Department of Environmental Conservation

Division of Hazardous Waste Remediation

Record of Decision

Vacant Land Adjacent to 1865 Connecting Road

Town of Niagara, Niagara County
Registry Number 932103

December 1994

New York State Department of Environmental Conservation
MARIO M. CUOMO, *Governor* LANGDON MARSH, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

VACANT LAND ADJACENT TO 1865 CONNECTING ROAD
Inactive Waste Disposal Site
Town of Niagara, Niagara County, New York
Site No. 932103

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the **Vacant Land Adjacent to 1865 Connecting Road** Inactive Waste Disposal Site that 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 **Vacant Land Adjacent to 1865 Connecting Road** Inactive Waste Disposal 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 substances from this site were addressed through the implementation of an Interim Remedial Measure (IRM) that removed all of the identified waste material from the property and nearly all contaminated soil. Because the site is paved, future direct contact exposures with residual soil contamination has been eliminated. Current or potential threats to public health and the environment no longer exist.

Description of Selected Remedy

Based upon the results of the Interim Remedial Measure and post remedial action monitoring for the **Vacant Land Adjacent to 1865 Connecting Road** Inactive Waste Disposal Site and the criteria identified for evaluation of alternatives, the NYSDEC has determined that **No Further Action** is required at the site, and that the site can be **Delisted** from the NYS Registry of Inactive Hazardous Waste Disposal Sites.

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. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

December 13 1994
Date

Ann Hill DeBarbieri

Deputy Commissioner
Office of Environmental
Remediation, NYS Department
of Environmental Conservation

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VACANT LAND ADJACENT TO 1865 CONNECTING ROAD

Town of Niagara, Niagara County, New York
Site No. 932103
October 1994

SECTION 1: SITE LOCATION AND DESCRIPTION

The site is approximately one acre in size, and is located on vacant land adjacent to 1865 Connecting Boulevard in the Town of Niagara, Niagara County, New York (Figure 1). The W.S. Kozdranski Company previously owned this property, which is now owned by the Niagara County Development Corporation. Most of the property is leased by the Benderson Development Company (Benderson) and has been developed into the Niagara Factory Outlet Mall. The site is located in a mixed industrial, commercial, and residential area. To the west, across I-190, is CECOS International Landfill, while the Sabre Park inactive hazardous waste site is located immediately to the south. No known public or private drinking water supplies are located near the site.

SECTION 2: SITE HISTORY

2.1: Site Discovery and Early Investigations

In October 1985 a contractor, excavating to construct a storm sewer line, encountered a two to three foot thick layer of yellow-tan resinous waste material about two feet below grade. The waste material was observed throughout the western part of the trench for a length of $\approx$ 100 to 120 feet. Also observed was a white powder-like material suspected of being PVC grindings, small amounts of wood debris and two crushed (apparently empty) steel drums. One sample of the resin was collected for chemical analysis. Based upon the analytical results obtained on this sample, the NYS DEC concluded that the waste contained hazardous constituents, and instructed Benderson to dispose of the material excavated from the trench. On May 28, 1986 approximately 250 cubic yards of material were transported to, and disposed of at, CECOS International Landfill. The trench was backfilled with clean material and had remained undisturbed until the recent remedial activities. It is suspected that a local rubber company disposed these wastes on the Kozdranski property in the late 1960's.

To obtain more information on the waste material, a preliminary field investigation was conducted by Benderson's consultant on August 19, 1988. During this study, five borings were completed at the site in the former area of the trench. The resinous waste was encountered in two of these borings at depths of 3.5 and 4.0 feet, respectively, and exhibited a very strong chemical odor. Two waste samples were collected from these borings for chemical analysis. The primary contaminants detected in these samples are tabulated as follows:

Contaminant	Concentration Range in ppm
N-nitrosodiphenylamine	130-3600
1,2,4-trichlorobenzene	ND-5.7
ppm Parts Per Million **ND Compound Not Detected.**	

In addition to these contaminants, several metals and pesticides were also detected, but below concentrations of concern. For comparison purposes, the Department's generic soil cleanup goals for N-nitrosodiphenylamine and 1,2,4-trichlorobenzene are 100 ppm and 3.4 ppm, respectively.

In July 1989 Benderson's consultant installed a single boring into the resinous waste to collect another sample for chemical analysis. In addition, one sample of groundwater entering the borehole was also collected for analysis. The only organic compound detected in the waste sample was N-nitrosodiphenylamine at a concentration of 4,300 ppm. Several organic contaminants, however, were detected in the groundwater sample. The primary contaminants detected in this sample are tabulated as follows:

Contaminant	Concentration (ppb)
N-nitrosodiphenylamine	160
1,2,4-trichlorobenzene	3.1
4-Methylphenol	17
ppb Parts Per Billion	

For comparison purposes, the groundwater guidance value for N-nitrosodiphenylamine is 50 ppb, while the groundwater standards for 1,2,4-trichlorobenzene and 4-methylphenol are 5 ppb and 1 ppb, respectively.

