Department of Environmental Conservation

Division of Hazardous Waste Remediation

Record of Decision

318 Urban Street Site City of Buffalo, Erie County Site Number 9-15-151

March 1995

New York State Department of Environmental Conservation
GEORGE E. PATAKI, Governor MICHAEL D. ZAGATA, Commissioner

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DECLARATION STATEMENT - RECORD OF DECISION

318 URBAN STREET INACTIVE HAZARDOUS WASTE SITE CITY OF BUFFALO, ERIE COUNTY SITE NO. 915151

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Urban Street inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substance Pollution Contingency Plan of March 8, 1990 (40 CFR 300).

This decision is based upon the Administrative Record of the New York Department of Environmental Conservation (NYSDEC) for the 318 Urban Street Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix A.

Assessment of the Site

Actual or threatened releases of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, present a current or potential threat to public health or the environment.

Description of the Selected Remedy

Based upon the Remedial Investigation/Feasibility Study (RI/FS) for the 318 Urban Street Site and the criteria identified for the evaluation of alternatives, the NYSDEC has selected a remedy involving the excavation and off-site landfilling of contaminated soils. The components of the remedy are as follows:

- Decontamination of the main building and the demolition and disposal of the smaller storage building located on the site.
- Excavation and off-site disposal of soil exceeding the remediation goals (1 and 10 parts per million PCBs) at a permitted landfill.
- Backfilling the excavations with clean, imported soil or soil from other areas of the site which contains PCBs at concentrations below the remediation goals.

 Deep excavations might be backfilled with soil containing up to 10 parts per million (ppm) PCBs while the top 12 inches of backfill must contain less than 1 ppm PCBs.

- Covering excavated areas with topsoil and seeding.
- Flushing and vacuuming sewers and transporting the collected sediments and water to an off-site facility for treatment and disposal.
- Implementation of a monitoring program which will allow the effectiveness of the preferred remedy to be assessed.

To maintain the structural stability of the main building foundation, some contaminated soil will remain below ground surface. This will be covered with a high density plastic liner and clean soil. Deed restrictions will be pursued to preclude future on-site construction which might disturb this remaining soil.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for the site as being protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

Date

Michael J. O'Toole, Jr., P.E. Director Division of Hazardous Waste Remediation

Record of Decision

318 URBAN STREET

City of Buffalo, Erie County Site No. 915151 March 1995

SECTION 1: SITE LOCATION AND DESCRIPTION

The site is located in the City of Buffalo, New York as shown in Figure 1. The site is approximately three and one half miles east of Lake Erie and two and one half miles northeast of downtown Buffalo. The facility consists of a large brick building and a smaller metal garage, located on approximately 2.25 acres of relatively flat property. The surrounding properties consist of both residential and commercial land. A site plan showing the facility and the surrounding properties is presented in Figure 2.

The site is situated in a well developed, urban section of Buffalo. The site is bounded to the north by residential homes along the south side of French Street, to the east by an abandoned school and former playground, to the south by Urban Street, and to the west by railroad tracks. More than half the site is either paved or covered by buildings, with the remaining portion consisting of overgrown vegetation.

Several residential properties on French Street abut the north side of the site. The nearest school is located on the opposite side of Urban Street, southeast and within a few hundred feet of the site. Additional schools are more than three blocks away. The land uses of the northeastern portion of Buffalo, where the site is located, are primarily commercial, industrial and residential.

The surface soils consist primarily of silts and clays and are poorly drained. There are no surface water bodies within a one-mile radius of the site. The nearest surface water body is Scajaquada Creek, located one and one-half miles northwest of the site. The creek flows northwest, away from the site, and ultimately discharges to Lake Erie.

Water is supplied to the neighborhood via the City of Buffalo, which obtains water from Lake Erie. There are no known private drinking water wells in the vicinity of the site.

Storm water from the site enters catchbasins and is routed to the combined storm and sanitary sewer on site, then to the public sewer on French Street. During normal flow conditions, all flow is discharged to the publicly owned treatment works (POTW) located on Squaw Island. During heavy storms, storm water overflow discharges to Scajaquada Creek which flows into Delaware Park's Hoyt Lake.

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

General Electrical operated a service center at the 318 Urban Street location from 1921 to approximately 1968. The facility was involved in the servicing and repair of industrial and utility equipment, including electrical transformers. The transformer repair work was reportedly performed in the southwest end and the center of the north end of the main building. The "untanking pit" in the center of the building's shop area (Figure 2) was where large transformers were lowered to remove their cores for repairs. The pit is now partially filled with broken concrete and debris, and covered with planks. Transformer repair operations included draining oil from the transformers. This oil contained a class of toxic chemical compounds known as polychlorinated biphenyls (PCBs). The waste oils were stored in drums in the facility machine shop, at the west end of the building. Final disposition of these waste oils could not be determined.

2.2: Remedial History

Several investigations were conducted at the site from 1990 through 1993. The objective of the investigations was to determine the nature and extent of contamination in the soil, groundwater, and any other potentially impacted environmental media. Samples of soil, sewer sediment, machine oil, wood chips, floor sweepings from within the building, and surface wipe samples were obtained and analyzed for PCBs to characterize the site.

