Department of Environmental Conservation

Division of Hazardous Waste Remediation

Record of Decision

Westinghouse Electric Corporation Site
Town of Cheektowaga, Erie County
Site Number 9-15-066

March 1995

New York State Department of Environmental Conservation
GEORGE PATAKI, *Governor* MICHAEL ZAGATA, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Westinghouse Electric Corporation Inactive Hazardous Waste Site
Operable Unit No. 1 - Soil and Sediment Contamination
Cheektowaga, Erie County, New York
Site No. 9-15-066

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Westinghouse Electric Corporation inactive hazardous waste disposal site, Operable Unit No. 1, 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 Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Westinghouse Electric Corporation Inactive Hazardous Waste 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 B of the ROD.

Assessment of the Site

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

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Westinghouse Electric Corporation and the criteria identified for evaluation of alternatives the NYSDEC has selected On-Site Thermal Desorption. The components of the remedy are as follows:

- A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and monitoring of the remedial program. This program will include additional sampling to identify and delineate areas of contamination where off-site disposal, in lieu of treatment, may be pursued based on the levels of contaminants present relative to LDRs.

- Excavation of all contaminated soil and ditch sediments, with transportation of the material to a dedicated on-site staging area. Approximate areas to be addressed include Areas C,

E, I, J, K and M (ref. Table 1 and Figure 3). Final volumes and area to be remediated will be defined by the remedial objectives included on Table 2.

- Dewatering of soil and sediments as necessary, with temporary storage or on-site treatment of accumulated water.

- Excavation of underground storage tanks and associated piping in Areas I, J and K. The removed tanks and piping will be properly decontaminated. Any sediments from the piping or tanks, as well as the sediment from the areas identified in Table 1 will also be stockpiled for treatment.

- The stockpiled soils will be treated by an on-site low temperature thermal desorption unit. The off-gas from the process will be treated by carbon adsorption or other appropriate control technology prior to discharge.

- Pending the outcome of metals analyses, the need for off-site disposal or solidification/stabilization of U-Crest ditch sediments will be determined.

- Based upon achievement of the remediation goals, a selected portion of the site will serve as a CAMU for site remediation purposes. The treated soil/sediment from the low temperature thermal system and the decontaminated tanks and piping will be disposed within the CAMU and graded as appropriate. Decontaminated tanks and piping may also be sent off site for recycling.

- Site restoration would include: demobilization of equipment; site grading and establishment of vegetative cover; surface water controls; site cleanup; pavement repair; restoration of the U-Crest ditch; decontamination of the staging/decon pads, etc.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this 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. As a component of the remedy, a CAMU has been designated for site remediation purposes. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the statutory preference for remedies that reduce toxicity, mobility, or volume as a principal element.

3/21/95
Date

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

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SECTION 1: SITE DESCRIPTION

The Westinghouse Electric Corporation site is located in Erie County, New York, at 4454 Genesee Street in the Town of Cheektowaga (refer to Figure 1). The site is bordered to the north and west by the Greater Buffalo International Airport, to the east by Holtz Drive (formerly Sugg Road) and to the south by Genesee Street. The site setting is urban/industrial.

The site is approximately one hundred and forty three (143) acres in size. A large plant building structure, approximately 2.5 million square feet in size, and several smaller buildings occupy a significant portion of the site. The remaining portion of the site consists of paved areas, roadways, railroads, and open grass/vegetated areas (refer to Figure 2).

The site is presently inactive with the exception of the Flying Tigers Restaurant, situated on the northern extreme of the site.

Operable Unit No. 1, which is the subject of this Record of Decision (ROD), consists of the identified areas of soil contamination at the site and sediment contamination in the U-Crest Ditch. The ditch, which is located across Genesee Street behind the Calspan facility, receives drainage from the southern portion of the site including the main plant building. Additionally, small volumes of contaminated sediment have been identified in Electric Manhole 5A (Area C), Storm Sewer Line 001 (Areas I & J), Storm Sewer Line 002 (Area K) and Storm Sewer Line 003 (Area M) which will also be addressed by this action. An Operable Unit represents a discrete portion of the remedy for a site which for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the contamination present at a site. The remaining operable unit for this site is described in Section 2.2 below.

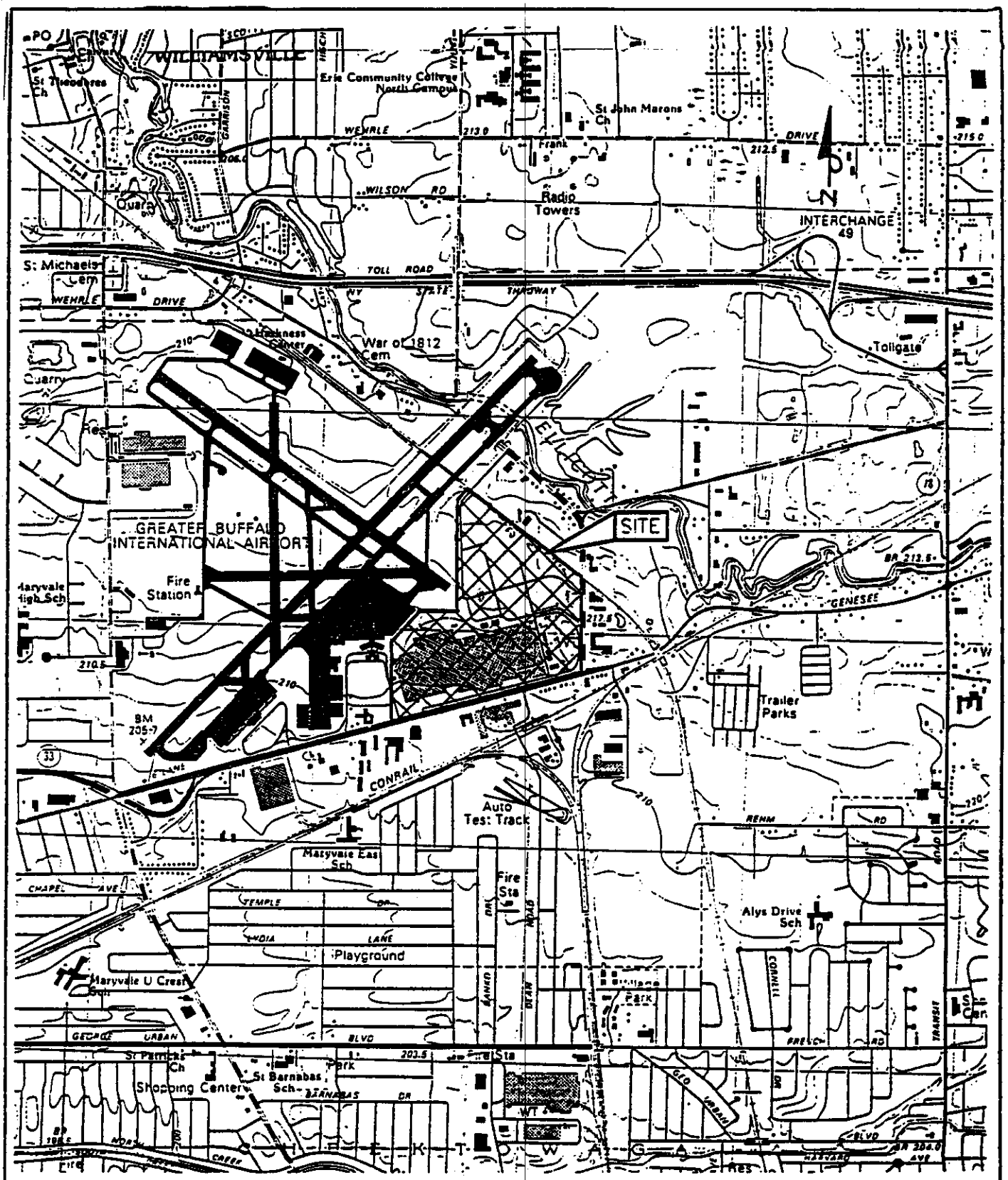
SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

1940: The existing facility was constructed and was operated by the Curtis-Wright Corporation for aircraft production.

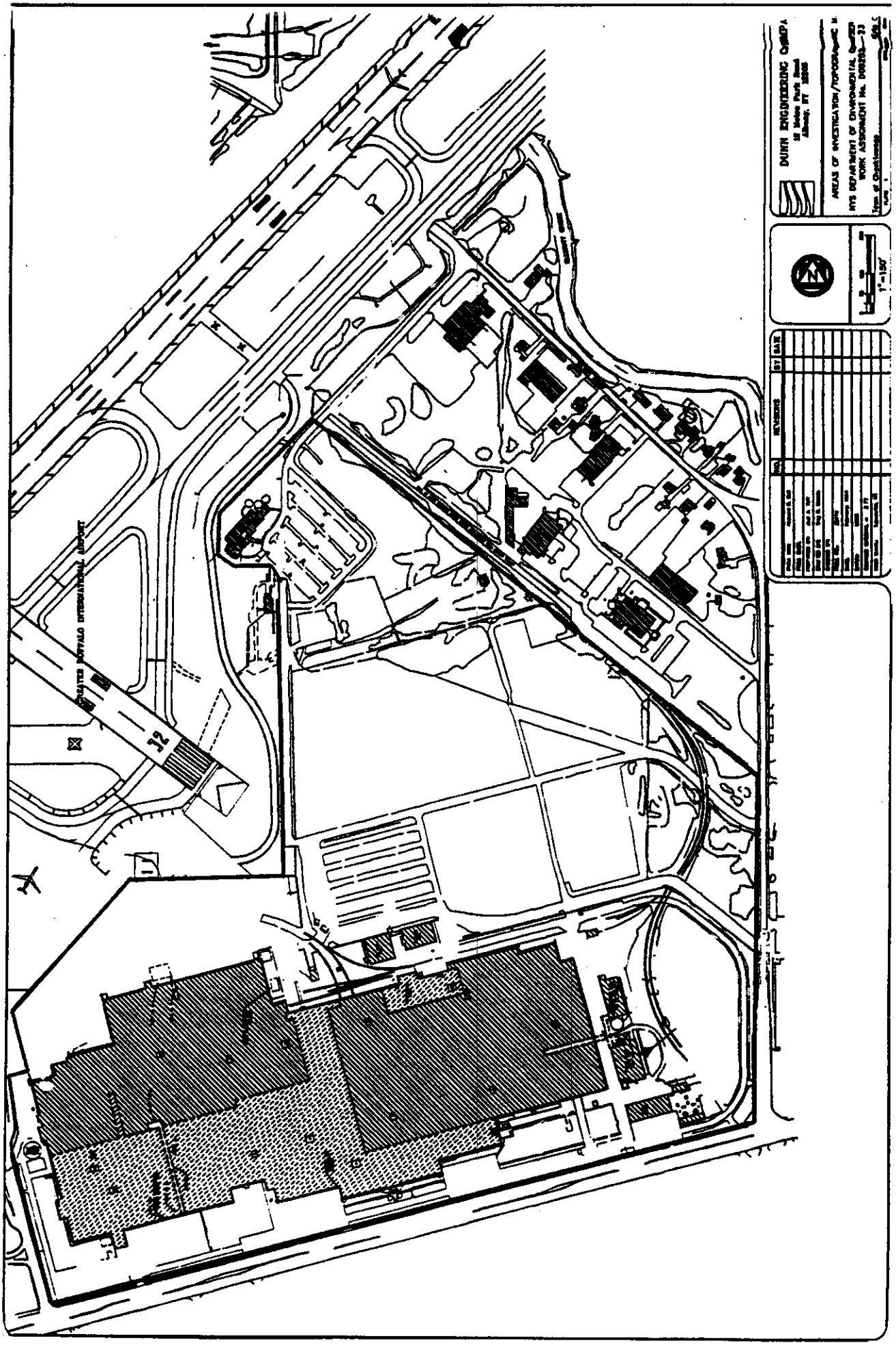
1946: The site was sold to the Westinghouse Electric Corporation.

FIGURE 1



DUNN ENGINEERING COMPANY 495 Commerce Drive Amherst, NY 14228	NYS DEPT. OF ENVIRONMENTAL CONSERVATION WORK ASSIGNMENT No. D002520-23 SITE LOCATION MAP WESTINGHOUSE REMIDIAL INVESTIGATION			
PROJECT NO. 35673	DATE Mar. 1994	DWG NO. 4A0087SD	SCALE 1"=2000'	FIGURE NO. 1

FIGURE 2



Westinghouse Electric Corporation Inactive Hazardous Waste Site

03/14/95

1946-84: Westinghouse Electric Corporation operated the facility for the manufacture of a variety of products including motors, generators, motor controls, gears, etc. but principal manufacturing processes included wire production; copper and aluminum casting; metal machining, fabrication, plating and finishing.

1984: Westinghouse Electric Corporation sold 11.4 acres on the northern portion of the property to the Niagara Frontier Transportation Authority (NFTA) and entered into an agreement to sell the remaining portion of the property to a private investor.

1985: The Erie County Industrial Development Agency (ECIDA) accepted all rights and interest in the facility from the owner. The Buffalo Airport Center Associates (BACA) subsequently entered into an agreement (lease with an option to buy) with the ECIDA.

1985-91: The BACA subleased portions of the building for warehousing, general office, and distribution operations.

1991: All BACA tenancies were discontinued.

2.2: Remedial History

1985-86: NYSDEC Phase I Investigation conducted. The Phase I concludes that further investigation is warranted.

1990-91: NYSDEC Preliminary Site Assessment (PSA) conducted. Based on the findings of the PSA, a Class 2 designation was assigned to the Westinghouse site, signifying that the site poses a significant threat to human health and/or the environment.

1992: After unsuccessful negotiations with Westinghouse Electric Corporation, the site was referred for action under the State Superfund Program, funded by the 1986 Environmental Quality Bond Act.

1993-94: NYSDEC Remedial Investigation (RI) conducted. The RI recommended the site be divided into two operable units to address the (1) soil and sediment contamination and (2) the groundwater/surface water contamination.

1994: NYSDEC Feasibility Study (FS) for Operable Unit No. 1, Soil and Sediments, completed. The FS for Operable Unit No. 2, Groundwater/Surface Water, is underway.

1994: At the request of the NYSDEC, the BACA implemented a voluntary removal of all PCB transformers at the site. A total of 25 transformers were removed from subsurface vaults within the facility.

As stated previously, Operable Unit No. 1 (OU-1) is the subject of this ROD. Operable Unit No. 2 will be the subject of a future ROD. A remedy will be selected to address the identified groundwater contamination problem. Groundwater beneath the main plant building has been

shown to be contaminated with a variety of contaminants attributable to past site operations. Because utilities no longer function at the facility, sumps which previously maintained/controlled shallow groundwater at the site have been shut down. The result has been the migration of contaminated groundwater into the site's extensive sewer network, thus enabling contamination to exit the site via storm water discharge to the U-Crest ditch. Operable Unit No. 2 will address this situation as well as identified groundwater contamination in the northern portion of the site.

SECTION 3: CURRENT STATUS

In response to a determination that the presence of hazardous waste at the Site presents a significant threat to human health and/or the environment, the NYSDEC has recently completed a Remedial Investigation/Feasibility Study (RI/FS).

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 two phases. The first phase was conducted in the summer of 1993 and the second phase was conducted in early 1994. A report entitled "Remedial Investigation/Feasibility Study Report, Westinghouse Electric Corporation Site", dated September 1994, has been prepared describing the field activities and findings of the RI in detail.

The RI activities consisted of the following:

- Soil Gas Investigation - A soil gas survey was conducted on selected portions of the site to help pinpoint areas of concern and select optimum locations for borings and monitoring wells. Grids were established and soil gas probes were installed at depths ranging from two to four feet. Soil gas/headspace analysis was conducted using an on-site gas chromatograph (GC), targeting eleven volatile parameters previously identified at the site. The GC was also used to analyze test pit soil samples and soil boring samples.