2.2: Remedial History

Following the completion of these preliminary investigations, the Department began negotiations with Benderson for the completion of a Remedial Investigation/Feasibility Study (RI/FS) at the site. During these negotiations, Benderson proposed to conduct an IRM source removal program at the site to expedite remediation. Based upon the quantity of waste suspected, its characteristics, and the location of the site adjacent to a major shopping center, the Department agreed that this course of action would be the most cost effective and efficient remedy for the site. Since the full extent of the waste material had yet to be

delineated and characterized, the IRM was divided into two components: (1) a Soil Boring/Test Pit Excavation Program, and (2) a Source Removal Program. Each component was completed under separate Order. Following difficulties encountered during the initial Soil Boring Program, a Test Pit Excavation Program was undertaken to complete waste delineation. These programs are described in detail in the following sections.

2.2.1: IRM Soil Boring/Test Pit Excavation Program

During 1991 and 1992 Benderson's consultant conducted an IRM Soil Boring/Test Pit Excavation Program to define further the nature and extent of waste material resulting from previous disposal activities at the site. Because the resinous waste was visually similar to waste at the nearby Forest Glen Subdivision site, chemical analyses completed during the IRM were augmented to include the five indicator compounds for that site. These compounds included aniline, benzothiazole, phenothiazine, diphenylamine, and 2-mercaptobenzothiazole. The IRM was conducted in 2 phases. The Soil Boring Program was conducted during July 1991, and the Test Pit Excavation Program was conducted between August and September 1992. Reports describing the investigation results were submitted after each phase of the study and are entitled: (1) "Interim Remedial Measure Interim Report - Investigative Results" dated February 1992, and (2) "Supplemental IRM Report" dated November 25, 1992. These reports detail the field activities completed at the site, and provide an evaluation of the analytical results obtained on environmental samples. The activities completed during the IRM Soil Boring/Test Pit Excavation Program included the following:

- The installation of nineteen (19) soil borings and forty-two (42) test pits to delineate both the vertical and horizontal extent of the waste material.
- The collection of thirty (30) waste and underlying soil samples for chemical analysis.
- The installation of one (1) background soil boring to determine the subsurface geology at the site.
- The conversion of six (6) soil borings into piezometers to determine the direction of shallow groundwater flow across the site. These piezometers were installed directly into the waste material.
- The collection of one (1) composite groundwater sample obtained from two of the piezometers for chemical analysis to determine whether treatment of this water would be necessary during remedial activities.

The areal extent of the waste material, and the locations of the borings and test pits are shown on Figure 2. A summary of the test pit observations is given in Table 1.

Site Geology and Hydrogeology

The geology of the site consists of 0 to 8 feet of fill and waste material overlying 6 to 10 feet of dense, reddish-brown silty clay. In background borings outside the waste area the silty clay deposit was encountered at 0 feet. These data suggest that the waste material was disposed in a shallow bowl-like depression, underlain by the natural silty clay deposit. This silty clay deposit has a very low permeability

that produces perched groundwater conditions, while also preventing the downward migration of contaminants to the upper bedrock water-bearing zone. In addition, the shallowing of the silty clay deposit outside the waste area confines the perched groundwater within the shallow depression. Lockport Dolostone bedrock directly underlies the silty clay deposit, and was encountered at a depth of 14 feet in the background boring. Bedrock groundwater flow is likely toward the Niagara River to the south.

Analytical Results

The analytical results from the IRM Soil Boring/Test Pit Excavation Program are summarized below by environmental media.

Waste

Prior to remediation, the site contained approximately 6000 cubic yards of waste material, which included the yellow-tan resin and the white PVC powder. The primary contaminants detected are tabulated below. Cleanup goals for the waste material were not developed because all waste material was removed during the IRM Source Removal Program (see Section 2.2.2).

Contaminant	Concentration Range in ppm
N-nitrosodiphenylamine	0.66-11,000
aniline	0.99-18,800
benzothiazole	5.37-63,500
phenothiazine	2.84-22,600
diphenylamine	3,400
2-mercaptobenzothiazole	25.9-312,000
vinyl chloride	ND-12,000

ppm Parts Per Million
ND Compound Not Detected.

Soil

The upper six inches of the silty clay deposit underlying the waste material was sampled and analyzed to determine the extent of downward contaminant migration. These data revealed that many contaminants detected in the waste material were also detected in these soils, but at much lower concentrations (compare the soil analytical results with the waste analytical results). These data suggested further that contaminant migration was limited to the upper portion of the silty clay deposit, and that the upper

bedrock groundwater would not be adversely impacted by the waste material. The primary contaminants detected are tabulated as follows:

Contaminant	Concentration Range in ppm
aniline	ND-1.5
benzothiazole	ND-6.5
diphenylamine	ND-4.3
2-mercaptobenzothiazole	ND-880
ppm Parts Per Million **ND Compound Not Detected.**	

For comparison purposes, see the soil cleanup goals developed for the site to evaluate residual soil contamination following removal of the waste material (Section 2.2.2).