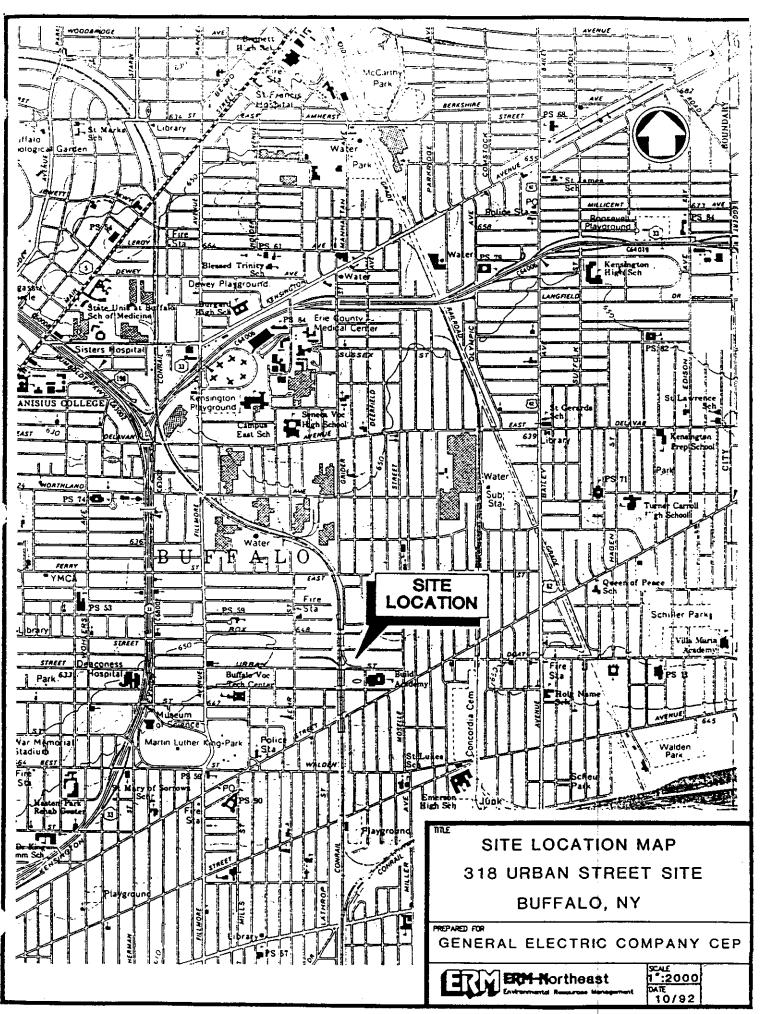
SECTION 3: CURRENT STATUS

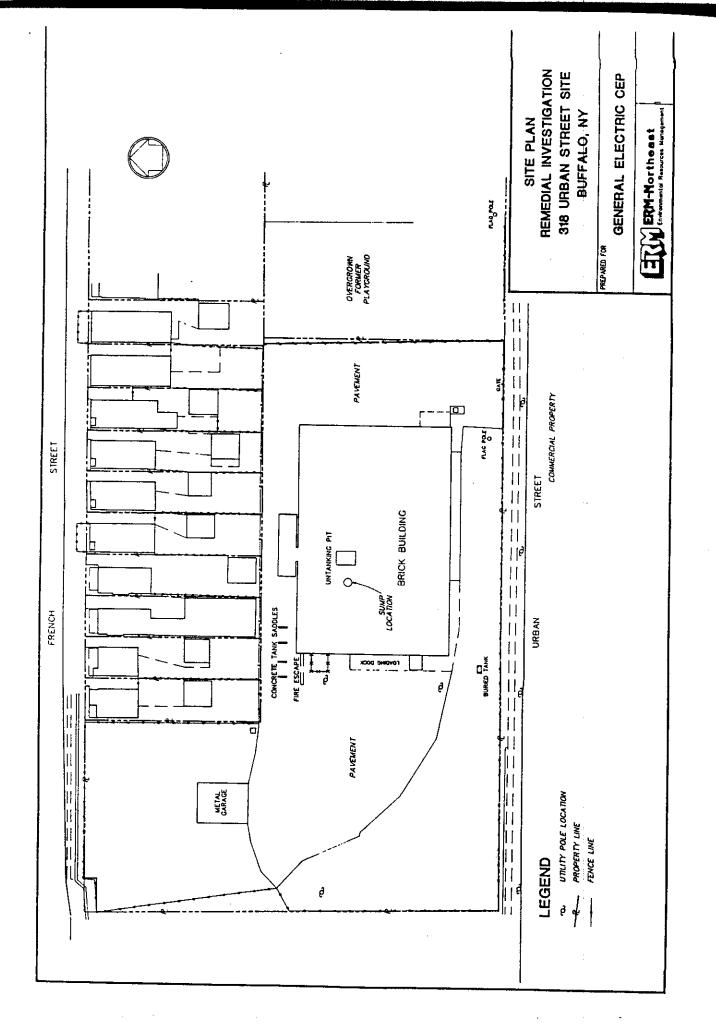
General Electric, under the supervision of the NYSDEC, initiated a Remedial Investigation/Feasibility Study (RI/FS) in July 1992 to address the contamination at the site. The RI was completed in November 1993, and documented in reports entitled: Remedial Investigation Report, 318 Urban Street Site, Buffalo, New York (November 1992) and Supplemental Remedial Investigation, 318 Urban Street Site (November 1993). The FS report was submitted in May 1994. The NYSDEC will negotiate with General Electric to enter into a Remedial Design/Remedial Action (RD/RA) Order on Consent (a legal agreement) to implement the chosen remedial alternative.

3.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted in phases between July 1992 and November 1993. The RI Reports describe the field activities and findings of the RI in detail.

The analytical data obtained from the RI was compared to applicable Standards, Criteria and Guidance (SCGs) in determining remedial alternatives. For the evaluation and interpretation of soil and sediment analytical results, NYSDEC soil and cleanup guidelines for the protection





of groundwater, background conditions, and risk-based remediation criteria were used to develop remediation goals for soil. Chemical concentrations are reported in parts per billion (ppb) and parts per million (ppm).

The surface soil at the site consists of a dark grayish brown loam approximately eight inches thick. The subsurface soil consists of a mottled, red brown to brown, silty clay loam with minor amounts of sand and gravel. The soil is generally moist to damp and eventually grades to a brown to gray silty clay extending to at least 32 feet below the ground surface. The amount of sand and gravel in the soil decreases with depth.

The depth to groundwater in the vicinity of the site has not been determined. No groundwater was encountered in any of the three borings drilled to depths of 32 feet in July, 1991. Groundwater in the vicinity of the site is expected to flow southwest toward the Niagara River and Lake Erie. Given the dense nature of the soil, groundwater will not likely be encountered until within the limestone bedrock. The depth of the bedrock is unknown.

Results of the PCB soil analyses indicated that the area of highest concentration is south of the western half of the building, between the building and Urban Street (Figure 2). Concentrations were highest adjacent to the building at shallow depths, with maximum concentrations of PCBs in soil exceeding 30,000 ppm.

PCBs were detected in most shallow samples obtained throughout the remainder of the site, at much lower concentrations, typically below 10 mg/kg. Results of samples obtained from paved areas north and east of the building contained low or non-detectable concentrations of PCBs, all below 1 ppm, with the exception of one sample which contained PCBs at 12 ppm.

A few soil samples were analyzed in the laboratory for the complete Target Compound List (TCL) of parameters; a list developed by the USEPA to include the contaminants of concern for most hazardous waste disposal sites. Only trace quantities of TCL organic compounds were found; the concentrations reported were generally below quantitation limits and could only be estimated. Several metals were detected, but all were within the expected range of concentrations for eastern United States soils.

PCBs were also found in the combined sanitary/storm sewers on site and off site, beneath French and Moselle Streets. The concentrations of PCBs in the sediments in the on-site sewers ranged from 5.9 to 16,000 ppm (Figure 3). From the site, the sewer flows east along the south side of French to Moselle, and north to East Ferry Street (Figure 4). On occasion, the flow from the site may have been diverted west on French; PCBs were also found in the sediments of the sewer beneath the railroad track (locations SEW-F002 & B-001, Figure 4). The laboratory results of sediment samples obtained from the French and Moselle Street sewers indicated that concentrations of PCBs were highest near the site and decreased with distance toward Moselle and East Ferry; the concentrations of PCBs in the off-site sewers ranged from 12 to 74,000 ppm.

The RI also located a vault on site (location SEW-20, Figure 3) believed to be the valve vault for the fire protection water main servicing the 318 Urban Street facility. Sediment in the bottom of this vault contained 12,000 ppm PCBs. The bedding around the pipe entering the vault contained 11,600 ppm PCBs. This valve pit does not apparently have a direct connection to the sewer, and the source of the PCB contamination is not known.

PCBs were also found inside the 318 Urban building; in the wood block floor, on the surface of some equipment and in the sediment of floor and roof drains (Figure 5). The wood block floor near the untanking pit, contained 808 ppm PCBs. The debris inside the pit contained as much as 12 ppm of PCBs, whereas the soil beneath the pit's concrete floor contained less than 1 ppm PCBs. As much as 207 ppm PCBs was found in the soil and grit on the shop floor, sediments in the floor sumps, and roof drains ranged from 1 to 48 ppm.

Results of soil sampling indicated that PCBs are present in soil to depths of eight to ten feet. Concentrations of PCBs in soil range from below 10 ppm to greater than 30,000 ppm. The highest concentrations of PCBs in soil are located immediately south of the building. PCBs were detected in most shallow samples throughout the site. Other areas containing concentrations of PCBs in soil above 10 ppm include the northwest corner of the site in the vicinity of the garage, and isolated areas north and west of the building. Groundwater was not encountered in the boreholes drilled to depths of 32 feet.