- Environmental Sampling - Sampling was conducted of storm sewers, sanitary sewers, outfalls, streams, ditches sumps, tunnels, vaults, surface soils, surface water and sediments.

- Test Pit Excavation - A total of one hundred test pits were excavated in eleven principal areas of investigation to assess the physical and chemical characteristics of subsurface soils and fill materials.

- Boring/ Monitoring Well Installation - Soil borings and monitoring wells were installed for analysis of soils and groundwater as well as to determine the physical properties of the soil and the hydrogeologic conditions.

To determine which media (soil, groundwater, etc.) contains contamination at levels of concern, the analytical data obtained from the RI was compared to applicable Standards, Criteria, and Guidance (SCGs) in determining remedial alternatives. Groundwater, drinking water and surface water SCGs identified for the Westinghouse site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of NYS Sanitary Code. For the evaluation and interpretation of soil and sediment analytical results, NYSDEC soil cleanup guidelines for the protection of groundwater, background conditions, and risk-based remediation criteria were used to develop remediation goals.

Based upon the results of the remedial investigation in comparison to the SCGs and potential public health and environmental exposure rates, certain areas and media of the site require remediation. These are summarized below. More complete information can be found in the RI Report.

The RI revealed the presence of several distinct areas of significant contamination (i.e. hot spot areas) in the vicinity of the main plant building. These areas (Areas I, J, K and M) were formerly used for manufacturing operations and/or tank storage. The levels of contaminants in soil in these areas supports that they are primary contributors to the contamination detected in site groundwater. These hot spot areas are acting as a continuing source to the contamination beneath the building, which ultimately leaves the site via the storm sewer network. The RI also revealed the presence of several additional areas of soil contamination (Areas O, P and Q) in the northern portion of the site. The origin of this contamination is believed to be dumping/disposal. While these areas are also acting as sources to the groundwater contamination, they are less clearly defined. Additionally, the RI revealed the presence of contamination in the U-Crest drainage ditch. The ditch receives storm water discharge from the southern portion of the site. Contamination has been identified, primarily PCBs, in an approximate 2,000 foot section of the ditch.

The remedy for OU-1 is intended to address the hot spot soil areas and the sediment contamination in the U-Crest ditch and the sewer line. Additionally, sediments in Manhole 5A (Area C) and Sump No. 4 (Area M) require action. The soil contamination in the northern portion of the site (Areas O, P and Q) has been deemed more appropriately handled as a component of OU-2. OU-2 is intended to address the site's groundwater contamination problem.

In summary, based on the results of the RI, six of the identified areas of investigation have been incorporated in OU-1. Soil contamination was identified in Areas I, J, K and M, and sediment contamination was identified in Areas C, E and M. The locations of these Areas of Investigation are presented on Figure 3. Additionally, a number of abandoned tanks remain in place in areas I, J and K. The tanks do not contain product but in several instances have been filled in place (sand or concrete). These tanks and associated piping will be removed as part of OU-1. Soil contamination was also identified in three additional areas of investigation. Areas O, P and Q, however, will be assessed as a component of OU-2, in conjunction with the identified groundwater contamination problems in these areas.

The extent and severity of soil and sediment contamination within each area was determined by the collection of numerous samples which were subjected to chemical analysis. The laboratory results were used in conjunction with field observations and on-site screening of recovered samples (with an HNU and GC) in order to delineate the areal and vertical extent of contamination.

A summary of the contaminated soils and sediment identified within each area of investigation associated with OU-1 is presented in Table 1. The table describes the area of concern, the primary contaminant/waste groups detected, the assessed source area of contamination and the estimated volume of contaminated media within each area. Also listed in Table 1 are estimated areas and volumes of contaminated soil in Areas O, P and Q. As discussed above, these areas will be addressed as a component of OU-2.

The estimated volume of a contaminated media was developed by comparing the levels of contamination detected within each Area of Investigation to recommended cleanup objectives (ref. TAGM No. HWR-94-4046). Table 2 lists the remedial objectives.

3.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) are conducted at sites when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

Several IRMs were implemented during the RI field program at the direction of the NYSDEC. IRMs were undertaken at three areas on the project site, which were identified during the PSA, in order to prevent or reduce the spread of contaminants or limit the need for more complex and costly future remedial actions. These IRMs included: removal of the underground varnish tank located south of the Heat Treatment/Plating Area (Area C); removal of the septic tank in the Gunnery Range (Area O); and pumping out of the Sump No. 4 located adjacent to the Underground Mixing Room (Area M). The work was performed on June 30 and July 1, 1993 (refer to Figure 3 for locations).

Based on the findings of the RI, an additional IRM was undertaken in April, 1994. The RI revealed elevated levels of contaminants, including volatile compounds, in the storm sewer system within the main plant building. Similar contaminants were also detected outside the building in the immediate proximity of former tank storage areas (Areas I, J, and K) and the underground mixing room (Area M). Using mechanical plugs, storm sewer laterals which pass near these areas were plugged as an IRM to preclude the flow of contaminated groundwater into storm sewers from these areas.

3.3 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the health risks can be found in Section 6 of the RI Report.

An exposure pathway is the process by which an individual comes into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

An evaluation of the RI and exposure assessment data indicated that the significant potential exposure points associated with the site would be: 1) the direct contact with subsurface soil by future construction workers; 2) the direct contact with surface soils by site trespassers and future on-site workers; 3) the direct contact with nearby surface water and sediments from the U-Crest ditch by nearby residents; 4) the direct contact with surface water from the flooded areas within the main building by site trespassers and future construction workers; 5) the direct contact with surface water and sediments from the storm water and sanitary sewer systems by future construction workers; and 6) the direct contact with surface water and sediments in the electric manhole 5A (Area C) by future on-site workers.

3.4 Summary of Environmental Exposure Pathways:

This section summarizes the types of environmental exposures which may be presented by the site. The Habitat Based Assessment included in the RI (Section 5) presents a more detailed discussion of the potential impacts from the site to fish and wildlife resources.

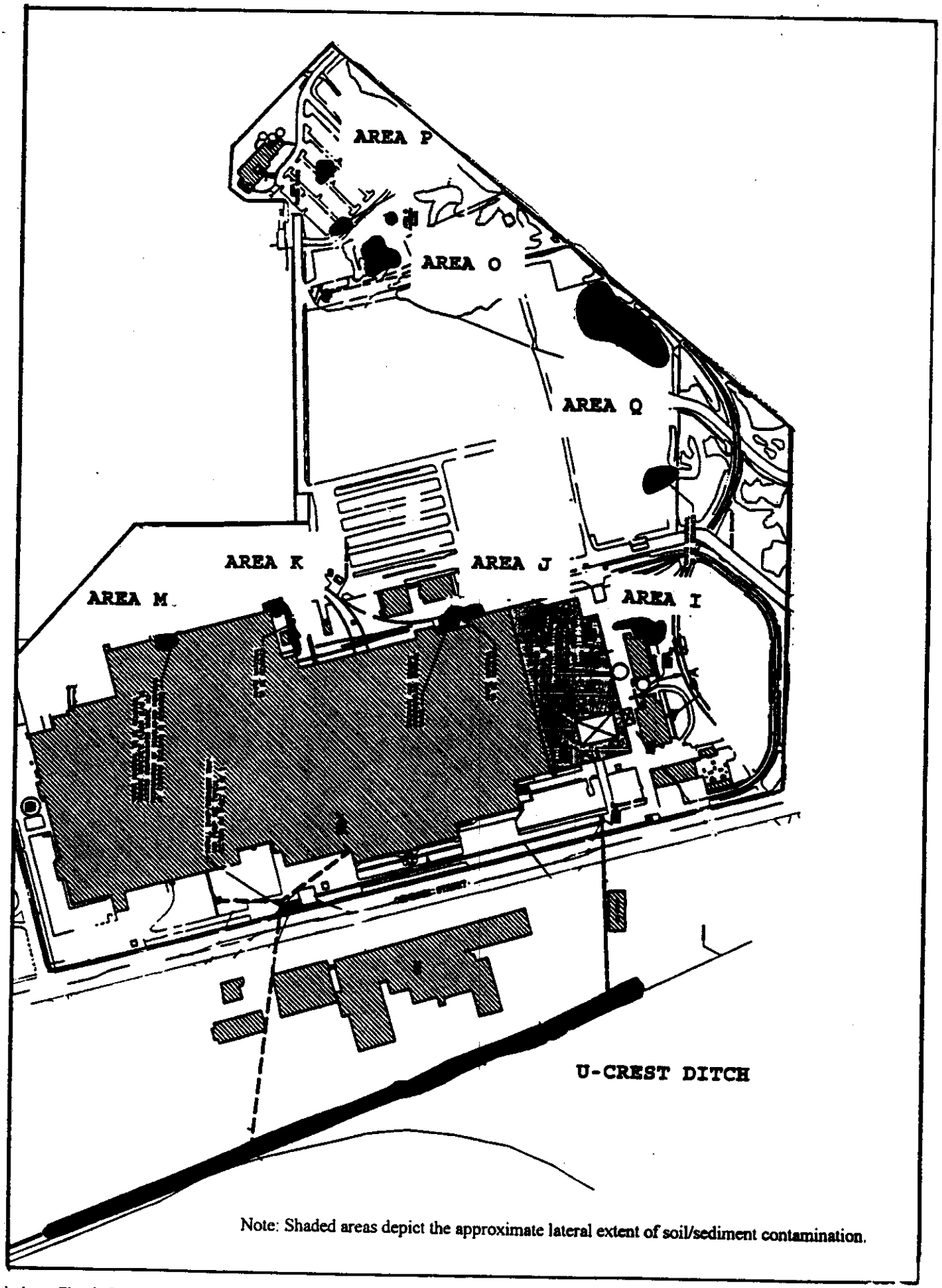
The Fish and Wildlife Impact Analysis (FWIA) determined that there are two habitats which could potentially be impacted by site related contaminants: Ellicott Creek and the U-crest ditch.

Ellicott Creek is a high quality aquatic habitat whereas the U-crest ditch represents a low quality habitat. Due to the industrial nature of the site, impacts to the terrestrial environment are anticipated to be minimal.

Comparison of Ellicott Creek surface water and analytical results with applicable criteria indicated that surface waters have not been impacted by site related contaminants. Data indicate that no further investigation or any remedial efforts are necessary in Ellicott Creek.

Surface water samples collected from the U-Crest ditch indicated that surface water quality in the vicinity of the discharge points to the ditch is impacted by site related contaminants. However, the contaminant levels detected in a sample collected approximately 800 feet downstream of the 002/003 discharge point generally exhibited lower concentration. Sediment samples from the U-crest ditch have been impacted by site related contaminants. Although the U-Crest ditch is a poor quality aquatic habitat, excavation of the sediments in the ditch has been recommended.

FIGURE 3



Note: Shaded areas depict the approximate lateral extent of soil/sediment contamination.

Table 1
Westinghouse Electric Corporation Site
Summary of Remedial Investigation Findings

Area of Concern	Contaminated Media	Primary Contaminant(s) Waste Group Detected	Contaminant Range (ppm)[1]	Estimated Area and Volume of Contamination
C - Electric Manhole 5A	Sediment	Volatiles Semivolatiles	23 - 440 <1 - 2.3	Areal Extent: 2'x2' Est. Volume: minimal
E - Storm sewer Line 001	Sediment	Semivolatiles PCBs Metals	<1 - 690 1.5 <1 - 5330	Est. Volume of Sediment in Pipe Network: 1-5 cu. yds.[2]
E - Storm sewer Line 002	Sediment	Volatiles Semivolatiles PCBs Metals	1.4 - 5.7 1.2 - 54 2.8 - 5.6 <1 - 3780	Est. Volume of Sediment in Pipe Network: 1-5 cu. yds.[2]
E - Storm sewer Line 003	Sediment	Volatiles Semivolatiles PCBs Metals	1.6 - 97 6.4 - 1800 1.7 <1 - 2950	Est. Volume of Sediment in Pipe Network: 1-5 cu. yds.[2]
E - U-Crest Ditch	Sediment	Semivolatiles Pesticides PCBs Metals	<1 - 96 <1 1.4 - 6.9 <1 - 125000	Areal extent: 2000' x 15' Avg. Depth: 1' Est. Volume: 1111 cu. yds. Est. Volume of Sediment in Pipe Network: 1-5 cu. yds.
I - Oil Storage Area	Subsurface Soil	Volatiles	<1 - 100	Area Extent: 85'x100' Avg. Depth 18' Est. Volume: 5667 cu. yds.
J - Underground Storage Tank Area	Subsurface Soil	Volatiles Semivolatiles	3.8 - 2400 <1 - 7.3	Area Extent: 55'x90' Avg. Depth 10' Est. Volume: 1883 cu. yds.
K -Hazardous Waste Storage Area	Subsurface Soil	Volatiles Semivolatiles	2 - 530 <1 - 8.5	Areal Extent: 50'x50' Avg. Depth: 12' Est. Volume: 1111 cu. yds.
M -Underground Mixing Room Sump No. 4	Sediment/ Waste Product	Volatiles	170 - 1300	Area Extent" 2'x2' Avg. Depth: 1' Est. Volume within sump structure: 0.2 cu. yds.

Table 1 (cont.)
Westinghouse Electric Corporation Site
Summary of Remedial Investigation Findings

Area of Concern	Contaminated Media	Primary Contaminant(s) Waste Group Detected	Contaminant Range (ppm)[1]	Estimated Area and Volume of Contamination
M - Underground Mixing Room	Subsurface Soil	Semivolatiles	14	Areal Extent: 35'x60' Avg. Depth 10' Est. Volume: 778 cu. yds.
O - Gunnery Range	Subsurface Soil	Volatiles Semivolatiles	-- <1	Areal Extent: 100'x100' Avg. Depth: 5' Est. Volume: 1852 cu. yds.
P - Flying Tigers Restaurant Area	Subsurface Soil	Semi-volatiles	1.2 - 1.6	Areal Extent: 50'x50' Avg. Depth: 5' Est. Volume: 463 cu. yds.
P - Flying Tigers Restaurant Area	Subsurface Soil	Volatiles	1.5 - 13	Areal Extent 60' x 40' Avg. Depth: 10' Est. Volume: 889 cu. yds.
Q - Railroad Track/ Western Parking Lot	Subsurface Soil	Volatiles	8.3	Area Extent: 110'x50' Avg. Depth 6' Est. Volume: 1222 cu. yds.
Q - Railroad Track/ Western Parking Lot	Surface Soil/ Waste Piles	Semivolatiles PCBs	<1 - 1.3 1.7 - 5.2	Est. Volume: 10-20 cu. yds.

1 Range of contaminant concentrations which exceeded remedial objectives.
2 Includes pipe network between outfall stations and ditch discharge pts.

TABLE 2
Westinghouse Electric Corporation Site
Remedial Objectives for Soil and Sediment
(based on protection of groundwater quality)

CONTAMINANT	CLEANUP OBJECTIVE (ppm)
VOLATILES	
1,1,1-Trichloroethane	1.14
Trichloroethene	1.05
Toluene	2.25
Ethylbenzene	8.25
Total Xylenes	1.8
SEMI-VOLATILES	
4-Methylphenol	1.35
PCBs	
Aroclor-1254	10(1.0-Sediment)
Aroclor-1260	10(1.0-Sediment)
METALS	
Arsenic	10 or SB
Chromium	50 or SB
Lead	500

KEY

MDL - Method Detection Limit PPM - Part per Million SB - Site Background

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include the Westinghouse Electric Corp., the Niagara Frontier Transportation Authority and the Buffalo Airport Center Associates.

The PRPs failed to implement the RI/FS at the site when requested by the NYSDEC. After the remedy is selected, the PRPs will again be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRPs, the NYSDEC will evaluate the site

for further action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State has incurred.

SECTION 5: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. These goals are established under the overall goal of meeting all standard, 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:

- Reduce the migration and concentration of contaminants contained in the soils to levels which are not anticipated to leach and result in exceedence of New York State Groundwater Standards (ref. Table 2).