Perched Groundwater

The perched groundwater sample collected during the IRM Soil Boring/Test Pit Excavation Program was analyzed and found to contain the contaminants of concern identified in the waste. It is important to note, however, that since the piezometers were installed directly into the waste material these analytical results represent worst case groundwater conditions. In addition, as perched groundwater at the site was confined to the shallow bowl-like depression, these analytical results would not be representative of groundwater quality outside the waste area. Also, removal of the waste material would eliminate future adverse groundwater impacts. The primary contaminants detected are tabulated as follows:

Contaminant	Concentration (ppb)
aniline	1,020
benzothiazole	13,800
phenothiazine	68
diphenylamine	15
2-mercaptobenzothiazole	15,000
ppb Parts Per Billion	

For comparison purposes, the groundwater standard for aniline is 5 ppb, while the groundwater standard is 50 ppb for the other contaminants.

2.2.2: IRM Source Removal Program

Selection of Soil SCGs

The analytical data from the IRM Soil Boring/Test Pit Excavation Program were compared to environmental Standards, Criteria, and Guidance (SCGs) to determine the appropriate cleanup goals. Because the contaminants of concern are not commonly found at waste disposal sites, SCGs for these compounds had to be developed. Soil SCGs were developed by the Department using the methodology outlined in Technical and Administrative Guidance Memorandum (TAGM) HWR-92-4046 entitled Determination of Soil Cleanup Objectives and Cleanup Levels. The cleanup goals selected for the Vacant Land Adjacent to 1865 Connecting Road site, developed to be protective of public health and the environment, are tabulated as follows:

Contaminant	Soil Cleanup Goal (ppm)
aniline	0.85
benzothiazole	0.85
phenothiazine	0.85
diphenylamine	0.85
2-mercaptobenzothiazole	0.85
ppm Parts Per Million	

The soil cleanup goal for n-nitrosodiphenylamine (100 ppm) was not utilized because (1) the cleanup goals selected for the other contaminants of concern were more restrictive, and (2) attainment of these more restrictive goals also would ensure attainment of the soil cleanup goal for n-nitrosodiphenylamine.

Selection of Groundwater SCGs

As previously discussed, the low permeability of the silty clay deposit in conjunction with its surface configuration prevents both the lateral and downward migration of contaminants from the waste material. In addition, because contaminated groundwater would be collected and treated during remedial activities, and because source removal would eliminate the potential for future groundwater contamination, cleanup goals for groundwater were not necessary. Furthermore, the area around the site is provided with public water, so area residents and businesses would not utilize groundwater as a drinking water source.

Based upon a comparison of the analytical results from the IRM Soil Boring/Test Pit Excavation Program with the soil cleanup goals, the NYS DEC and NYS DOH determined that, in addition to waste removal,

removal of contaminated underlying native soils also would be required. A work plan dated September 1993 for an IRM Source Removal Program was approved by the Department on September 20, 1993. The objective of the IRM was to reduce contamination at the site to a level that would be protective of public health and the environment. The elements of this Source Removal Program included: (1) the excavation of waste material, (2) the excavation of one foot of underlying contaminated soils, (3) the disposal of all excavated material in a permitted landfill, (4) the treatment of collected groundwater prior to discharge, and (5) the collection and analysis of confirmatory samples to evaluate the adequacy of the removal action. The actual area remediated is shown on Figure 3.

Waste Removal, Identification, Extent and Disposal

Prior to remediation, the site was divided into twelve cells (Figure 3) to facilitate coordinated excavation activities, and to provide a grid on which to collect confirmatory samples. Upon completion of mobilization activities, waste excavation and removal activities were initiated on January 11, 1994 and continued without delay through project completion on February 15, 1994. Waste removal began in the eastern portion of the site (cells 1 and 2), and progressed in a westward direction across the site.

All removal activities were conducted in a two stage process on a cell by cell basis. In the first stage, all waste material was excavated down to the underlying native silty clay deposit, removed from the excavation cell, and placed directly into tandem or tractor trailer dump trucks. Once this stage was complete, approximately one foot of the native soil was scraped from the bottom of the excavation with a bulldozer, removed, and placed directly into the tandem or tractor trailer dump trucks. In total, 12,879 tons of contaminated material were removed from the site.

The type and amount of waste encountered at the site were variable. The most significant in volume was the yellow-tan resinous waste. Additional waste and fill encountered during excavation activities included: a white-blue/gray powder, drums, construction and demolition (C&D) debris, cinders, slag, bricks, and ash. These materials were encountered in pockets, layers of varying thickness, or mixed with soil and other fill. The yellow-tan resinous waste was encountered in a layer ranging in thickness from 1 inch to 4 feet.