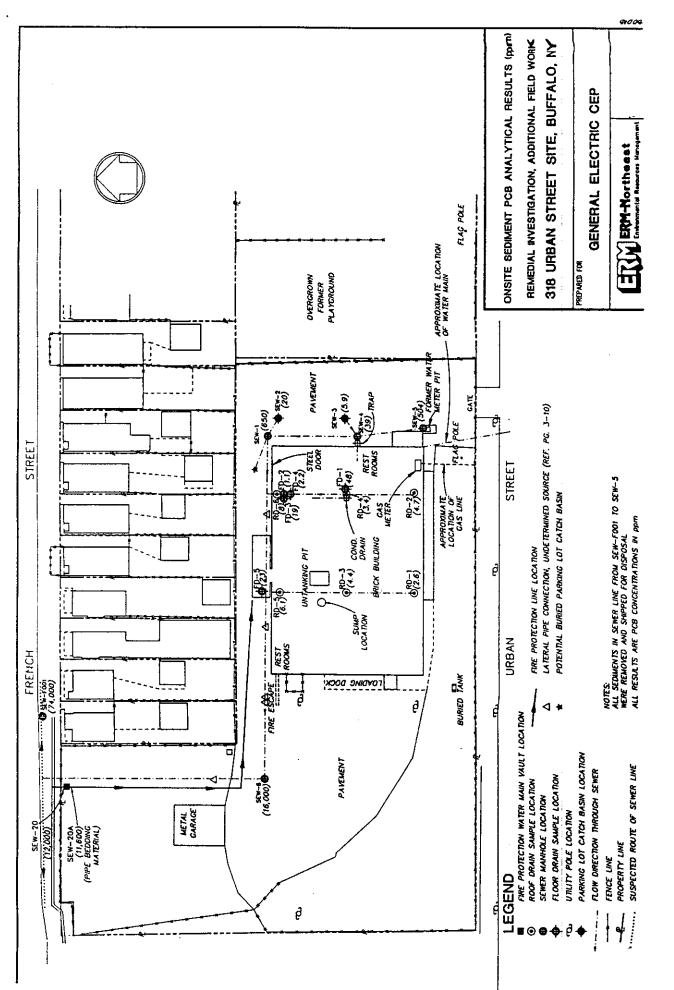
3.2 Interim Remedial Measures:

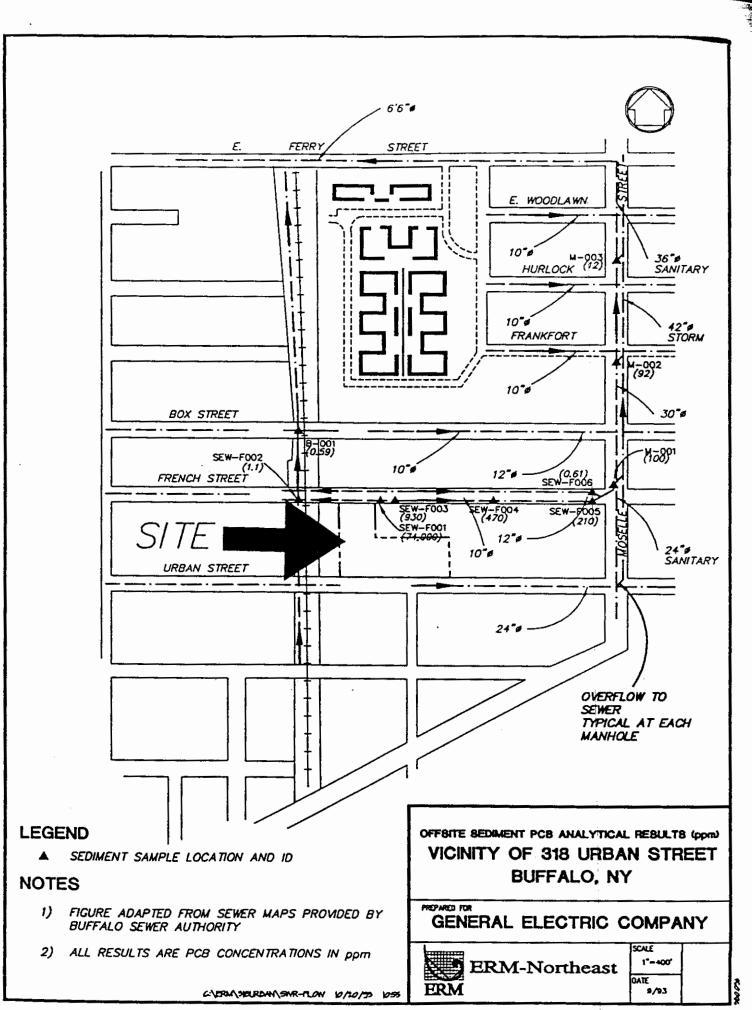
Interim Remedial Measures (IRMs) were conducted at the site based on findings as the RI progressed. An IRM is an activity which is undertaken without extensive evaluation to prevent or stop environmental damage from occurring. An IRM is intended to function as a temporary response to the problem until the RI/FS is completed.

Based upon analytical results of the RI, three Interim Remedial Measures (IRMs) were conducted. An IRM completed between November 1992 and April 1993 addressed off-site soil of French Street properties adjacent to the site's north side. Approximately half of the surface soil samples collected from these properties contained PCBs at concentrations less than the 1 ppm recommended cleanup level. However, one sample contained as much as 62 ppm PCBs. To eliminate the risk to public health, approximately 218 cubic yards of impacted soil were excavated and disposed in an off-site landfill.

A second IRM was conducted during the summer of 1993 which addressed sediment in the sewer. The sediment from approximately 500 feet of the sewer located on site and one manhole located on French Street (location SEW-F001, Figure 3) was removed and shipped off site for disposal. Sediment from the vault (location SEW-20, Figure 3) was also collected and disposed off site.

The third IRM was completed in May 1994 and addressed the off-site soil of the abandoned playground east of the site. Initial sampling of the playground's surface soils showed that the





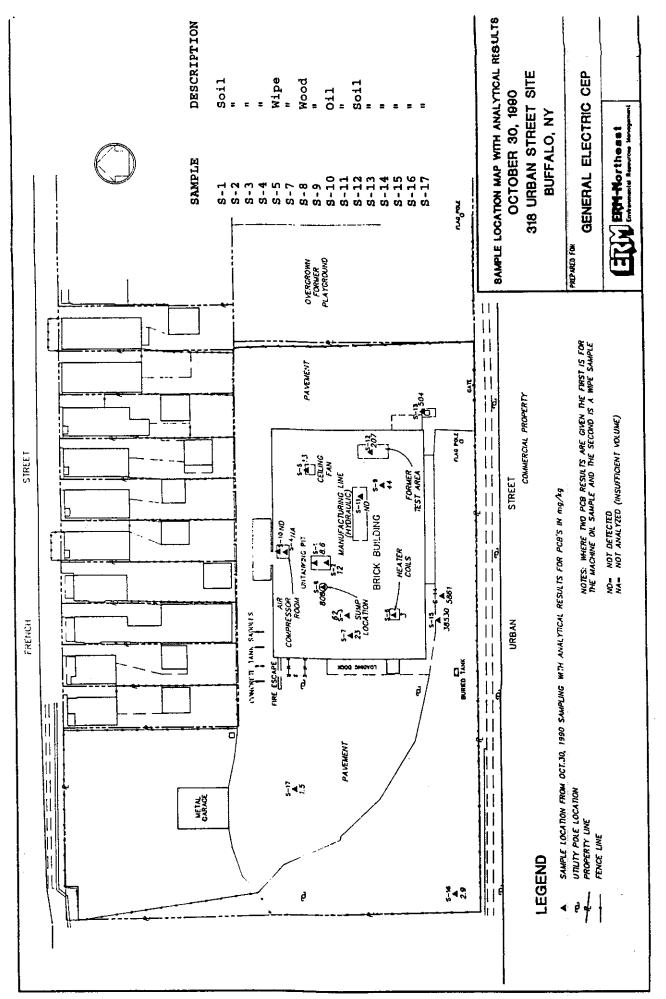


FIGURE 5

concentrations of PCBs were less than 1 ppm. Samples collected nearer the site fence, however, contained as much as 19 ppm PCBs. Approximately 68 cubic yards of soil were excavated from the playground, to a depth of 1 foot, along the entire length of the site's eastern fence. The excavated material was disposed in an off-site landfill.