- Prevent and/or minimize direct contact/ingestion of contaminated soils in excess of remedial objectives (ref. Table 2).

- Prevent the release and reduce the concentration of contaminants contained in the U-Crest Ditch sediments to levels which will not impact surface water quality standards or the aquatic ecosystem (ref. Table 2).

- Remediate the contaminated soil in such a manner that minimizes any possible direct human or environmental contact; and treat the contaminants to levels which can be classified as non-hazardous and/or attain levels which meet the soil cleanup objectives.

SECTION 6: SUMMARY OF THE EVALUATION OF ALTERNATIVES

Potential remedial alternatives for Operable Unit No. 1 at the Westinghouse site were identified, screened and evaluated in a Feasibility Study. This evaluation is presented in the report entitled *"Remedial Investigation/Feasibility Study Report, Westinghouse Electric Corporation"*, dated September, 1994. A summary of the detailed analysis follows.

6.1: Description of Alternatives

The potential remedies discussed below are intended to address the contaminated soils in areas I, J, K and M and sediments in Areas M (Sump No. 4), Area C (manhole 5A) and Area E (the storm sewer line and the U-Crest ditch).

Alternative No. 1 - No Action

The no action alternative is evaluated as a procedural requirement and as a basis for comparison. It would require continued assessment only, allowing the site to remain in an unremediated state. Under this alternative the site would remain in its present condition and human health and the environment would not be provided any additional protection. There would be no cost associated with this alternative.

Alternative 2 - Limited Action

Present Worth	$ 644,000
Capital Cost:	$ 87,500
Annual O&M:	$ 32,000
Time to Implement	6 months - 1 year

The Limited Action Alternative would be comprised of the following five components:

- Improve and maintain the existing fence around the perimeter of the site.
- Impose deed, zoning and property transaction restrictions, to the extent practicable.
- Increase public awareness of the contamination problems at the site and the risks associated with the contamination.
- Conduct a continuous or periodic sampling program to monitor the contamination levels of the impacted media(s).
- Prior to the planned demolition of the various building structures, the existing storm sewer system would be decommissioned and terminated within the confines of the property boundaries of the site.

The components of this alternative are assumed to be continued for a duration of 30 years. The status of the nature and extent of the contamination would be assessed based on the results of the monitoring program.

Alternative 3 - On-Site Containment

Present Worth	$ 5,589,000
Capital Cost:	$ 5,106,000
Annual O&M:	$ 32,000
Time to Implement	6 months - 1 year

On-site containment would involve construction of a landfill cell within the site boundaries. The selected area would have to be declared as a "Corrective Action Management Unit" (CAMU). The CAMU rule is a federal regulation designed to promote on-site remediation and reduce off-

site disposal of hazardous wastes. The CAMU provision in this instance, would waive the Landfill Disposal Restriction (LDR) requirement for pretreatment of the waste.

All contaminated soil and sediments (estimated volume: 13,150 cubic yards) would be excavated, dewatered as necessary, and disposed within the containment cell. Existing underground storage tanks and associated piping would also be removed during the excavation and transported to the cell. The landfill would have to be constructed in accordance with Federal and State requirements. The major requirements of such landfills include an impervious cap; a double liner; a leachate detection, collection and removal system; run-on and run-off control systems; and wind dispersion controls.

The landfill's features (cap, liner, etc.) would reduce direct exposures, infiltration of precipitation, and migration or leaching of residual contamination. The site would be periodically monitored and inspected to ensure the containment features remain functional. Access to the site and future use would be restricted to protect the containment structures.

Alternative 4 - Ex-Situ Soil Vapor Extraction

Present Worth	$ 4,462,000
Capital Cost:	$ 4,462,000
Annual O&M:	$ 0
Time to Implement	1-2 years

Ex-Situ Soil Vapor Extraction involves the physical removal of the contaminants from the soil and sediments by inducing air flow through the soil matrix. The flowing air strips volatile compounds from the solids and carries them to the extraction well/pipes by the use of a vacuum. The recovered vapors would be subject to treatment.

The alternative would involve the stockpiling of the soil and sediments within a temporary structure. The contaminated media would be subsequently placed in windrows (piles). Perforated piping would be located horizontally in the lower and upper portions of the windrow, which would be covered by a plastic liner material. Warm air would be blown into the lower perforated pipe. The vapors would be collected from the upper perforated pipe by a vapor extraction system. The vapor stream would be treated by carbon adsorption prior to discharge to the atmosphere.

Once the remedial criteria are achieved, the treated residuals would be disposed within a designated area at the site.

Alternative 5 - On-Site Thermal Desorption

Present Worth	$ 5,818,000
Capital Cost:	$ 5,818,000
Annual O&M:	$ 0
Time to Implement	6 months - 1 year

Thermal desorption is an ex-situ process that uses direct or indirect heat exchange to vaporize organic contaminants from solid and semisolid matrics. On-site thermal desorption involves the thermal separation of the organic contaminants from the soil and sediments. The contaminated media would be excavated and heated in the treatment unit to evaporate the organic contaminants. The evaporated organics would subsequently be treated in an afterburner or condensed for off-site destruction.

The treated media would be disposed within a designated area at the site. Any uncondensed combustion gases would be recirculated through the unit, with any remaining portion treated by activated carbon, prior to venting to the atmosphere.

Alternative 6 - Off-Site Incineration

Present Worth	$ 26,306,000
Capital Cost:	$ 26,306,000
Annual O&M:	$ 0
Time to Implement	6 months - 1 year

Off-site incineration would involve excavating the contaminated soils and sediments and transporting them off site for incineration at a permitted facility.

The ash residues from the incinerator would be disposed at a permitted off site landfill.

Alternative 7 - On-Site Incineration

Present Worth	$ 16,523,000
Capital Cost:	$ 16,523,000
Annual O&M:	$ 0
Time to Implement	1-1.5 years

On-site incineration would involve the thermal destruction of the organic contaminants in the soil and sediment. A transportable incinerator would be set up on the site and would process contaminated soils and sediment after they are excavated. The residuals from the incinerator would be disposed in a designated area at the site.

The incinerator would be designed and operated under all applicable regulations for hazardous waste incinerators. Air pollution control devices would treat the gaseous emissions from the incinerator so that no pollutants are emitted at unacceptable levels.

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 detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study.

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.

   Of the alternatives, No Action and Limited Action would not comply with State Standards, Criteria and Guidelines (SCGs). The remaining alternatives each would satisfy applicable 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.

   Of the alternatives, No Action and Limited Action would not be protective of human health and the environment. The remaining alternatives, however, would all be protective of human health and the environment.

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

3. Short-term Effectiveness. 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.

   There would be no short term effects if no actions were taken and relatively few with any of the remaining alternatives. The short term effects for the various construction-related alternatives are primarily related to dust suppression, worker safety and other general protective measures, with the degree of handling of the material and possible air emissions providing the significant difference between alternatives. The alternatives ranged in their degree of possible impact from off-site incineration which presented the least handling to Soil Vapor Extraction (SVE), which due to the increased handling of the contaminated material, represented the highest. Air emissions were of greatest concern for on-site incineration and least again for off-site incineration. In all instances controls can be incorporated into the project which will mitigate these possible impacts. The time-frame associated with the implementation of the various remedial alternatives ranged to a maximum of two years.

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.

The No Action and Limited Action alternatives would not provide long term protection as they would not prevent future exposure to contaminated materials. On-Site Thermal Desorption, Soil Vapor Extraction and the Incineration alternatives would effectively provide long term protection. The On-Site Containment alternative, however, would rely on enforcement of easement restrictions as a means of protection. Enforcement of easement restrictions can be problematic. Operation and maintenance activities would also be required to insure the integrity of the impoundment is maintained, decreasing this alternative's ability to satisfy this criteria.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

   The No Action and Limited Action alternatives would not satisfy the reduction in toxicity, mobility and/or volume criteria. Because the Containment alternative would not involve treatment of the contaminated media, the toxicity and volume would not be reduced. The ability of Soil Vapor Extraction to effectively treat the contaminated material to the levels required by the remedial objectives is also questionable, in light of the soil's physical characteristics, thus possibly limiting the reduction in the toxicity of the waste compared to the other treatment alternatives. The remaining alternatives would satisfy this criteria.

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 personal and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

   The No Action alternative would be the easiest alternative to implement. On-site incineration would be the most difficult alternative to implement in light of system mobilization and complicated start-up procedures. Soil Vapor Extraction would also be difficult to implement from a technical standpoint, due to the site-specific physical characteristics of the soil which may hinder the ability of the Soil Vapor Extraction alternative to effectively treat the contaminated media. The physical characteristics of the site soils are clayey in nature which could present treatability problems. The remaining alternatives could each be implemented using standard construction techniques and available control technologies, although with varying degrees of effort and time.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is 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. The costs for each alternative are presented in Table 3 .

The No Action alternative would be the least costly with no cost followed by Limited Action as the next in cost. The limited action costs would not reflect the cost of the loss of future use of the property. Of the excavation and treatment methods, the least costly would be Soil Vapor Extraction, next would be the Containment alternative and On-Site Thermal Desorption. The highest priced alternatives are the incineration alternatives with On-Site Incineration at $16,500,000 and Off-Site Incineration at $26,500,000.

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is focused upon after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary" included as Appendix A presents the public comments received and the Department's response to the concerns raised. In general the public comments received were supportive of the selected remedy. Several comments were received, however, pertaining to the disposition of metals-containing sediments onsite. To address this concern the remedy has been modified to include the provision for TCLP testing for the metals of concern. If the U-Crest ditch sediments (which will be segregated from the contaminated soil) fail TCLP analysis, the sediments will be disposed off site. If the sediments pass TCLP testing but do not satisfy the established remedial objectives for metals, the sediments will be subjected to solidification/stabilization treatment subsequent to thermal treatment.

   Another comment received, based on review of the PRAP, was the issue of off-site disposal for soils containing levels of contaminants below action levels. The issue has been addressed by modifying the remedy to include the provision for off-site land disposal of those materials which satisfy action levels currently. This will allow for land disposal, without prior treatment, of materials which satisfy this criteria. That is, should it be deemed cost-effective to pursue the option, those materials which do not require treatment under the LDRs and for which a disposal site can be identified, may be land-disposed off site.

   Finally, the most significant modification to the PRAP is the elimination of Areas O, P and Q from OU-1. These areas, which comprise an estimated volume of 4446 cubic yards of contaminated soil, will be addressed as a component of OU-2. OU-2 will evaluate remedies to address the identified groundwater contamination problem. The soil contamination in Areas O, P and Q will be addressed in conjunction with the evaluation of remedies, to address groundwater contamination in these areas.

TABLE 3
Remedial Alternative Costs

REMEDIAL ALTERNATIVES	COSTS
No Action	$ 0
Limited Action	644,00
On-Site Containment	5,589,000
Soil Vapor Extraction	4,462,000
Thermal Desorption	5,818,000
Off-Site Incineration	26,306,000
On-Site Incineration	16,523,000

SECTION 7: SUMMARY OF THE SELECTED ALTERNATIVE

Based upon the results of the RI/FS, and the evaluation presented in Section 6, the NYSDEC is selecting **Alternative 5, On-Site Thermal Desorption**, as the remedy for this site.

Alternative 5, On-Site Thermal Desorption, will: comply with the SCGs; be protective of human health and the environment; be effective in the long-term and permanent; and, relative to other potentially effective alternatives, be more easily implemented. Minimum uncertainties or expected technical delays are anticipated with Thermal Desorption, relative to the other technologies evaluated. Thermal Desorption will meet the RAOs for this site and will be consistent with the preference for remedies which permanently reduce toxicity, volume, or mobility.

The estimated present worth cost to implement the remedy is $5,818,000. This reflects the cost to construct/implement the remedy and no annual operation and maintenance costs, since post remedial monitoring is not anticipated since treatment will meet remedial objectives.

The elements of the selected remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and monitoring of the remedial program. This program will include additional sampling to identify and delineate areas of contamination where off-site disposal, in lieu of treatment, may be pursued based on the levels of contaminants present relative to LDRs.

2. Excavation of all contaminated soil and ditch sediments (estimated volume: 13,150 cubic yards), with transportation of the material to a dedicated on-site staging area. The ditch

sediments, due to their metals content, will be segregated from the contaminated soil and handled separately. Approximate areas to be addressed include Areas C, E, I, J, K and M (ref. Table 1). Final volumes and area to be remediated will be defined by the remedial objectives included on Table 2.

3. Dewatering of soil and sediments as necessary, with temporary storage or on-site treatment of accumulated water.

4. Excavation of underground storage tanks and associated piping in Areas I, J and K. The removed tanks and piping would be properly decontaminated. Any sediments from the piping or tanks, as well as the sediment from the areas identified in Table 1 will also be stockpiled for treatment.

5. The stockpiled soils will be treated by an on-site mobile thermal treatment unit. The off-gas from the process will be treated by carbon adsorption or other appropriate control technology prior to discharge.

6. Pending the outcome of metals analysis, the need for off-site disposal or solidification/stabilization of U-Crest ditch sediments will be assessed.

7. Based upon achievement of the remediation goals, a selected portion of the site will serve as a CAMU for site remediation purposes. The treated soil/sediment from the low temperature thermal system and the decontaminated tanks and piping will be placed within the CAMU and graded as appropriate. Decontaminated tanks and piping may also be sent off site for recycling.

8. Site restoration will include: demobilization of equipment; site grading and establishment of vegetative cover; surface water controls; site cleanup; pavement repair; restoration of aquatic environment along U-Crest ditch; decontamination of staging/decon pads, etc.

SECTION 8: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation (CP) activities were undertaken in an effort to inform and educate the public about the conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- A repository for documents pertaining to the site was established.

- A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.

- In July of 1993 a Fact Sheet was sent to the site's mailing list discussing the Remedial Investigation/Feasibility Study process. Included was a post card inquiry to gauge public interest in the site. Follow-up letters were sent to all respondents.

- In March of 1994 a notice was sent to the site's mailing list announcing an upcoming Public Meeting.

- In March of 1994 a Public Meeting was held to discuss the findings of the Remedial Investigation.

- In April of 1994 a Fact Sheet was sent to the residents in the vicinity of the U-Crest Ditch to discuss the PCB concentrations in the ditch sediments.

- In April of 1994 a Draft Protocol was developed at the request of the Town to provide a mechanism for communication between the Town, the NYSDEC and the NYSDOH, regarding anticipated work activities in the vicinity of the site.

- In September of 1994 a notice was sent to the site's mailing list announcing an upcoming Public Meeting.

- In October of 1994 a Public Meeting was held to discuss the Feasibility Study and the Proposed Remedial Action Plan (PRAP) for Operable Unit No. 1. The purpose of the meeting was to present findings, answer questions and accept comments.

- In March of 1995 a Responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

APPENDIX A

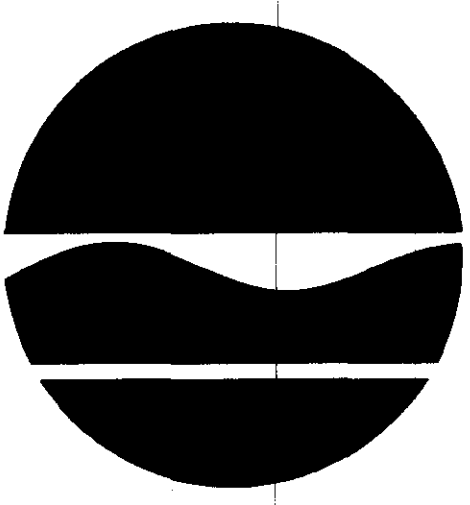
Westinghouse Electric Corporation
Inactive Hazardous Waste Site

Erie County, New York
Site No. 9-15-066

RESPONSIVENESS SUMMARY

Operable Unit No. 1
Contaminated Soil and Sediment

March 1995



Prepared by:

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation

RESPONSIVENESS SUMMARY

Westinghouse Electric Corporation Inactive Hazardous Waste Site
Operable Unit No. 1 - Soil and Sediment Contamination
Proposed Remedial Action Plan
Cheektowaga (T), Erie County
Site No. 9-15-066

The Proposed Remedial Action Plan (PRAP) for the Westinghouse Electric Corporation Site, Operable Unit No. 1, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on September 20, 1994. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil and sediment at the Westinghouse Electric Corporation site. The preferred remedy is Thermal Desorption.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on October 4, 1994 which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. Written comments were received from the Westinghouse Electric Corporation, the NFTA, the Curtiss-Wright Corporation and the Town of Cheektowaga Conservation Advisory Council.