In addition to the above wastes, a red resinous waste was encountered in several drums. This material was sampled and analyzed for Hazardous Waste Characteristics to characterize it for proper disposal. Based upon these analytical results the resin was classified as non-hazardous waste. In total, approximately 15 drums of varying integrity, and containing varying quantities of waste material, were excavated and staged prior to disposal. The waste filled drums contained either the yellow-tan resin, the white powder, or the red resin.

All excavated soil, waste, and debris were not Resource Conservation and Recovery Act (RCRA) listed or characteristic hazardous wastes, however, these materials did contain hazardous substances as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This material was transported to, and disposed at, Modern Landfill, a permitted solid waste landfill. In addition to this material, 27 drums containing solids, liquids, and personnel protective equipment generated during past site investigations were disposed at Modern Landfill on February 9, 1994. Following NYS DEC approval, the 15 drums encountered during excavation activities were also disposed at Modern Landfill.

Control and Disposal of Water

To prevent the possible migration of contaminants from the active excavation face, clay berms were constructed to prevent contaminated surface water and groundwater from entering, and thereby recontaminating, designated clean areas of the excavation. Water that collected behind the clay berms in the clean areas was designated as non-contaminated and discharged into an on-site catch basin. Water that collected in the contaminated portions of the excavation, however, was designated as contaminated and pumped to an on-site tanker truck. The majority of this water was generated during a three day thaw that occurred during site remedial actions. In addition, decontamination wash water was also collected and transferred into the same tanker truck.

Contaminated wastewater was transported to the North Tonawanda Wastewater Treatment Plant at 830 River Road in North Tonawanda for treatment prior to discharge. In total, approximately 7,300 gallons of contaminated water were treated at this facility.

Confirmatory Soil Sampling

Following the completion of excavation activities in a given cell, composite confirmatory samples were collected from the floor and sidewalls of the cell and analyzed for the five contaminants of concern. These analytical results were evaluated to determine the adequacy of the removal action. Following a review of the confirmatory results, the NYS DEC determined that excavation of additional soils from the floor and sidewalls of excavation cell 1, and from the sidewalls of excavation cells 3 and 4 was required. Once this additional excavation was complete, composite confirmatory samples were again collected for analysis and evaluated.

In summary, of the final 24 confirmatory samples collected, chemical concentrations were below the soil SCGs in 20 samples (Table 2). A summary of the analytical results from these samples follows:

- Concentrations were non-detectable or below the soil SCGs in the confirmatory samples collected from both the floors and sidewalls of excavation cells 1, 4, 5, 7, 8, 9, 11, 12, and only from the floors of excavation cells 2, 3, 6, and 10.

- Concentrations of 2-mercaptobenzothiazole were detected above the soil SCGs in the confirmatory samples collected from the sidewalls of excavation cells 2, 3, 6, and 10. All residual concentrations were below 4 ppm.

Although the selected cleanup goals were not achieved in all excavation cells, future direct contact exposures to this residual contamination will be limited because this area will be subsequently paved. The NYS DEC Project Manager determined, therefore, that excavation of these cells was adequate, and that additional soils removal was not necessary. Following acceptance of the confirmatory results, the excavation was subsequently backfilled with crushed stone, compacted, and the area regraded.

Documentation Air Monitoring and Sampling

An air monitoring plan was implemented during remedial activities to ensure the safety of on-site workers and the nearby community (e.g., mall patrons). Real time air monitoring for organic vapors, combustible

gases, oxygen deficiency, total dust, and radioactivity was conducted daily as excavation proceeded. Only in a few instances were organic vapor readings at the working face of the excavation high enough to halt work; elevated organic vapor readings were not detected above background levels at the site perimeter. None of the other real time monitoring results exceeded background levels. In addition, organic vapor samples were collected twice per week over an eight-hour period during working hours at regularly scheduled intervals from three site perimeter locations. These samples were subsequently analyzed for aniline, which was not detected in any of these samples.

SECTION 3: CURRENT STATUS

The Benderson Development Company has recently completed an IRM Source Removal Program at the Vacant Land Adjacent to 1865 Connecting Road site. During this project, all waste material and most contaminated soil were removed and disposed off-site. In addition, the area has been paved as part of mall expansion activities. The potential for future groundwater contamination and direct contact exposures has been eliminated; therefore, the IRM removal action is proposed as the final remedy for the site.

3.1: Summary of Human Exposure Pathways

The remediation of the site was performed as an IRM to address, as quickly as possible, the high contaminant levels detected at the site. Prior to remediation, the potential routes of exposure included direct contact with waste material or contaminated soils, ingestion (eating) of waste material or contaminated soils, and ingestion (drinking) of contaminated groundwater. The area around the site, however, is provided with public water, so area residents and businesses would not utilize groundwater as a drinking water source. These potential exposures have been eliminated as all waste and almost all contaminated soil have been removed from the site and the area paved. Furthermore, future use of the site will be restricted by means of a deed restriction/covenant to prohibit residential development. This will effectively eliminate future exposure to any remaining contamination at the site.