3.3 Summary of Human Exposure Pathways:

A baseline public health and environmental risk assessment (RA) was completed based upon results of the RI and other investigations. The RA evaluated chemicals of concern by evaluating compounds detected in site soil. Exposure pathways through which humans could contact the chemicals of concern were then identified. Potential human receptors, who may have complete exposure pathways were also identified.

An exposure pathway is the process by which an individual is exposed to a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media (e.g., soil, groundwater) and transport mechanisms; 3) the point of exposure; 4) the route of exposure (e.g., ingestion, inhalation); and 5) the receptor population, These elements of an exposure pathway may be based on past, present, or future events.

The only chemical of concern at the site is PCBs, present in surface as well as subsurface soil and in the sewer sediments.

The U.S. Environmental Protection Agency (EPA) has designated PCBs as probable human carcinogens, or class B2 carcinogens. This means that there is sufficient evidence that PCBs cause cancer in some animals but inadequate evidence of carcinogenicity in humans.

Potential exposure pathways include incidental ingestion (eating) and dermal absorption (contact with skin) resulting from direct contact with site soil and inhalation (breathing) of fugitive dust emissions. Health effects to humans could result from low level exposure to PCBs. Although the site is paved, vegetated and currently fenced to restrict access, it is possible that employees, visitors and trespassers entering the site could be exposed to contaminated soil. In addition, if site soil were disturbed through construction or other activity, unacceptable risks would result unless measures were taken to control fugitive dust.

3.4 Summary of Environmental Exposure Pathways:

The baseline risk assessment also evaluated the current and potential future threat to ecological resources. The site is located in a well developed urban area approximately two and one-half miles northeast of downtown Buffalo. Over 50 percent of the property is paved or covered by structures, and the remaining portion is vegetated. The site vegetation is currently overgrown and includes plants and grasses typical of the area. A small, localized area of stressed vegetation was observed west of the old loading dock on the south side of the facility building. Because of the limited vegetation at the site and the extensive development of the surrounding area, the site is not likely to support significant populations of wildlife species. No surface

water bodies or NYSDEC regulated wetlands are found within a one mile radius of the site. No significant adverse impacts to ecological resources are expected to result and no sensitive ecological resources are present at the site.

SECTION 4: ENFORCEMENT STATUS

The Remedial Investigation/Feasibility Study (RI/FS) was performed under Order on Consent Index #B9-0388-91-09, signed in June, 1992. The RI report was submitted to the NYSDEC in November 1992. A Supplemental RI report was submitted to the NYSDEC in November 1993, which addressed the NYSDEC comments on the earlier RI report. An FS report was also submitted, outlining alternative remedies for the site. General Electric will again be contacted to assume responsibility for implementing the remedy selected in this document under a new Order on Consent.

SECTION 5: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6NYCRR 375-1.10. These goals are established under the requirement of meeting all standards, criteria, and guidance (SCGs) and protecting human health and the environment.

At a minimum, the remedy selected should eliminate or mitigate all significant threats to the public health and to the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

The goals selected for this site are:

- Eliminate the contamination present within the soils/waste on site that present a significant threat to the public health and the environment.
- Eliminate the potential for migration of soil containing contaminants into the sewers via storm water runoff.
- Eliminate the potential for direct human contact with the contaminated soils on site.
- Eliminate the contamination present within the sewers that presents a significant threat to the environment.
- Eliminate the contamination within the building that presents a significant threat to onsite workers.

To accomplish these goals, surface soils (top twelve inches) containing PCBs in excess of 1 ppm will be treated or disposed. Deeper soils, containing PCBs in excess of 10 ppm will also

be treated or disposed. These soil cleanup objectives are based on an assessment of relative risk to human health; unrestricted exposure to concentrations above these levels may result in unacceptable risk. Figure 6 shows the areas and depths of PCBs exceeding the soil remediation goals.

SECTION 6: SUMMARY OF THE EVALUATION OF ALTERNATIVES

Potential remedial alternatives for the 318 Urban Street site were identified, screened and evaluated in a Feasibility Study. This evaluation is presented in the report entitled "Feasibility Study Report, 318 Urban Street Site", prepared by ERM-Northeast Inc. for the General Electric Company. A summary of the detailed analysis is provided here.

6.1: Description of Alternatives

The goal of remedial action is to address the contaminated soils on site, the sediments within the sewers flowing from the site, and the buildings located on the site.

Some actions would be common to all alternatives. Debris and scrub brush would be cleared, and disposed in an off-site landfill to prepare the site for remedial activities. The top few inches of excavated topsoil may contain vegetation, roots, concrete or asphalt that cannot be readily treated by the technologies considered. This material would also be disposed in an off-site landfill.

Sections of off-site sewers remain to be flushed and vacuumed, the water and sediment collected would be treated or disposed. The limits of this remedial action will extend from the end of the previously cleaned section of on-site sewer, to French Street, downstream to Moselle and finally to the intersection of Moselle and East Ferry (Figure 4). Contaminated sediments in the sewers west of the site, beneath the railroad tracks to East Ferry, will also be removed and disposed. Sampling and/or inspection of previously remediated sections of on-site sewer will also be performed to determine if additional action is necessary. Additional soil borings will be installed in the vicinity of SEW-20 to determine what, if any, additional remedial action is necessary in that area.

The brick building on site would be remediated by a combination of means including: dismantling and disposing of wooden partitions and flooring; and washing and/or sealing brick and concrete surfaces. The small garage on site would be demolished and the debris disposed in an off-site landfill.

Every alternative (except the "no action" alternative) would involve the excavation of contaminated soil for treatment or disposal. However, not all of the soil with PCB concentrations above the remediation goals would be excavated. Soil adjacent to the building may not be able to be excavated without impairing the structural integrity of the building foundation. Shoring the foundation would allow most of the soil to be removed. The soil

could also be safely removed by excavating to the depth of the foundation, and sloping the bottom of the excavation away from the building (Figure 7). The contaminated soil left behind would be excavated when the building is ultimately demolished. The excavation would be lined with a high density polyethylene (HDPE) to separate the contaminated soil from the clean backfill.

Alternative #1: No Action

Total Present Worth: \$33,000* Capital Cost: \$8,125 Annual O&M: \$1,600 Time to Implement: 3 months

The no action alternative is evaluated as a procedural requirement and as a basis for comparison. While no remedial construction would occur under this alternative, deed restrictions and access restrictions would be pursued. Deed restrictions would include clauses which would prevent residential, recreational or agricultural uses of the property. Access to the site would be restricted by maintaining the existing fence. This is an unacceptable alternative, as the site would remain in its present condition. Human health and the environment would not be adequately protected, on-site workers would still be at risk and the potential for contaminants to migrate with storm water runoff would remain.