The public comment period for the PRAP was to have ended on October 24, 1994. In a September 30, 1994 letter, the Westinghouse Corporation requested an extension to the comment period. Based on review of this request, the NYSDEC extended the comment period by thirty days. The comment period officially closed on November 23, 1994.

This Responsiveness Summary responds to all questions and comments raised at the October 4, 1994 public meeting and to the written comments received.

The following are the comments received at the public meeting, with the NYSDEC's responses:

Commentor: Councilman Tom Johnson:

> **COMMENT 1:** Regarding the protocol to be followed by Town and Fire Dept. personnel concerning the U-Crest ditch and the Westinghouse facility - they will not enter either place. The Town and I, as of this comment, are going on record asking for signage along

the ditch. Children live in the nearby subdivision and could enter the ditch and come in contact with the contamination. The Town and I prefer, support, and want the removal of all contaminated soils from the U-Crest ditch and the embankments along the ditch. The ditch should be restored by the State at a new width, if possible, to provide the Town with increased capacity. We do not want any contaminated soils to be returned to the ditch area.

RESPONSE 1: Posting signs along the affected section of the U-Crest Ditch is an issue which was raised by the Town of Cheektowaga at the public meeting in March of 1994. This concerns a matter of public health and accordingly was referred to the New York State Department of Health (NYSDOH). The NYSDOH evaluated this situation and deemed a mailing to residents in the vicinity of the ditch as an appropriate action. As stated in the April 1994 mailing, the NYSDOH recommends residents avoid any unnecessary activities in the ditch. The NYSDOH indicated that they do not consider the levels (of PCBs) in the ditch a health concern, barring direct contact or ingestion, and that posting warning signs was not necessary.

Operable Unit No. 1 incorporates the section of the ditch shown to be contaminated with site-related compounds. This section of the ditch extends from the easternmost Westinghouse discharge point to the area behind the Radisson Hotel. The proposed remedy calls for the excavation and treatment of these sediments. The treated sediment will not be returned to the ditch area, but disposed within a designated area at the site. While the proposed sediment removal should have the added benefit of increasing the ditch's capacity to some degree, a significant reworking or expansion of the ditch is beyond the scope of this project. Furthermore, such work would have limited impact on the overall capacity of the ditch since the length to be remediated is a relatively small percentage of the total ditch and its location at the extreme upstream end would have minimal impact on areas downstream.

COMMENT 2: There are areas downstream in the ditch that were previously (historically) excavated by Town personnel. Please interview the Town Engineering Department to find out where those soils were placed or hauled to or how they were placed on the embankments.

RESPONSE 2: The Town Engineering Department was contacted regarding this issue. The Town Engineer had no recollection of recent excavation activities in this area. He reported, however, that it was uncommon to haul away excavated material in such instances. He reported that dredged sediments from drainage ways are typically piled on the embankment. Several such piles were noted during inspections of the ditch and were sampled as part of the Remedial Investigation. The results are included in Section 4.5.4 of the RI report.

COMMENT 3: What was the result of testing near the Radisson?

RESPONSE 3: Testing of the U-Crest Ditch revealed sediment contamination in a limited section of the ditch, between the easternmost Westinghouse discharge point and the area approximately behind the Radisson Hotel. The primary contaminant of concern, PCBs, was detected at a maximum concentration of 6.9 parts per million (ppm). The level of PCBs detected behind the Radisson was 2 ppm for Aroclor-1254 and 2.2 ppm for Aroclor-1260, respectively. The remedial objective for each of these PCB compounds is 1 ppm.

COMMENT 4: The State should vigorously pursue Westinghouse to complete this effort.

RESPONSE 4: The Westinghouse Electric Corporation is one of the potentially responsible parties (PRPs) identified for this site. Subsequent to the issuance of the Record of Decision for this Operable Unit, Westinghouse and other documented PRPs will be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRPs, the NYSDEC will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all costs the State has incurred.

COMMENT 5: The decommissioning of the storm and sanitary sewer systems, etc. should commence as soon as possible. Any contaminated water should be trucked away until the sources of contamination are contained or removed. The sources of outflow from the Westinghouse facility to Town property should be stopped.

RESPONSE 5: The Remedial Investigation revealed that contaminated water is leaving the site through the existing storm and sanitary sewer systems. The water is a combination of contaminated groundwater and site runoff. A remedy for this problem is the subject of the Feasibility Study (FS) for Operable Unit No. 2, which is presently underway. The purpose of the FS is to determine the most suitable means of addressing the contaminated groundwater entering these systems, which is a large part of the problem. Such options as the decommissioning the sewer system, collection and treatment of the contaminated groundwater and the associated costs are being evaluated as part of this process. Because the southern storm sewer system serves as the primary source for the site's storm water runoff, however, including the main plant's (30 acre) roof, an immediate decommissioning of the sewer system is not feasible at this point in time. The Buffalo Sewer Authority (BSA) and the Town of Cheektowaga have been advised of the identified contamination problem.

COMMENT 6: I am opposed to on-site containment and on-site incineration. I would favor anything off-site, such as incineration or total removal of contaminated soils to a secure fill location. Last year, that was the decision in the Niagara Transformer facility, where PCBs flowed into a Town ditch system. I prefer a similar alternative, rather than

on-site storage of any materials.

RESPONSE 6: The Record of Decision for the Niagara Transformer site called for the excavation of PCB-contaminated soils and sediment with disposal of the excavated material at an off-site landfill. Excavation of the contaminated soil and sediments at this site with disposal of the entire volume at an off-site landfill is not considered appropriate given the primary contaminants of concern present, chlorinated solvents. Land Disposal Restrictions (LDRs), which are federal requirements governing the disposal of hazardous waste, dictate that given the levels of solvents present at this site, the majority of the soil must be subject to treatment prior to landfilling. Off-site Incineration followed by landfilling the residual was evaluated as a remedial alternative. The cost for off-site incineration is estimated at $26 million, more than four times the cost of the proposed remedy. Off-site disposal and off-site incineration, therefore, were not considered feasible alternatives.

COMMENT 7: I am interested in how on-site thermal desorption would work, especially since contaminants include heavy metals. How are the metals removed, absorbed, desorbed, re-adsorbed? It is similar to the Union Rd. site, where they are containing the source of contamination after dewatering. They have heavy metals there too, and there is no immediate disposition. How does thermal desorption deal with high lead, cadmium?

RESPONSE 7: Thermal Desorption is a remedial technique which effectively treats soils contaminated with volatile and semi-volatile organics. Volatile and semi-volatile organics were the primary contaminants detected in the majority of the identified areas of concern. Metals were detected less frequently. Elevated levels of metals were found only in the sewer system and in the U-Crest Ditch. Remedial objectives have been developed for all the contaminants of concern, including metals. The sediment from the sewer system and the ditch will be staged and handled separately from the contaminated soils. Sampling for metals will be undertaken and the sediments will be handled or disposed as described in the response to comment 10.

COMMENT 8: There is an oil storage area in Area I of the facility that has impacted the bedrock aquifer. What is the nature of contamination in the bedrock? What is the extent of it? Bedrock contamination is a major issue to the Town. I am not concerned that the downgradient wells are clean, because once the contamination is in the aquifer, it would be dispersing, and contaminating the entire aquifer. You should have wells circling the contaminated well.

RESPONSE 8: Area I is adjacent to the Oil Storage Building. Five underground solvent storage tanks have reportedly been removed from this area. Soil contamination by volatile organic compounds, primarily TCE, was detected as deep as the bedrock interface. Analysis of bedrock groundwater samples from this location (MW-23D) has also shown the bedrock aquifer to be contaminated with volatile compounds. Downgradient

groundwater sampling supports that to date, migration of these contaminants in the bedrock aquifer has been minimal. The source of this contamination in Area I will be removed as part of this remedy. Another component of the remedy is continued monitoring, to gauge the effectiveness of the removal. Contaminated groundwater will be specifically addressed in the FS for Operable Unit Number 2.

In addition to the former solvent tanks, three underground oil storage tanks, a gasoline tank and a diesel tank also remain in place, south of the Oil Storage Building. While the contamination detected in Area I is believed to be attributable to the now removed solvent tanks, the oil storage tanks pose an additional threat. The NYSDEC Division of Spills Management (DSM) has been advised of the petroleum storage tanks which remain on-site. The DSM is presently pursuing this issue.

COMMENT 9: I am very encouraged about the statements that the transformers have been removed by the PRPs.

RESPONSE 9: The removal of 25 transformers by the Buffalo Airport Center Associates, which were located in subsurface vaults (some of which were flooded) and which contained approximately 7,500 gallons of high-concentration PCB oil, is now complete.

COMMENT 10: I would feel better if the heavy metal contamination would be hauled away and/or if it were sealed up, like at Union Rd., so it cannot be re-contaminating the Town. Why not take the heavy metals out when you take the extracts from the thermal desorption process?

RESPONSE 10: Based on further evaluation, the remedy has been modified to incorporate the following approach for the sediment in the U-Crest ditch and the sewer system: The sediments from the U-Crest ditch and the sewer system will be segregated from the contaminated soil and handled separately. Initially the sediments will be subject to Toxicity Characteristic Leaching Procedure (TCLP) analysis for the metals of concern. If this material fails TCLP testing, the soil will be disposed off-site at a permitted hazardous waste disposal facility. If the material passes TCLP analysis, it may either be subject to thermal treatment or, if applicable, off-site disposal with other non-hazardous level soils. Subsequent to the treatment process the sediments will be sampled and analyzed. If this analysis reveals that the metals concentrations exceed the remedial objectives, the material will be subject to solidification/stabilization prior to disposal in the designated disposal area. This process will involve the addition of cement or other pozzolanic compounds to eliminate the threat of leaching.

COMMENT 11: The Town will notify DEC and/or DOT regarding problems in the ditch -- if there is an emergency, a spill, or a fire, etc.

RESPONSE 11: In accordance with the draft Communication Protocol between the Town of Cheektowaga, the NYSDEC and the NYSDOH, the Town should notify the NYSDEC if any unusual material or unusual conditions are encountered when working in the ditch. In addition, any spill which enters the ditch must also be reported directly to the NYSDEC Division of Spills Management.

COMMENT 12: Will you desorb the PCBs and haul the extracts away?

RESPONSE 12: The Thermal Desorption process will treat the PCBs present. The process involves the heating of the contaminated media, volatilizing the contaminants from the soil. Once separated from the soil, the volatilized gases are condensed, the PCBs recovered, and the remaining off gases are treated by the unit's air pollution control system. The condensate and any residuals from the pollution control system will be properly disposed at an off-site facility.

COMMENT 13: What reabsorption medium will be used for the PCB areas? What will the medium be for other contaminants? Carbon is not that effective.

RESPONSE 13: The process or technology used to capture or destroy the volatilized compounds is specific to the Low Temperature Thermal Desorption (LTTD) unit selected. Such systems may include a fabric filter, afterburner and gas scrubbing system or a bag filter, condenser and carbon adsorption system. The net result is air emissions at acceptable levels. The unit selected and its associated air pollution control system are Remedial Design considerations.

COMMENT 14: Are you going to back-flush storm utilities or flush them down to the U-Crest ditch? How will you capture the contaminants at or before they reach the ditch?

RESPONSE 14: The storm sewers would likely be flushed toward the U-Crest, however, sediment traps would be installed at the discharge points to capture the contaminated sediment. This flushing would also take place prior to the removal of the contaminated ditch sediments.

COMMENT 15: The site has a substantial foundation. The tunnels can also flood. If you can remediate the soils, the Town is very interested in the foundation of the Westinghouse building for use as a storage/retention basin for the Town and the airport. Please consider this. They have flood impacts at the airport, and want some additional capacity for water runoff to the U-Crest ditch.

RESPONSE 15: The groundwater beneath the footprint of the building is contaminated. The groundwater problem is the subject of Operable Unit No. 2. While it is likely that the slab may remain in-place, utilization of the foundation as a retention basin risks the

possibility of contamination of the storm water by the contaminated groundwater. It is therefore unlikely that such a usage would be deemed advisable.

COMMENT 16: Does NFTA wanting the property help to move things along to get the site listed on the State Superfund (SSF)? They'd be happy if the project stayed funded by SSF, if it meant it would happen faster.

RESPONSE 16: The desire of the NFTA to acquire the property can expedite the process only to the extent that cooperation by a PRP can accelerate negotiations and/or remediation.

COMMENT 17: I have to report one call received from a woman on Surfside Drive. Her dog died of cancer; the dog used to drink water from the U-Crest ditch. Does the water in the ditch pose a health problem? Please have someone contact this woman.

RESPONSE 17: A representative from the NYSDOH has contacted this woman. Noting that the U-Crest Ditch has been used extensively for industrial drainage, it was explained that the impact, if any, from the ditch water would be difficult if not impossible to determine. The woman stated she had two dogs, one of which was fine, and that she doesn't believe the ditch caused the death of her dog. In their April 1994 mailing, the NYSDOH recommends that unnecessary activities be avoided in the affected section of ditch.

Commentor: Joe Frazer:

COMMENT 18: How much cyanide was found? What is the discrepancy between the historical reports and the analytical data? There is flyash buried on the property. Did you contact any former employees to find out what they know? I talked to two people who were willing to come and show you where stuff was buried. Were the people you spoke to from Westinghouse supervisors or maintenance people, or what?

RESPONSE 18: The NYSDEC conducted a Preliminary Site Assessment (PSA) at the Westinghouse Electric Corporation Site prior to conducting the RI. As part of the PSA, former Westinghouse employees were interviewed about past operations and disposal practices. The positions of these employees ranged from maintenance personnel to management, however, their identities have been kept confidential. These individuals described past disposal practices and indicated on-site disposal had occurred. The areas described were investigated as part of the PSA and part of the RI. In some instances analytical data supported the reports by the past employees and in some instances no evidence of disposal could be found. Historical reports discuss the alleged disposal of cyanide salts on-site. In light of these reports, samples collected during the PSA and the

RI were analyzed for cyanide. Cyanide was not detected in either investigation, therefore the disposal could not be confirmed.

COMMENT 19: Cadmium is a carcinogen. Will there be dust prevention when you are working at the site? Will the people on Aero Drive be protected?

RESPONSE 19: A Health and Safety Plan (HSP) will be developed as a component of the Remedial Design. The purpose of the HSP is to insure appropriate safety measures (such as dust suppression, air monitoring, etc.) are implemented for both the on-site workers and the public.

COMMENT 20: Was the parcel where the new airport tower is located checked? One person I talked to told him hazardous waste is there too.

RESPONSE 20: The parcel of land on which the new airport tower is located was not part of the site. However, concerns about the proximity of the Westinghouse Electric Corporation site and the possibility of (off-site) disposal have been voiced previously. A meeting was held with representatives from the NYSDEC, the Niagara Frontier Transportation Authority (NFTA), the Federal Aviation Administration (FAA) and the Air Traffic Controllers Association in June of 1994 to discuss these issues. An engineer from the FAA was present who discussed the condition of the property prior to and during construction of the new facility. He noted that the only fill encountered during the construction of the facility was during construction of the access road (near Holtz Drive) and it consisted of concrete construction and demolition (C&D) debris. It was the basic conclusion by the parties at the meeting, considering the findings of the investigations to date and the information from the construction of the facility, that no direct routes of exposure exist that presently affect the staff at the facility. There is no evidence of contamination or disposal relating to the Westinghouse Electric Corporation site, on the FAA property.