3.2: Summary of Environmental Exposure Pathways

Prior to remediation, perched groundwater at the site was significantly contaminated by organic compounds associated with the waste material. This contaminated groundwater had the potential to enter an adjacent drainage ditch, thereby additionally impacting surface water. Potential adverse impacts on the environment have been substantially reduced as all waste, contaminated perched groundwater, and almost all contaminated soil have been removed from the site.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRP) are those individuals or groups of individuals who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers. Because the W.S. Kozdranski Co. was no longer in business, and due to potential future liabilities, the Benderson Development Company began negotiations with the Department to conduct additional investigations, and ultimately to remediate the site. The NYS DEC and Benderson

entered into an IRM Order on Consent in January 1991 that obligated Benderson to implement a Soil Boring Program at the site to define further the nature and extent of the waste material. This Order was later amended to include further waste delineation by the Test Pit Excavation Program. Following these studies, Benderson entered into a second IRM Order on Consent with the Department in November 1992 that obligated Benderson to remediate the site. The following is a chronological enforcement history of this site.

Date	Index No.	Subject of Order
1/15/91	B9-0154-86-09	IRM Soil Boring Program
7/24/92	B9-0154-86-09	IRM Soil Boring Program Amendment - Test Pit Excavation Program
11/5/93	B9-0154-86-09	IRM Removal Program

SECTION 5: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program were established through the remedy selection process stated in 6 NYCRR Part 375-1.10. These goals were established under the guideline of meeting all Standards, Criteria, and Guidances (SCGs) and the protection of public health and the environment. The overall objective of the IRM Source Removal Program at the Vacant Land Adjacent to 1865 Connecting Road site, therefore, was to reduce contamination to a level that was protective of public health and the environment.

The goals selected for this site were:

- Reduce organic contamination present within on-site soils/waste to a cleanup goal of 0.85 parts per million (ppm).
- Eliminate the potential for direct human contact with on-site waste and contaminated soils.
- Eliminate the potential for wastes and contaminated soils to contaminate local groundwater.

SECTION 6: SUMMARY OF THE PREFERRED REMEDY

The Proposed Remedial Action Plan for the Vacant Land Adjacent to 1865 Connecting Road Site is **No Further Action**. The selection of this remedial alternative is based upon the results of the Interim Remedial Measure (IRM) Source Removal Program recently conducted at the site and described in Section 2.2.2 above. This IRM consisted of the following:

- The removal of waste and one foot of underlying contaminated soils from the site, with off-site disposal in a permitted landfill.

- The treatment of contaminated waters collected during site remediation prior to discharge.

- The collection and analysis of confirmatory samples to evaluate the adequacy of the removal action.

The **No Further Action** alternative is an acceptable alternative, as the site would remain in its present remediated condition. The IRM conducted at the site achieved the goals identified in Section 6, with the exception that all soil cleanup goals were not achieved in every excavation cell. However, because the excavation was backfilled with crushed stone and paved, future direct contact exposures to residual soil contamination has been eliminated. In addition, the Benderson Development Company has agreed to file a deed restriction/covenant with the Niagara County Clerk's Office prohibiting the use of the site by it or other corporations or individuals for residential purposes. The NYS DEC and NYS DOH fully support this action. The site, therefore, does not require further investigation, nor is the development and evaluation of remedial alternatives necessary for this site. **This No Further Action alternative also will involve delisting the site from the Registry of Inactive Hazardous Waste Sites in New York State.** The NYS DOH concurs with the remedy selected for this site.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the Proposed Remedial Action Plan and Delisting process, the following citizen participation activities were conducted:

- All important Remedial Program documents were placed in the document repository for public review and comment.

- A mailing list was developed and fact sheets were mailed to the public during various stages of the remedial process.

- An informational mailing was sent to interested individuals/groups on August 10, 1994 that also announced the public meeting scheduled for the Proposed Remedial Action Plan.

- A notice was placed in the Environmental News Bulletin (ENB) to announce the proposed delisting of the site from the NYS Registry of Inactive Hazardous Waste Disposal Sites.

- A legal notice was placed in the Niagara Gazette to announce the proposed delisting of the site from the Registry.

- A 60 day comment period was designated to solicit public comments and concerns regarding either the delisting of the site or the Proposed Remedial Action Plan. This comment period lasted from August 10, 1994 to October 10, 1994.

- A public meeting was held on August 16, 1994 to present the Proposed Remedial Action Plan and to review the details of the Interim Remedial Measure Source Removal Program conducted at the site. A Responsiveness Summary that addresses questions and comments raised during the meeting and comment period is provided as Appendix A.