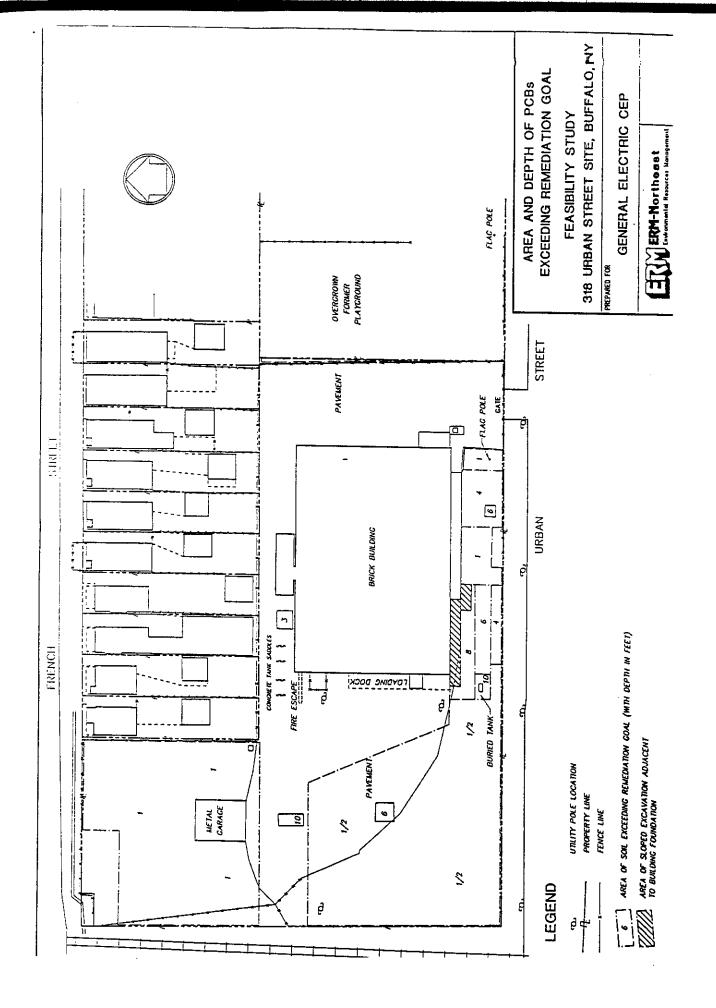
Alternative #2: Solidification/Stabilization of Excavated Soil

Total Present Worth: \$1,798,000
Capital Cost: \$1,762,000
Annual O&M: \$2,000
Time to Implement: 24 months

Alternative #2 consists of excavating soil exceeding the remediation goal, treating the soil on site by solidification/stabilization, and placing the treated soil in an excavation on site. Solidification/stabilization consists of mixing contaminated soils with a cement or cement-like binder and other additives, to immobilize the contaminants in a solidified mass. Prior to any site work, a treatability study would be performed to demonstrate that the technology would be effective in treating soil at the site. Following the treatability study, a pilot test may be conducted at the site to demonstrate that the grout slurry mixture recommended from the treatability study would also be effective in the field.

The areas and depths which would require soil to be excavated for stabilization are shown in Figure 6. Approximately 2800 cubic yards of soil would be excavated, from depths ranging from one half to ten feet. Samples of the stabilized mass would be tested to verify its integrity. Following completion of treatment, the stabilized soil would be placed in an excavation in the western portion of the site and covered with a high density polyethylene (HDPE) liner and clean soil. The cover material would protect the stabilized mass from

^{* -} Present Worth based on a 30 year period of operation and an interest rate of 7%.



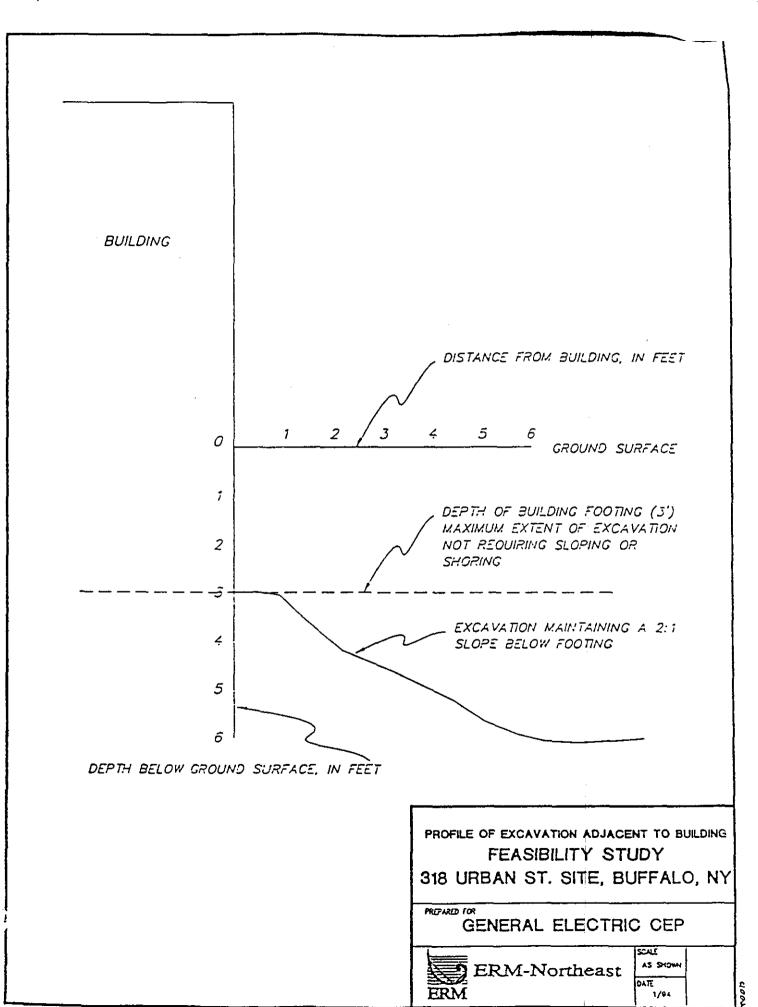


FIGURE 7

mechanical damage as well as prevent infiltration of storm water which could lead to freeze/thaw damage. The cover material would act as a barrier between potential human receptors and the treated soil.

Deed restrictions would be pursued, to prevent residential, recreational or agricultural uses of the property. The deed restriction would provide a notification of the stabilized mass and would limit construction at the site. Unauthorized access would be restricted by maintaining the existing fence.

A variation of this alternative was identified in the Feasibility Study as alternative #3. Alternative #3 consisted of treating the soil by solidification/stabilization in place, without excavating the soil. However, because the soils on site are dense clay, it would be difficult to mix in the cement binder. Since this method would be too difficult to implement, alternative #3 was not considered further.

Alternative #4: Off Site Landfill Disposal

Total Present Worth:

\$1,519,000

Capital Cost:

\$1,483,500

Annual O&M:

\$2,100

Time to Implement:

6 - 8 months

Alternative #4 consists of landfilling excavated soil at an off-site landfill. Soil containing PCBs with concentrations exceeding the remediation goal would be excavated and shipped by truck to a permitted landfill. The areas and depths of soil with PCB concentrations exceeding the remediation goal are shown in Figure 6. Approximately 2800 cubic yards of soil would be excavated to depths ranging from one half to ten feet. The excavated soil exceeding 10 ppm PCB would be transported to a permitted landfill for disposal. Surface soils containing PCB concentrations of less than 10 ppm would be used as fill material in site excavations at depths greater than 1 foot. All excavated areas would be covered with clean fill and graded.

Deed restrictions would be pursued, to prevent residential, recreational or agricultural uses of the property. Engineering controls, including dust suppression measures, would be required for any excavation or construction work. In addition, unauthorized access would be restricted by maintaining the existing fence.