COMMENT 21: This is a legal issue. Instead of going in and negotiating with Westinghouse, why not just take them to court now and get them to pay? You already have a whole legal file on them.

RESPONSE 21: Environmental Conservation Law dictates the procedure to be followed during the remedial program at listed hazardous waste disposal sites. This procedure requires that the PRPs be given the option to implement the ROD and that the NYSDEC enter into good faith negotiations to this end. If negotiations fail or the PRP(s) is unwilling to implement the remedy, the site can be referred for action under the State Superfund. At this point, the New York State Department of Law can and will initiate appropriate legal actions for the recovery of the State's costs.

Commentor: Dan Pyanowski:

COMMENT 22: I am a representative from the Town Environmental committee. Regarding the metals, I would like to see the return on investment figures. I would like the heavy metals from the U-Crest ditch and in the sewers taken away and buried someplace else. If that option costs a couple hundred thousand dollars more, versus a couple million, I would like it taken away rather than left on site.

RESPONSE 22: Refer to response number 7.

COMMENT 23: What sort of temperatures does thermal desorption operate at? So, there is no combustion?

RESPONSE 23: Thermal Desorption, more commonly referred to as Low Temperature Thermal Desorption (LTTD), operates at temperatures less than 1000 degrees Fahrenheit, typically at ranges from 500-800 degrees. The temperature may be higher based on the percentage of semivolatiles present. The object of the process is to induce volatilization of the contaminants, not combustion.

COMMENT 24: Regarding the water from dewatering process -- what treatment system will be used to treat the water before it is put through the thermal desorption unit?

RESPONSE 24: Water from the dewatering process will be treated to levels established consistent with the type of discharge proposed. The treatment method to be employed is an element of the Remedial Design, but common methods include air stripping and/or activated carbon filtration, depending on the compounds anticipated in the waste stream.

COMMENT 25: Regarding the work on the transformers that was just completed -- was the water treated? How?

RESPONSE 25: The water pumped from the transformer vaults as part of the recently-implemented transformer removal was treated prior to discharge, utilizing activated carbon filtration.

COMMENT 26: You mentioned an IRM to close off the sewer system. Is that part of this operable unit or part of Operable Unit no. 2?

RESPONSE 26: As an IRM, mechanical plugs were installed in the sewer laterals which drained the identified areas of contamination, Areas I, J, K, and M, to attempt to limit the migration of contamination from these areas via the storm sewers. The plugs were installed in April of 1994 and the effectiveness of this effort has been monitored via monthly sampling events. The results of this IRM will be discussed in the FS for Operable

Unit No. 2.

COMMENT 27: Please give some background regarding the responsibility of past and present owners, and why the State is doing the funding now.

RESPONSE 27: Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators of the site as well as waste generators and/or haulers. The PRPs failed to implement the RI/FS at the site when requested by the NYSDEC and the RI/FS was subsequently implemented using the State Superfund. The PRPs will again be contacted to assume responsibility for the remedial program, subsequent to the issuance of the Record of Decision. If an agreement cannot be reached with the PRPs at that time, the NYSDEC will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the State for the recovery of all response costs the State has incurred.

COMMENT 28: Who will pay for the general decon of the interior of the building prior to demolition?

RESPONSE 28: The general decontamination of the interior of the building prior to the demolition is the responsibility of the party undertaking the demolition. The demolition of the plant building is not a component of the proposed remedy.

COMMENT 29: In the report, you mention moving 17,000 yards of material. When would you start and how long would it take? When would the ROD be issued?

RESPONSE 29: The issuance of the ROD for Operable Unit No.1 is anticipated by early 1995. Subsequent to the issuance of the ROD, negotiations with the PRPs to perform the necessary design and construction to implement the remedy will be initiated. This process could take approximately one year. The remedial action therefore, is not expected to commence any earlier than 1996 and is expected to require up to twelve months to complete.

Commentor: Tom Cline:

COMMENT 30: Can you give any examples of sites where thermal desorption was used?

RESPONSE 30: Thermal Desorption has been employed successfully at the Niagara Mohawk Harbor Point Site in Utica, NY and used successfully by General Electric in Pittsfield, MA. Additionally, the USEPA actively tracks the usage and results of various remedial technologies nationwide. USEPA publications note successful results at sites in

Maine, New Jersey and New Hampshire as well.

COMMENT 31: Were there any problems at those places? There have been no problems with flash points being reached?

RESPONSE 31: The LTTD processes are planned and designed to avoid combustion of the contaminants in the primary unit. After desorption, the volatilized compounds are either condensed for destruction or treated in an afterburner.

Commentor: Paul Kranz:

COMMENT 32: Any idea where the thermal desorption unit would be located?

RESPONSE 32: The conceptual design plan, included in the FS, shows the LTTD unit inside the eastern end of the existing plant facility. If the building has been demolished by the initiation of the remedial program, a temporary building may be erected on-site. The location of this building, if needed, would be determined based on field observations.

COMMENT 33: When remediating the U-Crest ditch, do you have any plans for re-directing the storm water runoff?

RESPONSE 33: When remediating the U-Crest ditch it will be necessary to re-direct the storm water runoff around the section to be excavated.

The following are written comments received during the PRAP comment period. Copies of all letters are included in Appendix A.

A letter dated November 21, 1994 was received from Mr. Daniel Pyanowski of the Cheektowaga Conservation Advisory Council (CCAC), which provided the following comments on the PRAP:

COMMENT 34: We recommend signs be placed along this (U-Crest) ditch, warning residents of the contamination, until such time the material is removed.

RESPONSE 34: Refer to response number 1.

COMMENT 35: We agree with the concept to use on-site thermal desorption for removal of PCBs and VOCs from contaminated soil. However, the metals found in soil and sediments will not be remediated by this method. They will simply pass through the process, will be diluted with remediated soil and will be placed back onto the property.

We strongly recommend the areas listed on the attachment with metal contamination be segregated and removed from the site for disposal, in compliance with applicable regulations.

Based on the level of metal contamination, specifically for Cadmium, Chromium and Lead, it is likely the contaminated areas listed on the attachment, when tested by RCRA Hazardous Waste Toxicity Characteristic Leaching Procedure (TCLP) test methodology could fail and would be classified as hazardous waste. This is based on the rule of thumb: metal contamination 20 times greater than the hazardous waste definition allowable limit would likely fail the TCLP test.

If off-site landfilling regulations pose additional restrictions due to the volatiles in the same soils and sediments as the metals contamination, then we propose this material could be treated in the on-site thermal desorption unit before it is transported off-site for disposal.

RESPONSE 35: Refer to response number 10.

COMMENT 36: We are opposed to relocating and landfilling hazardous waste on the site.

RESPONSE 36: Relocating and disposing the wastes present on-site, without treatment, was evaluated in the FS. The On-site Containment alternative would involve construction of an on-site containment cell. The cell would be designed and constructed in accordance with pertinent Federal and State requirements. Contaminated soil and sediments would then be disposed within this regulated unit. This alternative, however, was not selected as it was deemed less appropriate than the preferred alternative, Thermal Desorption.

The following comments were provided in a letter dated November 23, 1994, from Mr. Walter Zmuda of the Niagara Frontier Transportation Authority (NFTA):

COMMENT 37: The estimated area and volume of contamination listed for Area P in Table 1 of the PRAP is not consistent with the volume of contamination listed in the RI page 71 and the FS Table 11-1. This discrepancy must be clarified.

RESPONSE 37: The RI indicates that Area P contains approximately 1350 cubic yards of contaminated soil. The FS indicates that Area P consists of two distinct areas of contamination, with estimated volumes of 463 cubic yards and 889 cubic yards, respectively. Note the combined total of approximately 1350 cubic yards. Table 1 of the PRAP listed an estimated Area P volume of 463 cubic yards. The second Area P total (889 cubic yards) was inadvertently omitted. The Table will be revised to reflect the estimated total of 1350 cubic yards.

COMMENT 38: It is not clear how the Soil Vapor Extraction alternative has a higher degree of handling of contaminated material as compared to the Thermal Desorption alternative. It appears that in both cases the contaminated soils will be excavated, staged, then treated. In both cases, the contaminated soil will be excavated and staged by presumably similar, if not identical methods. It is likely that the majority of the volatilization will occur during this portion of the process.

RESPONSE 38: The ex-situ soil vapor extraction alternative, like the thermal desorption alternative, will involve excavation and staging by similar, if not identical methods. The SVE alternative, however, involves the placement of the material in shallow windrows and the installation of perforated piping within the piles. The piles are then graded and covered with a plastic liner material to eliminate the threat of direct release of volatiles to the atmosphere. While it is probable that some release to the atmosphere will occur during transport and handling, those releases would in no way represent volatilization of the majority of the contamination present.

COMMENT 39: It is requested that specific documentation be presented that supports the statement in the PRAP that the ability of the soil vapor extraction to effectively treat the contaminated material to the levels required by the remedial objectives is questionable in light of the soils physical characteristics.

RESPONSE 39: Subsurface investigation at the site revealed the presence of glacial till underlying the project site. The till, which consisted predominantly of a clayey silt matrix, is described as having a firm to very compact density. Groundwater flow velocity through the overburden is estimated at less than .5 feet/year. In general, the soils are of a dense, non-porous nature with a high clay content. Also, a high moisture content is anticipated as a considerable volume of the soils to be treated are below the water table. Various USEPA publications including: "Presumptive Remedies: Site Characterization and Technology Selection For CERCLA Sites With Volatile Organic Compounds In Soils", "Innovative Treatment Technologies" and "Technology Screening Guide for Treatment of CERCLA Soils and Sludges" discuss the limitations associated with the implementation of various remedies. Each of these documents identifies low permeability and high moisture content as unfavorable characteristics for the SVE technology because these qualities hinder the movement of air through the soil. The movement of air through the soil is the basis of this technology. Therefore, the physical characteristics of the soil would likely impact the effectiveness of the technology and correspondingly, its ability to achieve the remedial objectives. At a minimum, the physical characteristics would likely significantly increase the duration necessary for the remedy to achieve remedial goals. Further, the uncertainty surrounding the necessary duration of SVE could result in additional cost, negatively impacting the cost effectiveness of this alternative.

COMMENT 40: In light of the very marginal differences between Soil Vapor Extraction

and Thermal Desorption as described in the PRAP, it does not appear that the increased cost of Thermal Desorption is warranted.

RESPONSE 40: The FS utilized the Presumptive Remedies initiative in the selection of the most suitable (i.e. most feasible) remedy for this site. The objective of this initiative is to accelerate site cleanups. This approach was employed to allow selection of a remedy which could address the contamination problem in a timely and effective manner. Thermal Desorption, is viewed as a remedy which can meet these criteria. As discussed in Response No. 39, SVE was not selected for this site because of questions regarding its effectiveness and necessary duration, in light of site-specific conditions. The ability to achieve remedial objectives in a timely and well defined period are considered desirable given the NFTA's plans for Airport expansion and the associated significant level of work contemplated in around the areas of concern.

COMMENT 41: The nature and extent of contamination identified in Area O and Area P as drawn on their respective figures (Figure O-2 and Figure P-3) does not appear to be consistent with the levels of contamination documented by laboratory analysis. Furthermore, it is unclear if the areal extent of contamination as shown on the figures is intended to represent to the areal extent of contamination that is above the RSCOs. It is noted that based on the level of contamination identified by laboratory analysis, there is very few locations in Area O and Area P that are above the RSCOs.

RESPONSE 41: The areal extent of contamination in Areas O, P and Q is depicted based on the results of the headspace screening. There is a disparity between the analytical data and the headspace data and the reason for this discrepancy is unclear. Based on the headspace results, field observation (strong solvent odors, elevated HNu readings, Level C protective equipment required) and analytical data from the PSA, contamination in these areas is evident and remedial action appears warranted. Further, groundwater quality data in Areas P and Q supports the presence of subsurface contamination. This apparent lack of a concentrated source area, however, has prompted a decision to further evaluate remedies to address soil contamination in these Areas (O, P, Q) in conjunction with groundwater contamination as a component of Operable Unit No. 2. Therefore, selection of remedy for these Areas will not be addressed by the ROD for OU-1, but rather deferred to Operable Unit No. 2.

COMMENT 42: The rationale for establishing the Recommended Soil Clean-Up Objectives (RSCOs) based on attaining groundwater or drinking water standards must be consistent with the cleanup objectives for the groundwater established under Operable Unit 2.

RESPONSE 42: The rationale for establishing clean-up objectives for Operable Unit 2 will be consistent with that used for Operable Unit 1.

The following comments were provided in a letter dated November 23, 1994, from Mr. James Maher of the Curtiss-Wright Corporation:

COMMENT 43: I note that the PRAP (p. 2) characterizes Curtiss-Wright as an "owner" of this facility in connection with aircraft production. I believe that Curtiss-Wright did utilize the site for aircraft production but only as a WW II contractor for the U.S. Government which was the actual owner of the site. Similarly, I note (p. 13) the statement that Curtiss-Wright, rather than the United States Government, is a PRP at the site and allegedly failed to implement the RI/FS requested by the NYSDEC. Until the recent Westinghouse contact, referred to above, I have no record that Curtiss-Wright was ever contacted by NYSDEC or any other agency concerning this site or was asked to or even afforded the opportunity to participate in any activity at the site. Accordingly, I must take exception to those statements and ask that appropriate corrections be made.

RESPONSE 43: The NYSDEC did not forward a copy of the PRAP to the Curtiss-Wright Corporation. The PRPs which have been notified by the DEC to date include the Westinghouse Electric Corporation, the NFTA and the BACA. The language in the ROD has been modified to reflect this. The Curtiss-Wright Corporation, as a former operator and/or owner of the site, is a potentially responsible party. The operations of Curtiss-Wright and the involvement of the U.S. Government at this site are being further evaluated. Pending the outcome of this evaluation, Curtiss-Wright will be contacted by the NYSDEC.

The discussion in the PRAP regarding RI/FS negotiations pertains to the Westinghouse Electric Corporation. Negotiations for the implementation of the RI/FS were conducted with the Westinghouse Corporation, a PRP who voluntarily entered negotiations, toward this end. These negotiations, however, were unsuccessful and the site was referred for action under the State Superfund. All recognized PRPs will be afforded the opportunity to participate in future negotiations, subsequent to issuance of the ROD.

COMMENT 44: Curtiss-Wright has not had an adequate opportunity to fully consider the RI/FS report, PRAP and related Fact Sheet in order to submit detailed written comments during the limited public comment period. Curtiss-Wright has, however, discussed the contents of the NYSDEC's PRAP with representatives of Westinghouse and concurs with its written comments concerning the DEC's remedy selection process and Westinghouse's proposed alternatives, which said comments are to be submitted for inclusion in the administrative record.

RESPONSE 44: Comment noted for the record.

The following comments were provided in a letter dated November 23, 1994, from Mr. James Brennan of the Westinghouse Electric Corporation.

The Brennan letter transmits comments on the Proposed Remedial Action Plan (PRAP) but also includes comments, interpretations and opinions on a variety of other issues, many of which do not pertain to the proposed remedy. The general comments/issues which do specifically pertain to the PRAP have been summarized and are addressed below. Included are those comments which address the findings of the RI/FS, which is the basis of the PRAP, and those which address the remedy selection process. Comments regarding past efforts to conduct the RI; past ownership and operation; the 1991 PSA Report and; discrepancies between the ERM RI work plan and the NYSDEC work plan are not relevant to the selection of a suitable remedial action, and have not been addressed.

The comments which pertain to the PRAP in many instances are expressed repeatedly throughout the letter. For this reason, text representative of the specific comments/central concerns, was selected for response. Because of the large size (several hundred pages) of these comments, they have not been included in Appendix A but are available in all document repositories for inspection.