TABLE 1
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IRM SUPPLEMENTAL INVESTIGATION PROGRAM
Vacant Land Adjacent to 1865 Connecting Road Site
Waste Type and Occurrence

TEST PIT LOCATION	TOTAL DEPTH (FEET)	TOP OF CLAY DEPTH (FEET)	WASTE TYPE ENCOUNTERED	WASTE OCCURRENCE (FEET)	REMARKS
TP-1	3.0	3.0	Yellow Resin	0.3-3.0	
TP-2	5.0	5.0	White Powder	2.0-5.0	
TP-3	5.0	4.0	None	—	
TP-4	4.0	3.0	Yellow Resin	1.0-3.0	
TP-5	5.0	5.0	Yellow Resin	2.0-2.5	Resin not continuous
TP-6	4.0	N/A	None to 4 Feet	—	TP caved in
TP-7	5.6	4.7	Yellow Resin	2.5	Resin & fill mixed
			White Powder	2.5-3.5	
TP-8	5.5	5.0	White Powder	2.5-4.5	
			Yellow Resin	4.5-5.0	
TP-9	5.0	4.5	White Powder	2.0-3.5	
			Yellow Resin	3.5-4.5	
TP-10	3.0	—	White Powder	2.5-3.0	
			Yellow Resin	3.0	
TP-11	4.5	4.0	Yellow Resin	2.3-3.0	
TP-12	4.0	3.0	Yellow Resin	2.0-2.5	Resin too hard
TP-13	3.0	2.0	None	—	to complete test pit
TP-14	3.5	2.5	None	—	
TP-14A	5.0	3.0	None	—	
TP-15	3.5	3.0	None	—	
TP-16	3.0	N/A	None at 3 Feet	—	
TP-17	4.5	4.0	None	—	
TP-18	6.5	5.5	None	—	
TP-19	6.0	6.0	None	—	Storm sewer at 3'
TP-20	5.0	5.0	Yellow Resin	3.0-4.0	
TP-21	7.0	7.0	Yellow Resin	6.0-7.0	
TP-22	7.5	7.0	None	—	
TP-23	7.8	7.0	None	—	Resin not in layer
TP-24	8.0	7.0	None	—	
TP-25	8.0	7.5	None	—	
TP-26	7.0	6.5	None	—	
TP-27	6.0	5.7	Yellow Resin	4.3-5.7	
TP-28	5.0	4.0	Yellow Resin	3.0-4.0	
TP-29	4.0	4.0	White Powder	3.5-4.0	
TP-30	4.0	4.0	Yellow Resin	1.0-3.5	
TP-31	3.5	3.5	Yellow Resin	3.0-3.5	
TP-32	6.0	3.0	None	—	WP in a pocket
TP-33	7.5	6.0	Yellow Resin	5.5-6.0	Resin & fill mixed
TP-34	8.0	7.0	Yellow Resin	4.7-7.0	Resin & fill mixed
TP-35	6.5	5.6	Yellow Resin	2.0-3.0,5.5	
TP-36	5.0	5.0	Yellow Resin	3.0-5.0	Trace resin 5.5'-6.0'
TP-37	5.0	4.0	Yellow Resin	1.0-4.0	
TP-38	4.0	4.0	Yellow Resin	3.4-4.0	Trace resin at 5.5'
TP-38A	5.0	3.5	None	—	
TP-39	4.0	2.0	None	—	Trace resin in fill 1'-4'
TP-40	5.0	5.0	White Powder	2.0-5.0	

TABLE 2
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IRM SOURCE REMOVAL PROGRAM
Vacant Land Adjacent to 1865 Connecting Road Site
Confirmatory Soil Sample Analytical Results
Concentration values in parts per million

Sample No.	S1A-4'-1B	S2A-2'-1W	S3-4'-2B	S4-2'-2W	S7-4'-3B	S8A-2'-3W	S5-4'-4B	S6A-2'-4W	Soil Cleanup Goals
Sample Date	1/18/94	1/18/94	1/18/94	1/18/94	1/25/94	1/31/94	1/25/94	2/1/94	
Excavation Cell	1		2		3		4		
Indicator Compounds									
Aniline	ND	ND	ND	ND	ND	ND	ND	ND	0.85
Diphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	0.85
2-Mercaptobenzothiazole	ND	0.62	ND	3.1	ND	1.6	ND	ND	0.85
Benzothiazole	ND	ND	ND	0.53	ND	0.41	ND	0.24	0.85
Phenothiazine	ND	ND	ND	ND	ND	ND	ND	ND	0.85