Alternative #6: Incineration at Off-Site Facility

Total Present Worth:

\$13,849,000

Capital Cost:

\$13,813,000

Annual O&M:

\$2,100

Time to Implement:

6 - 24 months

Alternative #6 consists of incinerating excavated soil at an off-site facility. On-site incineration, alternative #5, was another option identified in the Feasibility Study. However, because of the limited space available, operation of an incinerator and staging soils on site would be difficult. Strong public opposition to on-site incineration could also be expected. Alternative #5 was not considered further.

Under alternative #6, soil containing PCBs with concentrations above the remediation goal would be excavated and, if necessary, dewatered and shipped by truck or rail car to a permitted incinerator. Approximately 2800 cubic yards of soil would be excavated. The areas and depths exceeding the remediation goal are shown in Figure 6. The soil would be excavated to depths ranging from one half to ten feet, placed in burnable containers (if required) and transported to a permitted incinerator. The excavation would be backfilled with clean fill material, graded, covered with topsoil and seeded.

In order to prevent contact with contaminated soil remaining near the foundation, engineering controls, including dust suppression measures, would be required for any future excavation or construction work. In addition, unauthorized access would be restricted by maintaining the existing fence.

6.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6NYCRR Part 375). For each of the criteria, a brief description is provided followed by an evaluation of the alternatives against that criterion. A more detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study Report.

The first two evaluation criteria are termed threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance. SCGs are divided into three categories; chemical-specific (e.g. drinking water standards), action-specific (e.g. the transportation of hazardous waste) and location-specific (e.g. protection of wetlands). Many of the SCGs applied to the remediation of PCBs derive from the Federal Toxic Substances Control Act (TSCA). Table 2-1 of the Feasibility Study Report lists the SCGs identified for this site. Some of the more significant SCGs are listed in Table 1 of this proposal.

Alternative #1 would not satisfy the SCGs. Because the treatment would not actually reduce the concentration of contaminants, just immobilize them, alternative #2 would not satisfy the chemical-specific SCGs pertaining to recommended cleanup objectives. However, since the contaminants would be immobilized, alternative #2 might attain an equivalent standard of

TABLE 1

318 URBAN STREET SITE CITY OF BUFFALO, ERIE COUNTY, NEW YORK

STANDARDS, CRITERIA & GUIDANCE

SCG	COMMENTS
40 CFR Part 761; Toxic Substances Control Act	Federal regulations governing the management and disposal of PCB materials
6 NYCRR Subpart 373-1 - Hazardous Waste Treatment, Storage and Disposal Facility Permitting Requirements - 1/31/92	NY State regulations describing the substantive requirements for the permitting of hazardous waste facilities, including the construction and operating standards for such facilities.
6 NYCRR Subpart 373-2 - Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities - 1/31/94	NY State standards for the management of hazardous waste
Technical and Administrative Guidance Memorandum (TAGM) HWR-92-4046: Determination of Soil Cleanup Objectives and Cleanup Levels - 1/24/94	NY State guidance document describing the basis for establishing cleanup objectives
TAGM HWR-92-4030: Selection of Remedial Actions at Inactive Hazardous Waste Sites - 5/92	NY State guidance document for evaluating remedial alternatives
TAGM HWR-89-4031: Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Sites - 10/27/89	NY State guidance describing the precautions to take to monitor and control dust during remedial actions

performance to justify a waiver from these SCGs. Alternatives #4 and #6 would satisfy all SCGs.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective.

Alternative #1 would provide minimal protection of human health and the environment. Alternative #2 would immobilize the PCBs and provide a barrier to any potential receptors, the long-term reliability of the solidification/stabilization process is uncertain however. Alternative #4 would eliminate exposure by removing the threat, the contaminated soils, from the site. Alternative #6 would offer permanent protection through the destruction of the PCBs. Under alternatives #2, #4 and #6 some contaminated soil would remain near the foundation of the 318 Urban Street building. The clean soil and HDPE covering this soil would, however, provide adequate protection. Alternatives #4 and #6 would achieve remedial action levels and provide protection within two years, alternative #2 would take two years or more to complete.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of the remedial alternatives.

3. Short-term Effectiveness and Impacts. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared with the other alternatives.

Because there would be no remediation performed, implementing alternative #1 would pose no additional, adverse impacts to the environment or the community.

Alternatives #2, #4 and #6 would involve the excavation of contaminated soil and might therefore pose a risk to the community from fugitive dust, if dust suppression measures were not properly conducted. All three alternatives would also include the remediation of sewers and the interior of the 318 Urban Street building. The sewers would be cleaned in short sections, with temporary plugs at the downstream end to prevent the contamination from spreading further. Dust suppression measures would also be followed inside the building. Such measures are widely used and have been proven reliable.

A period of two years or more could be expected for implementing alternative #2, since a treatability study would be needed to determine the effectiveness of the solidification/stabilization technology. Due to the limited availability of permitted incinerators, lengthy delays could also be expected in implementing alternative #6. There are, however, a sufficient number of permitted landfills available that alternative #4 could be completed within one year.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of alternatives after implementation of the response actions. If wastes or treated

residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Under alternative #1, site access might be restricted with fencing, but trespassers and wildlife could still be exposed to contaminants via direct contact with contaminated soils. Future construction might occur, potentially exposing the community to fugitive dust. The risks remaining to the community and environment under this alternative would be significant.

Under all of the remaining alternatives, some contaminated soil beneath and near the brick building would be left in place. This soil, located at least 4 feet below the surface, would be covered with HDPE liner and clean soil. The risk of exposure would be minimal as long as the cover were maintained. Deed notices would restrict future construction on site and ensure that the cover is left intact.

If the contaminants are immobilized in a solidified mass under alternative #2, the risks to the community and environment would be insignificant. Covering the solidified mass with HDPE and clean soil would provide adequate and reliable protection against current and future exposure. However, since contaminants would be contained on site and not actually destroyed, this alternative would be less permanent than either alternatives #4 or #6. Weathering of the solidified mass may later release contaminants to the environment.

Both alternatives #4 and #6 would be permanent remedies; contaminated material would be contained in an off-site landfill or destroyed through incineration. Landfill disposal and incineration are reliable technologies with adequate controls to ensure that the environment is protected. Both alternatives begin with the removal of contaminated soil from the site; the risk of exposure to the community and the environment would be eliminated.

5. Reduction of Toxicity, Mohility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site. Alternative #1 would provide no significant reduction in the toxicity, mobility or volume of wastes. Alternatives #2 and #4 would reduce the mobility of the site contaminants without changing the toxicity. Alternative #2 may be reversible; with time, contaminants might be released from the stabilized/solidified mass. Alternative 6 however, would permanently and irreversibly reduce the toxicity, mobility and volume of wastes through destruction.

It should be noted that for alternatives #2, #4, and #6, contaminated soils near the building foundations would be left in place. With a cover of HDPE and clean soil, the mobility of the contaminants in this soil would be reduced. When the building is ultimately demolished, the contaminated soil would be removed for treatment/disposal.

6. Implementability. The technical and administrative feasibility of implementing each alternative is evaluated. Technically, this includes the difficulties associated with the construction, the reliability of the technology, and the ability to monitor the effectiveness of

the remedy. Administratively, the availability of the necessary personnel and equipment is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc..

Alternative #1 would be easy to implement with few technical or administrative difficulties to overcome. Acquiring the necessary approvals to implement alternative #2 would present an administrative difficulty since it may not be approvable under Federal regulations. The reliability of the solidification/stabilization technology applied to PCBs would also have to be demonstrated. Alternative #4 would also be easy to implement; landfilling is a proven and reliable technology and a number of permitted landfills are available, so scheduling delays would be unlikely. Scheduling delays would be more likely encountered under alternative #6; with only a few permitted incinerators in the country, treatment capacity is limited.