The following comments were included in the section of the letter entitled "Deficiencies in NYSDEC's Development of Remedial Action Objectives":

> COMMENT 45: NYSDEC arbitrarily elected not to perform a quantitative risk assessment that would have allowed an informed risk management decision regarding the need for and type of remedial actions at the Site.
>
> RESPONSE 45: The NYSDEC consults with the NYSDOH to determine the appropriate level of risk evaluation required for sites. After consideration of the site specific contaminants and setting, the NYSDOH determined a qualitative health risk assessment be conducted as a component of the Remedial Investigation. The purpose of the Human Health Evaluation (HHE) was to identify potential transport pathways, assess exposure routes and discuss toxicological properties of the chemicals identified in the RI. Sufficient evidence was gathered during the HHE to identify the existence of significant potential exposure routes, substantiating the need for remediation at this site.
>
> COMMENT 46: NYSDEC's arbitrary decision not to quantify the potential human health risks at the Site, under baseline (unremediated) conditions, is wholly inconsistent with the NCP (40 CFR Part 300) and corresponding New York Part 375-1 regulations.
>
> RESPONSE 46: NCP dictates that risk must be assessed and 6 NYCRR Part 375 dictates that the remedy selection process "must not be inconsistent" with the NCP. NCP does not specify that a quantitative health risk assessment must be conducted. As discussed in

response number 45, the NYSDEC conducted a qualitative health risk assessment at this site. This was based on the NYSDOH's decision to not require a quantitative risk assessment, based on the findings and interpretations of data collected during the RI, in particular the Human Health Evaluation. The decision not to conduct a quantitative health risk assessment was not inconsistent with the NCP, nor was it inconsistent with Part 375.

COMMENT 47: Part 375 requires compliance with the NCP. The NCP requires a risk assessment as part of remedial investigations. In addition, Part 375, at 375-1.3(t) and 375-1.10(c)(3), clearly contemplates and requires that a full quantitative risk assessment be conducted.

RESPONSE 47: The NCP requires that risk be assessed as part of the RI, but does not require that a quantitative risk assessment be conducted. Consistent with that required by the NCP and 6 NYCRR Part 375, a qualitative risk assessment was conducted. Contrary to Westinghouse's assertion, Part 375-1.3(t) and 375-1.10(c)(3) do not contemplate, require or even discuss the necessity for a quantitative risk assessment.

COMMENT 48: There is no indication that Site groundwater is affecting surface water or sediments in the U-Crest Ditch.

RESPONSE 48: The contamination detected in the U-Crest ditch was consistent with the contamination detected in the storm sewer system and the contamination detected in the site groundwater. Further, the elevation of the groundwater table relative to the site's sewer system supports that groundwater is infiltrating the sewer system, being transported through the sewer system and leaving the site via the U-Crest ditch. Analytical and elevation data support that the contamination present in the ditch is attributable to the contamination present in site soil, groundwater, surface water (sewer) and sediment. Therefore, a direct migration pathway for site groundwater to the U-Crest ditch has been established.

COMMENT 49: The PRAP suggests that flooding of Site basements with contaminated groundwater has led to contaminated groundwater through Site sewers. This assertion is not supported by existing data from routine monitoring of sewer outfalls. These monitoring data are submitted to NYSDEC monthly by BACA.

RESPONSE 49: The flooding of the subsurface tunnels and vaults by contaminated groundwater is one component of the contamination detected in the sewer system. However, the contamination present in the sewer system, like that present in the flooded vaults and tunnels, is believed to be primarily the result of infiltration by contaminated groundwater. This assertion is supported by analysis which shows the presence of similar contaminants in groundwater, the sewer system and the flooded vaults and tunnels. Numerous samples have been collected which support this, including the NYSDEC's own

monthly monitoring data from the sewer outfalls, collected as part of the remedial program. The BACA State Pollution Discharge Elimination System (SPDES) data, as it represents only a very limited list of parameters, obviously does not confirm all the contaminants entering the system. Among the contaminants present in groundwater, the basement areas and the sewer system, which are not analyzed under the SPDES program, are: 1,1 DCE, 1,1 DCA, Tetrachloroethene, Acetone, PCBs and a variety of semivolatile compounds.

COMMENT 50: The soil cleanup criteria being applied by NYSDEC are irrelevant and without technical justification. Basing soil cleanup on the potential contravention of class GA groundwater standards is not appropriate because these standards are not applicable at a site where there is no completed exposure pathway for consumption of groundwater.

RESPONSE 50: While the Remedial Investigation did not identify any users of groundwater directly downgradient of the site, groundwater is used as a potable source within one half mile of the site. Groundwater at this site has been shown to be highly contaminated and this contamination is directly attributable to past operations and disposal practices. Contrary to Westinghouse's view, it is not acceptable to contaminate groundwater in New York State, regardless of its contemplated use. The proposed soil cleanup criteria were developed based on protection of groundwater. Groundwater standards are developed based on protection of public health and the environment. The soil cleanup criteria are therefore developed to be protective of public health and the environment. The soil cleanup criteria are therefore technically justified and appropriate in this situation, as per 375-1.10(c)(1)(ii).

COMMENT 51: In the absence of quantitatively evaluating risk, NYSDEC applies the soil cleanup standards derived from the cited TAGM as if this TAGM were an applicable or relevant and appropriate requirement ("ARAR") as defined under CERCLA and the NCP or the State-equivalent "New York State Standard, Criteria and Guidelines ("SCGs")."

RESPONSE 51: The referenced TAGM, entitled "Determination of Soil Cleanup Objectives and Cleanup Levels", is a recognized Departmental guidance document. Accordingly, the TAGM is a New York State SCG.

COMMENT 52: Under State regulations (Part 375-1.10 (c)(1)(i)), SCGs must be "officially promulgated," not internal memoranda which have not been subject to rule-making.

RESPONSE 52: Part 375-1.10 indicates that Standards and Criteria must be "officially promulgated", not Guidance. Guidance is discussed in 375-1.10 (c)(1)(ii). This section indicates that consideration should be given to guidance which is deemed to be applicable,

after the exercise of engineering judgement. The soil cleanup TAGM is a recognized Departmental guidance document, which has been deemed to be applicable to this site, and inactive hazardous waste disposal sites addressed by the DHWR.

COMMENT 53: The RI/FS applies class GA groundwater standards to sediment cleanup in U-Crest Ditch. The surface water standards for the stream classification of the U-Crest Ditch should have been used in the model.

RESPONSE 53: The cleanup objectives for the U-Crest ditch sediments were established using the TAGM levels for surficial cleanup. These levels were selected based on discussions with the NYSDEC's Division of Fish and Wildlife (DFW). The TAGM levels were selected in lieu of the more stringent DFW Sediment Criteria, in light of the industrial nature of the ditch and its low quality aquatic habitat.

The following comments were included in the section of the letter entitled "Remedy Selection":

COMMENT 54: There is no need to examine presumptive, or any other, remedies because the Site in its unremediated condition does not represent an unacceptable human health or environmental risk. The no action alternative is appropriate.

RESPONSE 54: This site holds a Class 2 designation in the Registry of Inactive Hazardous Waste Disposal Sites in New York State. The Class 2 was assigned based on the documented disposal of hazardous waste at this site and the identified significant threat to the environment due to groundwater standard contravention. By definition a Class 2 site is one which requires action, therefore, the need to examine potential remedies for this site was previously determined. The objective of the RI/FS process is to determine the best-suited remedy to address the problem. While seldom selected, the no action alternative is evaluated as part of this process as a baseline. Unlike the preferred alternative, Thermal Desorption, if no actions were taken the contamination problem(s) would persist; contamination of soil, groundwater, surface water and sediment would continue; and human health and the environment would not be afforded protection. The no action alternative is therefore unacceptable.

COMMENT 55: EPA guidance defines in situ SVE as the "primary presumptive remedy" for remediation of VOCs because this technology "effectively treats waste in place at a relatively low cost." NYSDEC did not even consider in situ SVE in its detailed alternatives analysis, apparently concluding, without benefit of any treatability studies that this technology is not applicable.

RESPONSE 55: EPA guidance also states "in cases where SVE will not work" that "thermal desorption may be the more appropriate response technology" and "if SVE will

not be sufficiently effective" that "thermal desorption should be considered as the primary ex-situ presumptive remedy". While in-situ SVE was not examined, ex-situ SVE was evaluated as part of the FS process. The advantages and disadvantages associated with the implementation of this technology at the site are discussed in detail in the FS. In situ SVE and other in-situ technologies were not considered in light of characteristics specific to this site and this contamination problem. In-situ SVE was specifically not considered due to: (1) the non-contiguous nature of the areas of concern; (2) the physical characteristics (low permeability) of the site soils; (3) the high groundwater table; (4) the anticipated lengthy time frame associated with implementation of this technology (given the aforementioned soil and water properties); and (5) the planned demolition/development project at the site and the impacts of this project on an in-situ system and vice versa.

COMMENT 56: EPA guidance calls for early PRP involvement when presumptive remedies are to be employed. Westinghouse was first apprised of the use of presumptive remedies when NYSDEC published its PRAP.

RESPONSE 56: Because the RI/FS was State-funded, the use of presumptive remedies was disclosed in the FS Work Plan (February 1994), the FS and PRAP documents. Had this been a PRP-funded site, the usage of presumptive remedies would have either been apparent to Westinghouse sooner or the NYSDEC would have brought it to Westinghouse's attention. EPA guidance indicates that presumptive remedies are expected to be used at all appropriate sites. While the guidance indicates it would be "generally desirable" to notify the community, State, and PRP(s) as early in the cleanup process as possible that presumptive remedies are being considered (to assess the relative merits of an alternative technology proposed by a commentor), it also indicates that generally, the presumptive remedies directive and supporting documentation will provide substantial justification for usage of presumptive remedies.

COMMENT 57: EPA guidance states that "the site characterization and technology selection procedures outlined in this directive are recommended for use primarily on soil containing VOCs only". The RI/FS designates other non-VOC analytes as contaminants of concern (e.g., SVOCs, PCBs and inorganics).

RESPONSE 57: EPA guidance also states for sites containing a mixture of VOCs and other contaminants in soil, the presumptive remedies should be considered only if they can also be effective in removing the non-VOC contaminants or combined with other, non-presumptive remedies in a treatment train. The preferred alternative, LTTD, has a demonstrated effectiveness in the removal of VOCs, SVOCs and PCBs. This technology is considered to be fully capable of attaining the established cleanup objectives for these categories of contaminants at this site. The media contaminated with inorganics, the storm sewer and the U-Crest ditch sediments, will be segregated and handled separately. Analysis (including TCLP) will be conducted to determine the need for additional

treatment by solidification/stabilization or alternatively, off-site disposal as hazardous waste, for the limited volume (U-crest ditch) where the metals levels in the affected media may be a concern (see Response 10). This approach is consistent with that prescribed in the EPA guidance. This approach was not discussed in the PRAP but will be addressed in the ROD.

COMMENT 58: Even if remedial action to address VOCs were required, which it is not, VOCs are present in Site soils in sufficiently low level to allow the more practicable and cost-effective use of off-site land disposal. Indeed, the great majority of the soils that NYSDEC refers to as "VOC contaminated" contain sufficiently low levels of VOC to allow disposal of these soils at nonhazardous, industrial waste landfills. These soils generally exhibit VOC concentrations well below the levels at which NYSDEC considers soil "containing" hazardous waste and below the EPA Land Disposal Restrictions ("LDR") that would require treatment, rather than disposal, of these materials if they were considered hazardous.

RESPONSE 58: The NYSDEC "Contained-In" guidance document states that "environmental media containing constituents from listed hazardous waste identified 6 NYCRR Part 371, must be managed as hazardous wastes unless or until the media contains hazardous constituent concentrations which are at or below action level concentrations". Numerous soil and sediment samples collected from across the site exceeded action levels. LDRs are then triggered for these soils and sediments. Comparison of the constituent concentrations to action levels, yields that the majority of the contaminated soils at this site in fact appear to require treatment in advance of land disposal. However, the ROD has been modified to provide that those soils whose concentrations are presently below action levels, could be disposed at a permitted facility without treatment. Considerable cost would likely be incurred disposing the material at an off-site, regulated facility. Because a treatment unit is required to treat the majority of the contaminated media, it is presumably more cost effective to treat all the media, rather than pursue dual remedies. While it may not be cost-effective to ship contaminated soil off-site, given the presence of the treatment unit, the ROD will include provisions for the appropriate off-site disposal of those materials, for which a disposal site can be identified, should it be determined cost effective to pursue this option.

The following comments were included in the section of the letter entitled "Feasibility Study Comments and Alternative Remedies":

COMMENT 59: Because presumptive remedies were assumed, the alternatives that underwent the detailed analysis phase did not cover the full range of cost-effective alternatives for the Site. ...The following additional alternatives should have been included in the detailed analysis of alternatives: in-situ soil vapor extraction; two-phase vapor extraction; excavation and removal; and containment integrated with site

development.

RESPONSE 59: EPA guidance indicates that presumptive remedies are expected to be used at all appropriate sites. As it was deemed appropriate, the presumptive remedies initiative was employed to address the contamination problem at this site. The objective of this initiative is to accelerate site cleanups by utilizing technologies which are proven, and have been routinely selected as the most appropriate for the specified type of site. With the exception of SVE, none of the above technologies are recommended in the EPA's Presumptive Remedies guidance for sites with VOCs in soils. SVE was examined as part of the FS. Ex-situ SVE, not in-situ SVE, was subject to the detailed evaluation due to the non-contiguous nature of the areas of contamination, as discussed in response number 55. Further, SVE is ineffective in treating contaminated soils with low permeability and soils which are below the vadose zone. The soils at this site generally exhibit low permeability and a considerable volume of these contaminated soils are below the groundwater table. Therefore, while ex-situ SVE was evaluated, in-situ SVE was deemed inappropriate and was not subject to analysis.

Two-phase vapor extraction is an innovative technology which, by Westinghouse's own admission, may be difficult to implement due to its proprietary nature. Further, the non-contiguous nature of the areas of contamination and potential disruption to the ongoing airport improvement project, create additional obstacles. As this technology essentially functions as an SVE system, it too would be subject to the limitations discussed above. In light of the potential obstructions to the successful implementation of this technology, the uncertainty surrounding this relatively new technology and increased cost associated with this uncertainty, this technology is considered impractical for this site.

Excavation and removal of the contaminated media was not evaluated by the detailed analysis as NYSDEC considered that the majority of the contaminated media at this site would require treatment in advance of land disposal. The ROD, however, will include provisions for the excavation and removal of material with levels of contaminants below action levels, for which a disposal site can be identified should it be deemed cost-effective to pursue this option (see Response 58).

The Containment Integrated with Site Development alternative, whereby Areas of Contamination I, J, K, M and P will remain in place and unremediated, is not protective of human health or the environment nor is it compliant with SCGs. This alternative is an unacceptable option.

In summary, none of the above alternatives, if implemented in lieu of the preferred alternative, are considered more appropriate than Thermal Desorption.

COMMENT 60: Because treatability studies were not performed, the detailed analysis was

conducted with very little knowledge with respect to what technologies would be effective. ...The FS indicates that the remedial costs for ex-situ SVE are $2,800,000 less than thermal desorption. NYSDEC capriciously makes a $2.8 million decision without benefit of treatability studies that are clearly specified in EPA guidance for conducting an RI/FS and for application of presumptive remedies.

RESPONSE 60: Treatability studies are not a required component of the RI/FS process. The effectiveness of potential alternatives is detailed in various guidance documents. Included are removal efficiencies in varying circumstances (sandy soils, silty soils, etc.), based on actual application or treatability studies. This information was evaluated in conjunction with site-specific data (soil physical properties, contamination present, etc.) gathered during the RI, and engineering judgement applied to make technical decisions. If additional data was deemed necessary (e.g. treatability study), a study(s) would have been planned and implemented accordingly. In this instance a treatability study(s) was deemed unnecessary in light of the well-documented site conditions and abundant literature on the effectiveness of the technologies in question.