Sample No.	S9-5'-5B	S10-2'-5W	S11-5'-6B	S12-2'-6W	S15-6'-7B	S16-4'-7W	S13-6'-8B	S14-3'-8W	Soil Cleanup Goals
Sample Date	1/28/94	1/28/94	1/28/94	1/28/94	2/3/94	2/3/94	2/1/94	2/1/94	
Excavation Cell	5		6		7		8		
Indicator Compounds									
Aniline	ND	ND	0.28	ND	ND	ND	ND	ND	0.85
Diphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	0.85
2-Mercaptobenzothiazole	ND	ND	ND	1.6	ND	0.67	ND	ND	0.85
Benzothiazole	ND	ND	0.33	0.41	0.21	ND	ND	ND	0.85
Phenothiazine	ND	ND	ND	ND	ND	ND	ND	ND	0.85

TABLE 2
Page 2 of 2
IRM SOURCE REMOVAL PROGRAM
Vacant Land Adjacent to 1865 Connecting Road Site
Confirmatory Soil Sample Analytical Results
Concentration values in parts per million

Sample No.	S23-6'-9B	S24-4'-9W	S17-6'-10B	S18-4'-10W	S21-7'-11B	S22-5'-11W	S19-6'-12B	S20-4'-12W	Soil Cleanup Goals
Sample Date	2/11/94	2/11/94	2/3/94	2/3/94	2/10/94	2/10/94	2/8/94	2/8/94	
Excavation Cell	9		10		11		12		
Indicator Compounds									
Aniline	ND	ND	ND	ND	ND	ND	ND	ND	0.85
Diphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	0.85
2-Mercaptobenzothiazole	ND	ND	0.54	1.6	ND	ND	ND	ND	0.85
Benzothiazole	ND	ND	ND	ND	ND	ND	ND	ND	0.85
Phenothiazine	ND	ND	ND	ND	ND	ND	ND	ND	0.85