7. Cost. Capital, annual operation and maintenance (O&M), and total costs were estimated for each alternative and compared on a present worth basis, assuming an interest rate of 7% over a 30 year period. Although cost is one the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision.

		COSTS (\$) *		
Alternative	#1	#2	#4	#6
Total	33,000	1,798,000	1,519,000	13,849,000
Capital O & M	8,125 1,600	1,762,000 2,000	1,484,000 2,100	13,813,000 2,100
* Does not include t	he costs for sewer or b	uilding remediation		

The O&M costs for the alternatives were essentially equal. The capital costs for alternatives #2 and #4 were similar, both were significantly less expensive than alternative #6. Alternative #1, the "no action" alternative, was the least expensive of all.

8. Community Acceptance. Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan are evaluated. A "Responsiveness Summary" has been prepared that describes public comments received and how the Department will address the concerns raised (Appendix B).

SECTION 7: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 6 of this document, the NYSDEC is selecting Alternative #4, off-site landfill disposal of contaminated soils, as the remedy for this site.

Alternative #1, the "no action" alternative, would not be protective or satisfy SCGs. In the short-term, the remaining alternatives are comparable, with few adverse impacts to the community or environment expected. Alternative #6 would be more permanent than either alternative #2 or #4, since the contaminants would be destroyed through incineration. Alternatives #4 and #6 rely on technologies proven reliable, solidification/stabilization (alternative #2) would need to be tested to demonstrate its effectiveness at the Urban Street site.

Alternative #4 will be easier to implement than either alternative #2 or #6. The process of obtaining the necessary approvals and scheduling delays could be lengthy with these two alternatives.

While alternatives #2 and #4 were comparable in cost, both significantly less expensive than alternative #6, alternative #4 was selected because of its reliability and ease of implementation.

The estimated total present worth cost to implement the selected remedy is \$1,519,000. The cost to construct the remedy is estimated to be \$1,483,500 and the estimated average annual operation and maintenance cost is \$2,100.

The decontamination of the interior of the brick building at 318 Urban Street is to be completed as part of the site remedy. The most feasible means of cleaning the building has yet to be determined. Due to the uncertainties involved, cost estimates for this work have not been included in the selected remedy. The costs for remediation of the sewers were also not included.

A remedial design will be completed to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedy. Uncertainties identified during the RI/FS will be resolved. The elements of the selected remedy are as follows:

- Maintenance of the site perimeter fence. The possibility of deed restrictions will also be pursued.
- Additional investigations to resolve the following issues: 1) what is the best method for decontaminating the building and surfaces; 2) what is the extent of contamination around the vault area (SEW-20) and what is the best remedy for that area; and 3) what is the source of contamination to the roof drains and what must be done to ensure that there are no further sources of contamination.
- Demolition and disposal of the metal garage.
- Excavation and off-site disposal of an estimated 2,800 cubic yards of soil exceeding the remediation goals (1 and 10 ppm PCBs) at a permitted landfill.

- Backfilling excavations with clean soil, or with surface soil from other areas of the site that is below the remediation goal (i.e., deep excavations might be backfilled with soil, from other parts of the site, which contains less than 10 ppm PCBs; the top 12 inches of backfill will have to contain less than 1 ppm PCBs).
- Covering excavated areas with topsoil and seeding.
- Covering the sloped sides of the excavation near the 318 Urban Street building (where soil containing PCBs exceeding the remediation goal will remain) with HDPE and clean soil.
- Flushing and vacuuming sewers and transporting the collected sediments and water to an off-site facility for treatment and disposal. The sewers to be remediated include those beneath French and Moselle Streets and the railroad track west of the site.

Since the remedy will result in some hazardous waste remaining untreated at the site, a long term monitoring program will be implemented. This program will allow the effectiveness of the selected remedy to be monitored. This long term monitoring program will be a component of the operations and maintenance for the site and will be developed in accordance with a Remedial Design.

SECTION 8: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial process, a citizen participation plan, dated October 16, 1992, was developed for the Urban Street site. The objectives of the plan are: promote public understanding of the NYSDEC's responsibilities, planning and remedial activities; provide opportunities for the NYSDEC to learn from the public; and provide information that will facilitate a comprehensive remedial program protective of both public health and the environment.

The following public participation activities have been conducted as part of the project:

- A Citizen Participation Plan dated May 19,1992 (revised October 16, 1992) was developed.
- Document repositories were established at the following locations:

C.R.U.C.I.A.L. Center 1609 Genesee Street Buffalo, NY

East Delevan Branch Library 1187 East Delevan Street Buffalo, NY

- A letter dated July 5, 1991 was mailed to the area residents informing them of the presence of PCBs at the site and the plans for additional soil sampling along the perimeters of the site.
- A letter was mailed to the area residents on October 21, 1991 summarizing the results of the site perimeter sampling.
- A public meeting was held on November 21, 1991 to discuss the proposed investigative work to be conducted as part of the Remedial Investigation. A responsiveness summary was also prepared, and sent to the document repositories.
- During the week of May 18, 1992, representatives from the NYS DOH and General Electric hand-delivered meeting announcements and discussed with residents the results of backyard soil sampling conducted in February 1992.
- A public meeting was held on May 30, 1992 to discuss the results of soil sampling conducted in the residential backyards adjacent to the site, and plans for further investigation of the backyards. A fact sheet was prepared and distributed at this meeting which provided a summary of site information.
- A public meeting/availability session was held October 28, 1992 to address public concerns regarding plans to remove contaminated soils from the residential backyards adjacent to the site. A fact sheet prepared by GE was sent with a meeting notice by NYSDEC on October 15.
- A press release was issued by NYSDEC on November 13, 1992 announcing the start of the interim remedial measure addressing the residential backyards.
- Fact sheets were also sent to area residents and all interested parties on May 1993 and June 1994, providing updates on the Remedial Investigation and Feasibility Study.
- A public meeting was held on February 23, 1995 to present the Proposed Remedial Action Plan (PRAP) for the site. Comments received during the meeting, and the Department's responses are presented in the Responsiveness Summary in Appendix B. There were no other comments received, during the public comment period, which extended from February 13 to March 17, 1995. The remedy selected in this ROD is the same as was proposed in the PRAP.