The following comments were included in the section of the letter entitled "Improper Source Identification":

COMMENT 61: There is no evidence to suggest that there is a correlation between the compounds detected in Area K and the storm sewer.

RESPONSE 61: Soil samples collected from Area K revealed high concentrations of VOCs and SVOCs (DCE, DCA, Phenol, Methylphenol, etc.). Groundwater samples collected from Area K revealed high concentrations of VOCs including TCE, DCE and DCA. Samples collected from the 002 storm sewer line (which drains Area K) contained TCE, DCE, DCA, Phenol, Methylphenol and many other compounds detected in Area K. There is therefore a direct correlation between Area K and the storm sewer. Irregardless of the apparent connection, both Area K and the storm sewer have been shown to contain contamination and both the storm sewer and Area K warrant remedial measures.

COMMENT 62: The RI failed to consider the potential impacts of Calspan, BACA operations and other upstream facilities on the U-Crest Ditch.

RESPONSE 62: The RI identified that the contamination from the site extended to the U-Crest ditch. Evaluation of the data shows that the nature of the contamination upstream of the Calspan discharge (the outfalls on the north side of Genesee Street) is consistent with the contamination detected downstream of the Calspan discharge. Therefore, the data supports that the contamination detected in the ditch is attributable to the Westinghouse Electric Corporation site. This is reinforced by the fact that the site's easternmost storm sewer discharge is essentially the upstream origin for the U-Crest ditch as it presently

exists.

COMMENT 63: The highest cadmium concentration in a sediment sample (133 ppm in WEC-SED-E21) was encountered in a sample taken upstream of the point where Site Outfall 001 discharges.

RESPONSE 63: While the physical location of WEC-SED-E21 was approximately 10 feet upstream of the 001 discharge point, this area is known to have been the subject of prior remedial and maintenance activities. It is believed that the dredging work and clearing work in this area is responsible for the detection of cadmium at the WEC-SED-E21 location.

The following comments were included in the section of the letter entitled "Field Procedure Errors and Data Deficiencies":

COMMENT 64: The backfilling of the borings with auger cuttings may have allowed chemicals detected in the fill zone to be placed below the fill layer and within the indigenous subsurface soil (see page 19 of the RI). Backfilling borings with auger cuttings in areas where chemicals were detected in the fill zone may also have provided a conduit for these chemicals to migrate from fill to natural overburden.

RESPONSE 64: The procedure employed during the soil program was consistent with that in the approved Quality Assurance Project Plan (QAPP). Auger cuttings were backfilled into the respective soil boring if deemed appropriate by field personnel, after visual observation and screening with an HNu. Those cuttings which exhibited elevated HNu readings or which were suspect, based on visual observation, were containerized in 55 gallon drums. For example in Area I where elevated HNu readings were detected all the way to the top of bedrock, drums were used to containerize the auger cuttings. The borings were then tremie-grouted to the ground surface. This approach is standard practice in the environmental industry. This approach is explained on page 19 of the RI and detailed in the QAPP.

COMMENT 65: The decontamination procedure for the field sampling equipment (see page 21 of the RI) should have included nitric acid and hexane (or methanol) rinses.

RESPONSE 65: The decontamination procedure employed was consistent with that in the approved QAPP. Field blanks were collected and analyzed and support that the data quality is accurate and representative.

COMMENT 66: The groundwater level data presented in Section 4.18 (see page 79 of RI) and accompanying figures appear to be erroneous. These errors appear to be associated with the elevation survey of the monitoring points. For example, the monitoring point

elevations of MW-3 and MW-5 were reported to be 688.64 and 692.77, feet above mean sea level("ft-msl"), respectively. These elevations do not compare with the 1990 Krehbial Associates, Inc. survey which reported monitoring point MW-3 (second floor level) approximately 12.6 feet above the top of casing at MW-5. Additionally, the monitoring point elevations of MW-1 and MW-6 were reported by Dunn to be 703.04 and 697.38 ft. msl, respectively. These elevations are inconsistent with the 1990 Krehbial Associates, Inc. survey which reported the top of casing at each of these wells approximately 0.7 foot different in elevation. Due to these discrepancies, the hydrogeologic interpretations must be revised after a resurvey of all monitoring wells by a surveyor licensed in the state of New York, who is familiar with the site bench marks.

RESPONSE 66: A review of Table 4-5 of the RI indicates that the elevations for the ground surface and top of casing for MW-3 were reported to be 702.21 and 701.91 feet, respectively. It is unclear where Westinghouse obtained a value of 688.64 feet for MW-3. The elevations of the ground surface and top of casing for MW-5 (Table 4-5) were reported to be 689.58 and 692.77 feet, respectively. Therefore, as presented in Table 4-5, the difference in ground elevations between MW-3 (702.21 ft.) and MW-5 (689.58 ft.) is 12.63 feet, which is consistent with the 1990 survey. Westinghouse also indicated that the values given for the elevations of MW-1 and MW-6 were erroneous, citing the 1990 Krehbial survey which reported a difference of 0.7 feet (between top of casings). A review of Table 4-5 indicates that the values cited by Westinghouse were ground elevations, not top of casing elevations. The top of casing elevations for MW-1 and MW-6, as presented in Table 4-5, are 705.65 and 704.93, respectively. This is an elevation difference of 0.72 feet, which is once again consistent with the 1990 survey. As no discrepancies in fact exist, a revision to the hydrogeologic interpretations is not warranted.

The following comments were included in the section of the letter entitled "Uniform Ratio Between Headspace and Mass":

COMMENT 67: The results obtained on analysis of an unknown quantity of soil cannot be compared to actual soil concentrations to determine soil requiring remediation. For this reason, the reported headspace data are useless.

RESPONSE 67: Headspace analysis was utilized as a field screening tool. The soil gas data was used to supplement the laboratory analysis and to assist in the delineation of areas of contamination. The headspace data was not intended to be used, nor was it used, in lieu of laboratory analysis.

COMMENT 68: Comparison of the headspace results with the results of off-Site laboratory analysis of samples taken from the same locations demonstrates how headspace values were several orders of magnitude greater than the actual soil concentrations. ...The soil VOC concentrations deduced from headspace readings are grossly in error and cannot

be considered in delineating the extent of contamination or otherwise used.

RESPONSE 68: Headspace analysis was utilized as a field screening tool. For a number of the samples collected, however, there was no correlation between the headspace data and the laboratory results. The reason for this discrepancy, which was most evident in Areas O and Q, is unclear. Based on the headspace data, field observation (elevated HNu readings and strong solvent odors) and groundwater quality data, contamination in these areas is evident and remedial action appears warranted. After further consideration, due to the identified impact on groundwater quality but lack of an apparent concentrated source area, Areas O, P and Q have been deemed to be more appropriately addressed as a component of Operable Unit No. 2. Operable Unit No. 2 will focus on remedies to address groundwater contamination. For estimating purposes, however, the areas and volumes listed in the FS, which are based on headspace data, are considered representative.

COMMENT 69: There was laboratory contamination associated with the sediment sample analysis procedure based on the high percentage of analytes found in the blanks (i.e., approximately 8 percent), the high percentage of analyses that failed spike recovery quality control analyses (i.e., approximately 6 percent) and the high percentage of analyses reported as varying from quality control limits (i.e., approximately 11 percent). ...Because the sediment analysis are critical in delineating the extent of contamination in the U-Crest Ditch, these quality control problems may have impacted remedial decisions made during the FS process.

RESPONSE 69: Sediment samples were collected from the U-Crest ditch on three separate occasions. Had significant quality control problems arisen, there seemingly would have been some disparity in the data obtained from these distinct sampling events. The data supports that contamination is present in the ditch, that the contamination is directly attributable to the contamination at the site, that the contamination is leaving the site through the outfall and that (at this point) the contamination is limited to area between the easternmost discharge point and the vicinity of the Radisson Hotel. Additional samples will be collected during the implementation of the remedial action to insure the full extent of the contamination in the ditch is addressed.

The following comments were included in the section of the letter entitled "The NYSDEC's Proposed Remedy Does Not Satisfy the Nine Criteria for Selecting Remedies in the NCP and "Factors" Under Part 375":

COMMENT 70: The no action alternative is sufficiently protective of human health and the environment, and there is no need to conduct any further remedial action at the Site. NYSDEC's assertion that its remedy is needed to meet this protection criterion is false.

RESPONSE 70: As a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites, this site is defined as one which "poses a significant threat to public health and/or the environment" (see Response 54). If no actions were taken, the threat would persist and human health and the environment would not be afforded protection. There is therefore a need to conduct remedial action at this site. As detailed in the RI/FS and the PRAP, the preferred alternative, Thermal Desorption, would satisfy this threshold criteria, but the no action alternative would not.

COMMENT 71: The no action alternative complies with ARARs and SCGs.

RESPONSE 71: If no actions were taken contaminated soil and sediments would remain onsite. Contaminants would continue to leach from the soil to the groundwater. 6 NYCRR Part 703, an ARAR, contains standards for the protection of groundwater. TAGM No. HWR-94-4046, an SCG, contains recommended maximum concentrations for contaminants in soil, to maintain levels in groundwater below Part 703 standards. The contamination present at this site has resulted in significant violations to Part 703. If no actions are taken, standards would continue to be violated. The no action alternative therefore, does not comply with ARARs or SCGs.

COMMENT 72: Even if the TAGM and 6 NYCRR Part 703 groundwater standards were considered ARARs or SCGs at this Site, Site conditions indicate that a waiver of these requirements, as defined in Part 375-1.10(c)(1), would be appropriate. Implementation of the PRAP would increase risk to Site workers (and, possibly, the community) and is technically impractical.

RESPONSE 72: 6 NYCRR Part 703 is an ARAR and the cited TAGM is an SCG. Part 375 indicates that if implementation of an alternative which conforms to SCGs will result in greater risk to public health or to the environment, than that alternative should be dispensed with. Implementation of the preferred alternative, Thermal Desorption, like any construction project, could result in potential risk(s) to site workers. However, dispensing with the remedial program entirely would result in continued risk to the community and the environment. The threat posed by the existing contamination problem warrants a remedial program. A health and safety plan will be developed in advance of the remedial program to mitigate risk(s) to onsite workers and the community. The argument presented is inconsistent with the intent of the sub-part and does not support that a waiver would be appropriate.

COMMENT 73: Excavation and thermal desorption (as well as all of the other presumptive remedies examined by the NYSDEC) would not be effective in the long-term, would not constitute a permanent remedy, or would not address the TMV (toxicity/mobility/volume) for any of the metals concentrations in Site soils or U-Crest Ditch sediments. Such soils would be more appropriately be removed for off-Site disposal

in a nonhazardous waste facility.

RESPONSE 73: Excavation and thermal desorption would involve the treatment of the contaminated media to levels which have been deemed protective of the environment and public health. The toxicity, mobility and volume of the contamination would be reduced permanently, thus satisfying the long-term effectiveness criteria. The ROD will include provisions for the stabilization or off-site disposal of the metal-containing sediments which constitute a limited volume of the total being addressed, as appropriate. Analysis (including TCLP) will dictate the methodology to be employed for the sediments to satisfy this criteria (see Response 10). Therefore, the preferred remedy would be effective in the long-term, would constitute a permanent remedy and would address the TMV for all contamination present, including the metals.

COMMENT 74: The excavation and thermal desorption remedy is generally considered implementable, but the NYSDEC apparently made no effort to develop an alternative that is consistent with the large-scale Site development activities associated with the future use of this Site as part of the Airport Expansion.

RESPONSE 74: During the RI/FS process, the NYSDEC was made aware and kept apprised of pertinent airport project details. The planned future usage of this site was considered during the evaluation of all alternatives as evidenced by the application of the Presumptive Remedies initiative and the selection of a remedy which can address the contamination problem in a timely and effective manner. It is important to recognize, however, that future site usage cannot be the only or even the major factor considered in the development or evaluation of alternatives. Consistent with both 6 NYCCR 375 and the NCP, all remedies must first be protective of public health and/or the environment and meet applicable SCGs (ARARs), before other factors such as future use are considered.

The following comment is included in the section of the letter entitled "DEC Has No Authority to Expend Monies and Conduct Investigation and Remediation At The Site":

COMMENT 75: The NYSDEC has proceeded with the RI/FS and is proceeding with other investigative activities, IRMs, remedial design or remedial action activities, without legal authority or foundation. All costs and expenses of the NYSDEC related to these activities are unauthorized expenditures of state monies, and inconsistent with and unauthorized under ECL, Part 375, State Finance Law Section 97-b, CERCLA and other applicable law.

RESPONSE 75: The Department is authorized to undertake a remedial program where those found responsible will not do so. The responsible parties at the site were notified of their potential liability by letter dated August 5, 1991. Each of the PRPs initially

expressed its willingness to fund an RI/FS. Protracted negotiations failed to produce an agreement amongst the PRPs, and none of them committed to investigate and remediate the site in the absence of such an agreement. The Department's lengthy and time-consuming efforts to negotiate an agreement with the PRPs (August 1991 - October 1992) satisfied the requirements of State Finance Law § 97-b.4 thus authorizing full state funding pursuant to § 97-b.3.(a).

An RI/FS was required at the site in order to define the necessary remedial program. These activities are consistent with the Department's obligations under ECL § 27-1309. State Finance Law § 97-b.3.(a) authorizes funds to meet these obligations.

Subsequent to the issuance of the ROD, the PRPs will again be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRPs, the Department will evaluate the site for future action under the State Superfund.

The following comment is included in the section of the letter entitled "No Hazardous Waste Disposal Has Occurred At The Site":

COMMENT 76: The NYSDEC has made no demonstration in the administrative record or, to Westinghouse's knowledge, elsewhere, that there has ever been disposal of "hazardous waste" at the Site.

RESPONSE 76: Numerous samples have revealed the presence of a variety of contaminants in the immediate vicinity of and downgradient from underground storage tank areas. The tanks are known to have contained "hazardous waste" as defined in 6 NYCRR Part 371. Groundwater quality data has revealed the presence of many of these compounds at levels which contravene standards. Additionally, beneath the plant building contamination has been observed which directly correlates to past site operations. In light of the former manufacturing operations at this site, the chemicals used in support of these operations, and the direct correlation between these operations and the contamination detected, sufficient evidence exists to support that the contamination present is the result of "hazardous waste" disposal. This view is reinforced by statements by former employees regarding past operations and disposal practices.

The following comment is included in the section of the letter entitled "NYSDEC Is Remediating Permitted Discharges":

COMMENT 77: The presence of organics and inorganics in Westinghouse's permitted waste water discharge was identified, reviewed, and made part of the permit record with respect to the permits issued to Westinghouse or BACA. Under Section 107(j) of the CERCLA, 42 U.S.C. 9607(j), DEC cannot hold Westinghouse liable or otherwise responsible for those releases.

RESPONSE 77: While a SPDES permit for site discharge presently exists, established limits have been violated routinely and in fact enforcement proceedings were only deferred once it appeared that this site would be addressed under the umbrella of the Inactive Hazardous Waste Remediation program. The NYSDEC Division of Water has been monitoring this situation, cognizant of the ongoing hazardous waste remedial program. Further, the U-Crest ditch has been shown to be contaminated by a number of additional compounds (such as PCBs), for which discharge is not permitted. Whether Westinghouse is compelled to remediate the ditch is irrelevant from a technical standpoint. In light of the history of permit violations and the presence of non-permitted compounds in the ditch, the U-Crest ditch will have to be remediated.

The following comments were included in the section of the letter entitled "The DEC's Public Participation Responsibilities Are Flawed":

COMMENT 78: NYSDEC failed to provide the PRAP to Westinghouse.

