource Division Rule, Env-A 1002	Applicable	Requires abatement procedures for fugitive dust from demolition and other types of activities.	Control of fugitive dust will be required if the roof is demolished or if the NHPC building is to be demolished.

POTENTIAL LOCATION-SPECIFIC ARARs AND TBCs
 NON-TIME-CRITICAL REMOVAL ACTION
 NEW HAMPSHIRE PLATING COMPANY SUPERFUND SITE
 MERRIMACK, NEW HAMPSHIRE

Authority	Requirement	Status	Requirement(s) Synopsis	Action To Be Taken To Achieve ARAR
Federal Regulatory Requirements	42 USC 4341, 40 CFR, Part 6, Appendix A, Flood Plain Management Act	Applicable	Specifies the implementation of provisions of the Flood Plain Management Executive Order (EO 11990). Under this order, federal agencies are required to minimize harm to or within flood plains and avoid long- and short-term adverse impacts associated with the occupancy and modification of flood plains. Since the Site is situated in a 100-year flood plain, and this is a federal activity affecting land use, the regulation is applicable.	For the removal action alternatives presented, minimal impact to the site is expected. However, measures will be taken to minimize loss, destruction, or degradation of flood plains.

POTENTIAL ACTION-SPECIFIC ARARs AND TBCs
 NON-TIME-CRITICAL REMOVAL ACTION
 NEW HAMPSHIRE PLATING COMPANY SUPERFUND SITE
 MERRIMACK, NEW HAMPSHIRE

Authority	Requirement	Status	Requirement(s) Synopsis	Action To Be Taken To Achieve ARAR
Federal Regulatory Requirements	Resource and Conservation Recovery Act Subtitle C (40 CFR Parts 261-263)	Applicable	Specify definitions, hazardous waste classifications and analytical protocols, responsibilities of generators, labeling of drums, storage, documentation, and manifest requirements.	Activities performed in connection with the on-site generation and classification of hazardous wastes, and preparation for transport will comply with the requirements of these regulations.
Federal Regulatory Requirements.	RCRA Land Disposal Restrictions (LDRs) (40 CFR Part 268)	Applicable	Identify hazardous wastes that are restricted from land disposal. Also establishes waste analysis and record keeping requirements.	Waste materials generated from the decontamination and/or demolition of building materials and stored on-site need to be analyzed and their disposal will comply with the requirements of these regulations.
Federal Regulatory Requirements	CAA NESHAP (40 CFR 61.145, 61.150, 61.152)	Applicable, based on quantity of asbestos removed during demolition or decontamination.	Specify requirements governing removal, management, and disposal of asbestos. Only the substantive portions of these regulations need to be attained.	Asbestos abatement activities associated with the decontamination or demolition of the NHPC building will comply with these regulations.
Federal Regulatory Requirements	RCRA Tank Systems (40 CFR 264 Subparts G and J).	Relevant and appropriate, if hazardous wastes are identified in the UST sludge.	Specifies requirements for closure of a tank system containing waste, closure and post-closure plans, and financial responsibility.	If hazardous wastes are identified in the UST sludge, closure of the tank will be consistent with these requirements.

POTENTIAL ACTION-SPECIFIC ARARs AND TBCs
 NON-TIME-CRITICAL REMOVAL ACTION
 NEW HAMPSHIRE PLATING COMPANY SUPERFUND SITE
 MERRIMACK, NEW HAMPSHIRE
 PAGE TWO

Authority	Requirement	Status	Requirement(s) Synopsis	Action To Be Taken To Achieve ARAR
State Regulatory Requirements	Public Health Division Rule (He-P 5000)	Applicable	Specifies asbestos abatement requirements for contractors (i.e., training and medical monitoring). Only the substantive portions of these requirements need to be attained.	Contractors will comply with these regulations.
State Regulatory Requirements	Solid Waste Division Rules (Env-Wm 100, 400, and 500)	Applicable	Provide definitions and requirements for identification and testing of hazardous wastes, generator responsibilities, waste storage, manifesting, and record keeping.	Removal activities that result in the generation of hazardous wastes will comply with these regulations.
State Regulatory Requirement	Hazardous Waste Division Rules (Env-Wm 708.03 (d))	Relevant and appropriate, if hazardous wastes are identified in the UST sludge.	Specifies requirements for tanks consistent with 40 CFR Subparts G and J.	If hazardous wastes are identified in the UST sludge, closure of the tank will be consistent with these requirements.