APPENDIX A

INDEX OF ADMINISTRATIVE RECORD

318 URBAN STREET SITE CITY OF BUFFALO, ERIE COUNTY, NEW YORK

- Phase I Environmental Assessment, ECCO Inc., July 19, 1990.
- Sweeney Steel Environmental Sampling (Letter report), ERM-Northeast Inc., December 10, 1990.
- 3. Supplemental Sampling Report Sweeney Steel, ERM-Northeast Inc., August 20, 1991.
- 4. Off-property Soil Sampling Pyramid Steel Facility, ERM-Northeast Inc., December 10, 1991.
- 5. Work Plan Remedial Investigation GE Service Center 318 Urban Street Site, ERM-Northeast Inc., May 6, 1992 (revised June 3, 1992).
- 6. Field Sampling Plan Off-property Soil Sampling, Phase II 318 Urban Street Site, ERM-Northeast Inc., June 11, 1992.
- 7. Interim Remedial Measure Work Plan for Off-site Properties to the 318 Urban Street Site, ERM-Northeast Inc., June 18, 1992 (revised October 13, 1992).
- 8. Phase II Site Investigation Report Off-property Soil Sampling 318 Urban Street Site, ERM-Northeast Inc., September 4, 1992.
- 9. Citizen Participation Plan GE Service Center 318 Urban Street, ERM-Northeast Inc., May 19, 1992 (revised October 16, 1992).
- 10. Remedial Investigation Report 318 Urban Street Site, ERM-Northeast Inc., November 19, 1992.
- 11. Work Plan Additional Field Work Subsequent to Remedial Investigation 318 Urban Street Site, ERM-Northeast Inc., February 19, 1993.
- 12. Sewer Investigation Work Plan, ERM-Northeast Inc., July 16, 1993.
- 13. Final Report Soil Remediation of Off-site Properties 318 Urban Street Site, Remcor Inc., July 20, 1993.
- 14. Supplemental Remedial Investigation 318 Urban Street Site, ERM-Northeast Inc., November 1993.
- 15. Feasibility Study Report 318 Urban Street Site, ERM-Northeast Inc., May 1994.
- 16. Pre-Decontamination Building Characterization -318 Urban Street Site, ERM-Northeast Inc., August 1994.
- 17. Order on Consent, Index No. B9-0388-91-09, signed June, 1992.
- 17. Proposed Remedial Action Plan, 318 Urban Street Site, NYSDEC, February 1995.
- 18. Record of Decision, 318 Urban Street Site, NYSDEC, March 1995.

APPENDIX B

RESPONSIVENESS SUMMARY

318 URBAN STREET SITE CITY OF BUFFALO, ERIE COUNTY, NEW YORK

The Proposed Remedial Action Plan (PRAP) was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repositories on February 10, 1995. This plan outlined the proposed measures for the remediation of the Urban Street site. The release of the PRAP was announced to the public via a notice mailed February 10, 1995 indicating the time, date and location of a public meeting.

A public meeting was held February 23, 1995 at the CRUCIAL Center, 1609 Genesee Street, Buffalo and included a presentation of the PRAP and a discussion of the proposed remedy. Comments received have become part of the Administrative Record for this site. The remedy selected in the Record of Decision is the same as was proposed in the PRAP.

The following are comments/questions related to the PRAP and the State's response:

- Q1. Do PCBs in the sewers affect drinking water? If a water line breaks, could it be affected by the PCBs in the sewers?
- A1. No. Sewers are generally installed below and away from drinking water lines. Water within a drinking water line is under pressure; in the event of a break, the water would escape outward from the pipe. If this water were to become contaminated by contact with PCBs in the surrounding soils, the contaminated water would not be able to overcome the pressure of the escaping water to reenter the drinking water pipe.
- Q2. Remedies for the site involve the use of deed restrictions. Would deed restrictions be placed on all neighboring properties? Does the owner of the property have to agree to a deed restriction?
- A2. The contamination which existed in the neighboring properties has already been removed and there will be no need for deed restrictions on the neighboring properties. For the Urban Street site itself however, some contamination will remain after the site has been remediated and deed restrictions will be pursued. The deed restrictions will prevent the remaining contamination from being disturbed by any future construction. Deed restrictions can only be placed on the property with the owner's consent.
- Q3. It was noted in the PRAP that there are only a few permitted incinerators available for the treatment of PCB wastes. How many are there exactly?
- A3. At this time, the NYSDEC is familiar with only two permitted incinerator facilities in the United States.

- Q4. The preferred remedy would leave some contaminated soils behind; the soils nearest the building foundation. Why can't this soil be removed?
- A4. Contaminated soil near the building foundation can be safely removed to the depth of the foundation. Excavating below this depth (approximately four feet) would risk collapsing the building. Demolishing the building to excavate this soil was deemed impractical and unnecessary. Contaminated soil below the depth of the building foundation will be covered with a high density plastic and at least three to four feet of clean soil, the risk to the public health from the remaining contamination will be minimal. The building is currently being used and demolishing even a portion of the structure would be costly. If the building should fall into disrepair, is no longer useful and the owner decides to demolish the structure, the contaminated soils left behind will be excavated for proper disposal.
- Q5. Could the contamination left behind, a few feet beneath the ground surface(near the building foundation), eventually reach the surface, perhaps from infiltrating precipitation?

 A5. As part of the site remediation, long term monitoring and maintenance of the site will be performed. The site would be periodically inspected to ensure that the contaminated soils in question remain covered. It is expected that the high density plastic, placed at the bottom of the excavation and covered with clean soil, will prevent infiltrating water from contacting the contaminants.
- Q6. Why were the neighboring properties remediated first and not the site? Is it possible that contamination at the plant site has moved back into the residential yards?
- A6. The site is completely enclosed by a fence, which prevents the public from coming into contact with contaminants on the site. However, the contamination that existed off-site, in the backyards of residential properties, presented a more immediate public health threat. While the extent of contamination on site was still being determined, an extensive investigation of the backyards was completed and the residential properties were cleaned up. It was determined that the backyards had been contaminated when rainfall had washed contamination from paved areas of the site. To prevent the yards from being re-contaminated, a small curb was built along that portion of the site's perimeter.
- Q7. Would the State consider conducting a study to determine the incidence of cancer in the neighborhood?
- A7. The New York State Department of Health is conducting a cancer incidence study for the neighborhood around the 318 Urban Street site. The study is expected to be completed and released within a few months.
- Q8. What health testing has been done on residents near the site? How many people were tested? What were the results?
- A8. On December 10, 1992, the New York State Department of Health conducted a blood screening for polychlorinated biphenyls (PCBs) for any interested residents on French Street with property adjacent to the 318 Urban Street site. Sixteen people participated in the sampling, and all of the results were within the normal range for the general population.

- Q9. How many years has the PCB contamination existed at the site? Could people who lived there in the area, but moved, have been affected by the PCBs?
- A9. The PCB contamination in the soils and sewers may have occurred as early as the late 1920's, when PCBs first became commercially available. In order for a person to experience a health effect from a chemical, he or she must first be exposed to it. Exposure can be caused by eating or drinking (ingesting) the chemical, breathing (inhaling) the chemical, or by having it come into direct contact with your skin. Other factors that are important are how much of the chemical you are exposed to, how long the exposure lasts, what other chemicals you may have been exposed to, how healthy you are, your age, sex, family traits and life style. The results of the blood tests performed in 1992 suggest that the level of human exposure to PCBs from the Urban Street site was low. Therefore, the potential for former residents to experience health effects related to the site is low.
- Q10. This year, the CRUCIAL Center will be moving its senior citizen and youth recreation programs to the former Public School 62, east of the site. Should we be concerned about our health?
- A10. No, there should be no cause for concern. The site poses a health risk only to those who have access to the site and might be exposed to the contaminated soils found there. The fence which encloses the site should restrict access. When the site is remediated next year, precautions will be taken to prevent contaminated dust from migrating off site. Restricted access to the site will also be maintained. This will eliminate the potential for human exposures to site contaminants.
- Q11. Many of the residents in the neighborhood are senior citizens who have difficulty attending public meetings, and may not be able to interpret the site reports and other documents for themselves. Can a community task force be formed?
- A11. The State has held other public meetings and mailed fact sheets to residents of the neighborhood to explain the results of the site studies. Residents were provided with the names, addresses and telephone numbers of the State personnel who could provide further information or the answers to their questions. If individuals in the community decide to form a task force, the State would cooperate in any effort to inform the public of the site remediation project.
- Q12. Will people who work in the building in the future be affected by the PCBs?

 A12. It is unlikely. Sampling of the building has shown that PCBs have soaked into the floor and are also found in floor drains and sumps. The likelihood of contamination picked up from these areas is low. Recent sampling of areas where human exposure likely, such as machinery surfaces, has shown the levels to be low, making exposure. As part of the remedy for the site, the building will be cleaned. This will exposure potential for future exposure to workers in the building.