RESPONSE 78: Westinghouse Electric Corporation was provided a copy of the PRAP as an attachment to an October 3, 1994 letter from J. Ryan, Division of Environmental Enforcement, Region 9 to T. Gricks, Westinghouse Electric Corporation. Further, while Westinghouse claims not to have obtained a copy of the PRAP until November 23, 1994 (from the repository), Westinghouse acknowledged their knowledge of the PRAP in a September 30, 1994 letter, by attendance at the October 4, 1994 Public Meeting and subsequent phone conversations with NYSDEC staff. Ample time existed for Westinghouse to seek to and obtain a copy of the PRAP, had the copy transmitted on October 3, 1994 not been received.

COMMENT 79: The closure of the public comment period after November 23, 1994, with respect to the PRAP, is inconsistent with applicable law and regulations. Under the NCP, NYSDEC is to automatically extend the public comment period by a minimum of 30 additional days. The NCP specifies the minimum level of time for public comment, but does not preclude DEC from providing additional time where appropriate.

RESPONSE 79: The 30 day public comment period for the PRAP was to have ended on October 22, 1994. While not required by the NCP, the comment period was extended an additional 30 days until November 23, 1994, at the request of Westinghouse. This extension was granted in the spirit of cooperation. This extension was deemed adequate because representatives of Westinghouse were aware of the ongoing RI/FS program and had been routinely monitoring its progress. Further, representatives of Westinghouse were aware of the existence of the document repository and its contents, including the Interim Final RI Report which had been available since March of 1994.

COMMENT 80: DEC's notice and analysis provide insufficient information necessary to

provide the public with a reasonable explanation of the PRAP and alternative proposals considered.

RESPONSE 80: The PRAP is meant to be a summary document. Page 1 of the PRAP states that it is a "summary of the information that can be found in greater detail in the RI/FS reports on file at the document repositories" and that "the public is encouraged to review the documents at the repositories to gain a more comprehensive understanding of the site and the investigations there". Page 1 also lists the locations of the document repositories. If any member of the public was of the opinion that the PRAP was of insufficient detail, they were strongly encouraged by the PRAP to review other site-related information.

COMMENT 81: The complete lack of participation by certain PRPs with respect to this Site, including Curtiss-Wright Corporation and the U.S. Government, who the DEC has failed to notify of PRP status, requires that the DEC provide notice to these parties and reopen the public participation process to enable these potentially responsible parties to comment on the PRAP. If DEC fails to remand the proposed remedial action plan and public participation process for further development after these parties are notified, the record of decision process for this Site will be flawed, and inconsistent with the requirements of the ECL, CERCLA and due process.

RESPONSE 81: Reports indicate that Curtiss-Wright Corporation, was an owner and/or operator of the Westinghouse Electric Corporation Site in the early 1940s. The NYSDEC is further evaluating Curtiss-Wright's past involvement to clarify past operations/ownership and possible U.S. Government involvement. Curtiss-Wright Corporation was not provided a copy of the PRAP. Curtiss-Wright advised the NYSDEC of this omission in a November 23, 1994 letter. Curtiss-Wright did, however, acknowledge having received a copy of the PRAP and other site-related information from the Westinghouse Corporation. In their letter, Curtiss-Wright indicated that they concur with Westinghouse's comments regarding DEC's remedy selection process and Westinghouse's proposed alternatives. Curtiss-Wright did not specifically request that the comment period be reopened.

The following comments were included in the section of the letter entitled "Releases to Groundwater Potentially Caused by Field Procedures":

COMMENT 82: MW-23D was drilled near I-6 to monitor bedrock groundwater. During the first round of sampling at the Site, conducted in September 1993, no TCE was detected (above the analytical quantitation limit) in the groundwater at MW-23D. Results from the second round of sampling conducted in February and March, 1994, reported the TCE concentration in the well at 430 micrograms per liter ("ug/l"). The contrast of the absence of TCE during the initial groundwater sampling round with the relatively high level of TCE detected in the same well six-months later indicates that TCE entered the bedrock

ground water system only after Dunn conducted its drilling in Area I. ...It is highly unlikely that the contamination found in MW-23D in naturally leaking through the confining layer. Given the breach of the till confining layer by I-6 and the conversion of the boring to a piezometer constructed with a sand filled conduit to bedrock, it is much more likely that I-6 is the source of the VOCs in the bedrock aquifer observed at 23D.

RESPONSE 82: The sand-filter pack surrounding the screen to piezometer P-6 (referred to as "I-6" above) extends to a maximum depth of 24.5 feet below ground surface (bgs). This boring was initially drilled to the top of bedrock, a depth of 29.2 feet, but was backfilled with bentonite to 24.5 feet. Therefore, there is no "sand filled conduit to bedrock" as misstated above. Further, TCE was detected in the first sampling round in MW-23D, albeit at an estimated concentration of 9 ug/l, as well as other VOCs including DCA and Acetone at concentrations of 12 ug/l and 190 ug/l, respectively. Additionally, headspace screening of split spoon soil samples from the P-6 and MW-23D borings, revealed elevated levels of VOCs all the way to the bedrock interface. Therefore, data supports that the contamination observed in MW-23D is representative of the bedrock water quality in Area I and that this contamination is a result of leakage from the contamination present in the overburden due to past storage and/or disposal in this area.

APPENDIX A

CHEEKTOWAGA CONSERVATION ADVISORY COUNCIL

November 21, 1994

NYSDEC - Central Office
50 Wolf Road
Albany, New York 12233-7010
Attn: Michael Ryan

Subject: Comments on the PRAP for the Westinghouse Electric Corporation Site, Operable Unit 1, Cheektowaga, New York, Site No. 9-15-066

Dear Mr. Ryan:

Please accept these comments as part of the Public Participation in reviewing the Proposed Remedial Action Plan for the Westinghouse Site referenced above.

1. U-Crest Ditch
We recommend signs be placed along this ditch, warning residents of the contamination, until such time the material is removed.

2. On-Site Thermal Desorption
We agree with the concept to use on-site thermal desorption for removal of PCBs and VOCs from contaminated soil. However, the metals found in soil and sediments will not be remediated by this method. They will simple pass through the process, will be diluted with remediated soil and will be placed back onto the property.

We strongly recommend the areas listed on the attachment with metal contamination be segregated and removed from the site for disposal, in compliance with applicable regulations.

Based on the level of metal contamination, specifically for Cadmium, Chromium and Lead, it is likely the contaminated areas listed on the attachment, when tested by RCRA Hazardous Waste Toxicity Characteristic Leaching Procedure (TCLP) test methodology could fail and would be classified as hazardous waste. This is based on the rule-of thumb: metal contamination 20 times greater than the hazardous waste definition allowable limit would likely fail the TCLP test (Also illustrated in attached example for Table E-12).

If off-site landfilling regulations pose additional restrictions due to the volatiles in the same soils and sediments as the metals contamination, then we propose this material could be treated in the on-site thermal

desorption unit before it is transported off-site for disposal.

We are opposed to relocating and landfilling hazardous waste on the site.

Sincerely,

Daniel J. Pyanowski

Daniel J. Pyanowski
CCAC Member

cc: John Marriott - Chairman CCAC
Tom Johnson - Councilman, Town of Cheektowaga

file: prapwest

TABLE E-12

WESTINGHOUSE ELECTRIC CORPORATION SITE
SUMMARY TABLE OF INORGANIC PARAMETERS
SEDIMENT SAMPLES
AREA E - STORM SEWER LINE 003
(Concentrated Values in mg/kg-ppm)

HAZ. WASTE LIMITS (PPM)

ANALYTES	20:1 Limit (ppm)	SAMPLE IDENTIFICATION AND LOCATION				Average Background Soil Conc.	Avg. Conc. of Element in Uncont. Soils	Conc. Range of Element in Uncont. Soils
		WEC-SED-E11 MH-003-13	WEC-SED-E13 MH-003-07	WEC-SED-E14 MH-003-03	WEC-SED-E18 MH-003-01			
Arsenic	100	5.70 N	25.10 N	25.50 N	11.2 N	6.03	5.0	3.0 - 12.0
Beryllium	—	0.16 B	0.36 B	0.30 B	0.31 B	0.67	0.6	0.0-1.75
Cadmium	20	7.30 E*	12.40 E*	10.50 E*	10.8 E*	0.32	0.6	0.1-7.0
Chromium	100	13.10 EN*	1295.10 EN*	1010.00 EN*	574 EN*	18.67	33	1.5 - 40
Copper	—	55.20 EN*	1400.00 EN*	828.00 EN*	935 EN*	23.77	20	2.0 - 100
Lead	100	39.20 N*	2950.00 EN*	1010.00 EN*	574 EN*	17.8	14	4.0 - 61
Mercury	4	-	0.18 *	0.14 *	0.23 *	ND	0.06	0.001-0.2
Nickel	—	5.90 BEN*	40.60 EN*	58.10 EN*V	29.9 EN*	24.1	40	0.5 - 60
Selenium	20	-	-	0.78 BN*	1.1 BN*W	ND	0.2	0.01-12.0
Silver	100	0.74 BN*	1.10 BN*	1.30 BN*	7.7 N*	ND	-	0.01 - 8.0
Thallium	—	-	-	0.51 B	-	0.177	-	-
Zinc	—	1150.00 EN*	1620.00 EN*	2730.00 EN*	1390 EN*	90.2	50	10 - 300

11-21-96

Cheektowaga Conservation Advisory Council

Comments on Remedial Investigation / Feasibility Study Report for:

WESTINGHOUSE ELECTRIC CORPORATION SITE
NYS SITE NO. 915066

The following sediment and soil sample analysis, as provided in Tables in the RI/FS Report, indicate levels of metal contamination that would likely classify this material as hazardous waste under Federal and State regulations. This is based on the contamination level being more than 20 times greater than the allowable amount, before a waste is classified as hazardous waste.

RI/FS REPORT TABLE	AREA	METALS w/potential exceedance	AREA DESCRIPTION	SAMPLE TYPE	SAMPLE ID NO.
E-4	E	Arsenic Cadmium Lead Selenium	Storm Sewer Line 001	Sediment	WEC-SED-E6 WEC-SED-E2 WEC-SED-E2 WEC-SED-E2
E-8	E	Arsenic. Cadmium Lead Selenium	Storm Sewer Line 002	Sediment	WEC-SED-E8 WEC-SED-E1
E-12	E	Chromium Lead	Storm Sewer Line 003	Sediment	WEC-SED-E1 WEC-SED-E1 WEC-SED-E1
E-17	E	Arsenic Cadmium Lead Selenium	U-Crest Ditch	Sediment	WEC-SED-E2 WEC-SED-E2 SED-UC SED-E2 SED-UC SED-UC SED-UC SED-UC
M-14	M	Lead	Underground Mixing Room	Soil	WEC-SB-M1 8'-16'dept
Q-5	Q	Cadmium Lead	Railroad Track Area Surface Soil Samples	Soil	WEC-SS-Q1 WEC-SS-Q2
Q-7	Q	Cadmium Chromium Lead	Railroad Track Area Waste Pile Samples	Soil	WEC-WS-Q1 WEC-WS-Q2 WEC-WS-Q3

JJP -CCAC
file: westtclp

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November 23, 1994

Michael J. Ryan
Project Engineer
New York State Department
of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Patricia Nelson
Citizen Participation Specialist
New York State Department
of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

Re: Proposed Remedial Action Plan, Westinghouse Electric Corporation Site, Site No. 9-15-066

Dear Mr. Ryan and Ms. Nelson:

I represent Curtiss-Wright Corporation. Westinghouse Electric Corporation recently notified Curtiss-Wright of the above-referenced matter and provided us with a copy of the DEC's Remedial Investigation/Feasibility Study report, Proposed Remedial Action Plan ("PRAP") and related Fact Sheet.

I note that the PRAP (p. 2) characterizes Curtiss-Wright as an "owner" of this facility in connection with aircraft production. I believe that Curtiss-Wright did utilize the site for aircraft production but only as a WW II contractor for the U.S. Government which was the actual owner of the site. Similarly, I note (p. 13) the statement that Curtiss-Wright, rather than the United States Government, is a PRP at the site and allegedly failed to implement the RI/FS requested by the NYDEC. Until the recent Westinghouse contact, referred to above, I have no record that Curtiss-Wright was ever contacted by NYDEC or any other agency concerning this site or was asked to or even afforded the opportunity to participate in any activity at the site. Accordingly, I must take exception to those statements and ask that appropriate corrections be made.

Curtiss-Wright has not had an adequate opportunity to fully consider the RI/FS report, PRAP and related Fact Sheet in order to submit detailed written comments during the limited public comment period. Curtiss-Wright has, however, discussed the contents of the NYSDEC's PRAP with representatives of Westinghouse and concurs with its written comments concerning the DEC's remedy selection process and Westinghouse's proposed alternatives, which said comments are to be submitted for inclusion in the administrative record.

We request that you also include this letter in the administrative record file with respect to this matter.

Very truly yours,

James V. Maher

JVM:mad

NIAGARA FRONTIER TRANSPORTATION AUTHORITY

November 23, 1994

Mr. Michael Ryan
Project Engineer
Bureau Western Remediation
Division of Hazardous Waste
Remediation
New York State Dept. of
Environmental Conservation
50 Wolf Rd.
Albany, NY 12233-7010

Re: Westinghouse Remedial Investigation
and Feasibility Study, PRAP

Dear Mr. Ryan:

The NFTA wishes to submit the following comments on the above documents:

PRAP Comments:

1. The estimated area and volume of contamination listed for Area P in Table 1 of the PRAP is not consistent with the volume of contamination listed in the RI page 71 and the FS Table 11-1. This discrepancy must be clarified.

2. It is not clear how the Soil Vapor Extraction alternative has a higher degree of handling of contaminated material as compared to the Thermal Desorption alternative. It appears that in both cases the contaminated soils will be excavated, staged, then treated. In both cases, the contaminated soil will be excavated and staged by presumably similar, if not identical, methods. It is likely that the majority of volatilization will occur during this portion of the process.

3. It is requested that specific documentation be presented that supports the statement in the PRAP that the ability of the soil vapor extraction to effectively treat the contaminated material to the levels required by the remedial objectives is questionable in light of the soils physical characteristics.

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4. In light of the very marginal differences between Soil Vapor Extraction and Thermal Desorption as described in the PRAP, it does not appear that the increased cost of Thermal Desorption is warranted.

RI Comments:

5. The nature and extent of contamination identified in Area O and Area P as drawn on their respective figures (Figure O-2 and Figure P-3) does not appear to be consistent with the levels of contamination documented by laboratory analysis. Furthermore, it is unclear if the areal extent of contamination as shown on the figures is intended to represent the areal extent of contamination that is above the RSCOs. It is noted that based on the level of contamination identified by laboratory analysis, there is very few locations in Area O and Area P that are above the RSCOs.

FS Comments:

6. The rationale for establishing the Recommended Soil Clean-Up Objectives (RSCOs) based on attaining groundwater or drinking water standards must be consistent with the cleanup objectives for the groundwater established under Operable Unit 2.

Thank you for the opportunity to comment on this topic. If you have any further comments, feel free to contact David Skoney of my staff.

Very truly yours,

WALTER D. ZMUDA
General Manager,
Engineering

WDZ/mk
Z11-23A4
cc: R. Swist
D. Gregory
K. McCarthy
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R. Stone

APPENDIX B

ADMINISTRATIVE RECORD

The following documents, which have been available at the document repositories, constitute the Administrative Record for the Westinghouse Electric Corporation Site, Remedial Investigation/Feasibility Study.

SEPTEMBER 1991:	Preliminary Site Assessment
SEPTEMBER 1994:	Remedial Investigation/Feasibility Study
SEPTEMBER 1994:	Proposed Remedial Action Plan Operable Unit No. 1
MARCH 1995:	Responsiveness Summary Operable Unit No. 1
MARCH 1995:	Record of Decision, Operable Unit No. 1