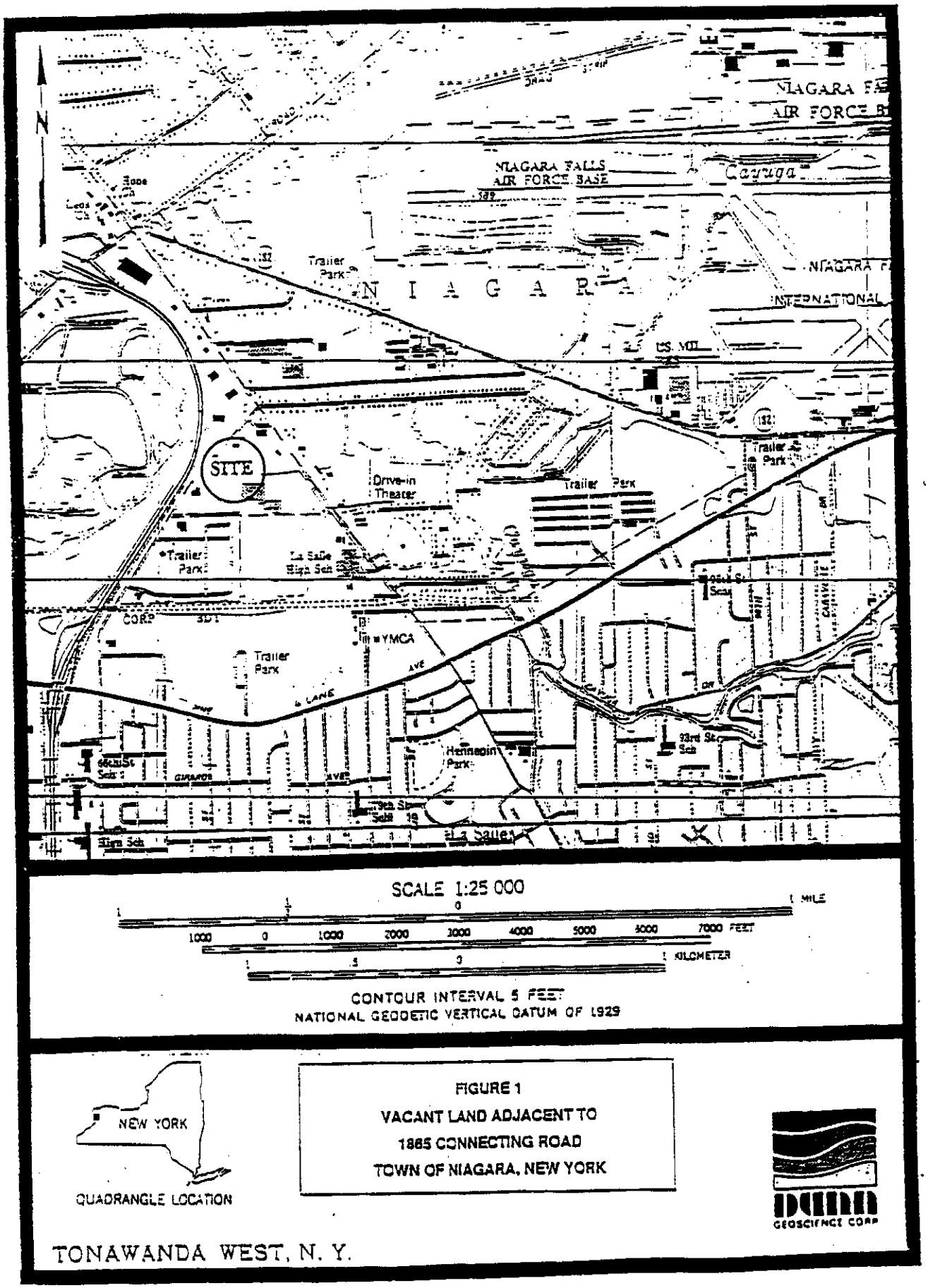

Figure 1 - Site Location Map

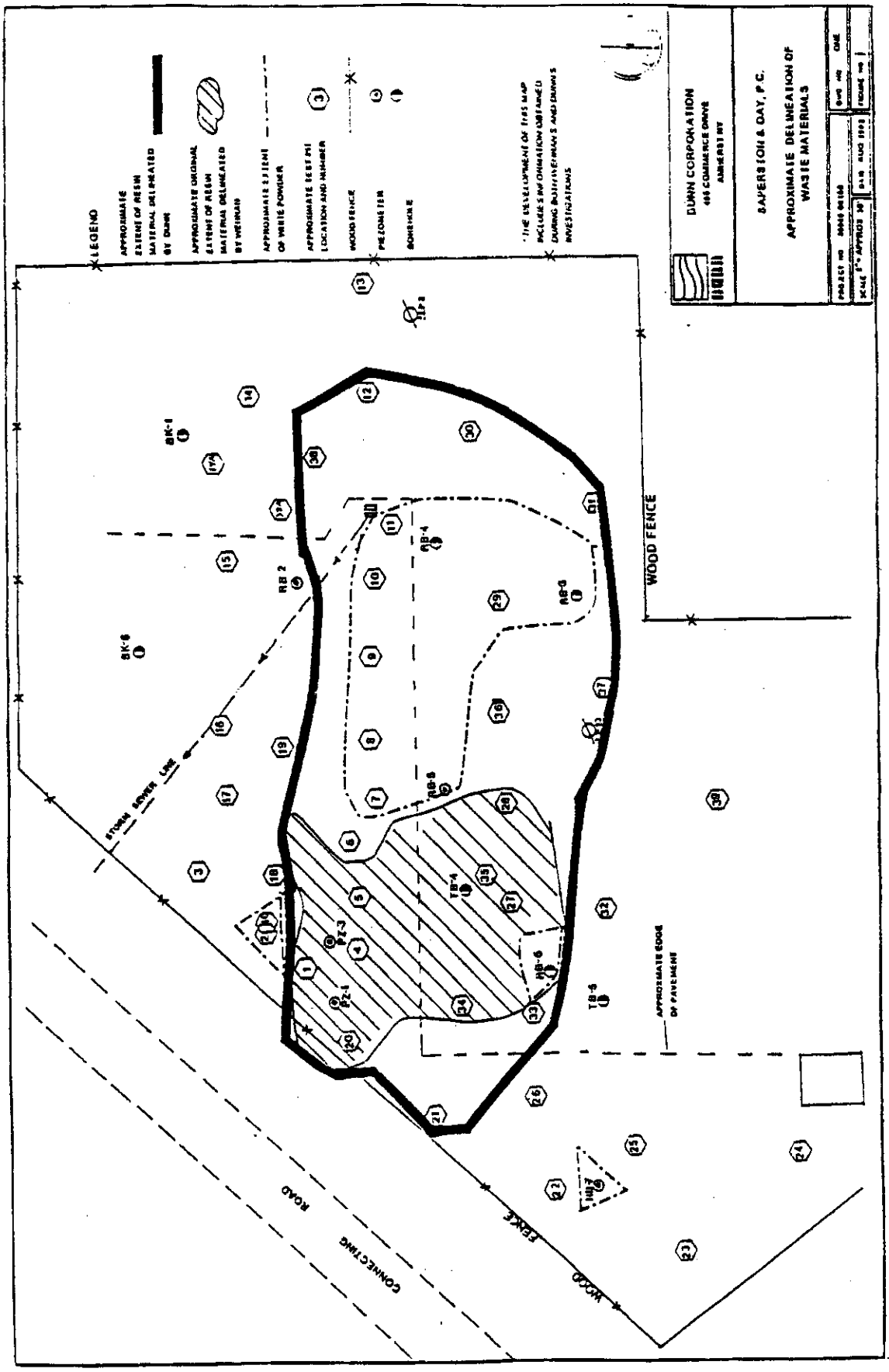

Figure 2 - Site map showing the extent of waste material, and the locations of borings and test pits completed during the IRM Soil Boring/Test Pit Excavation Program.

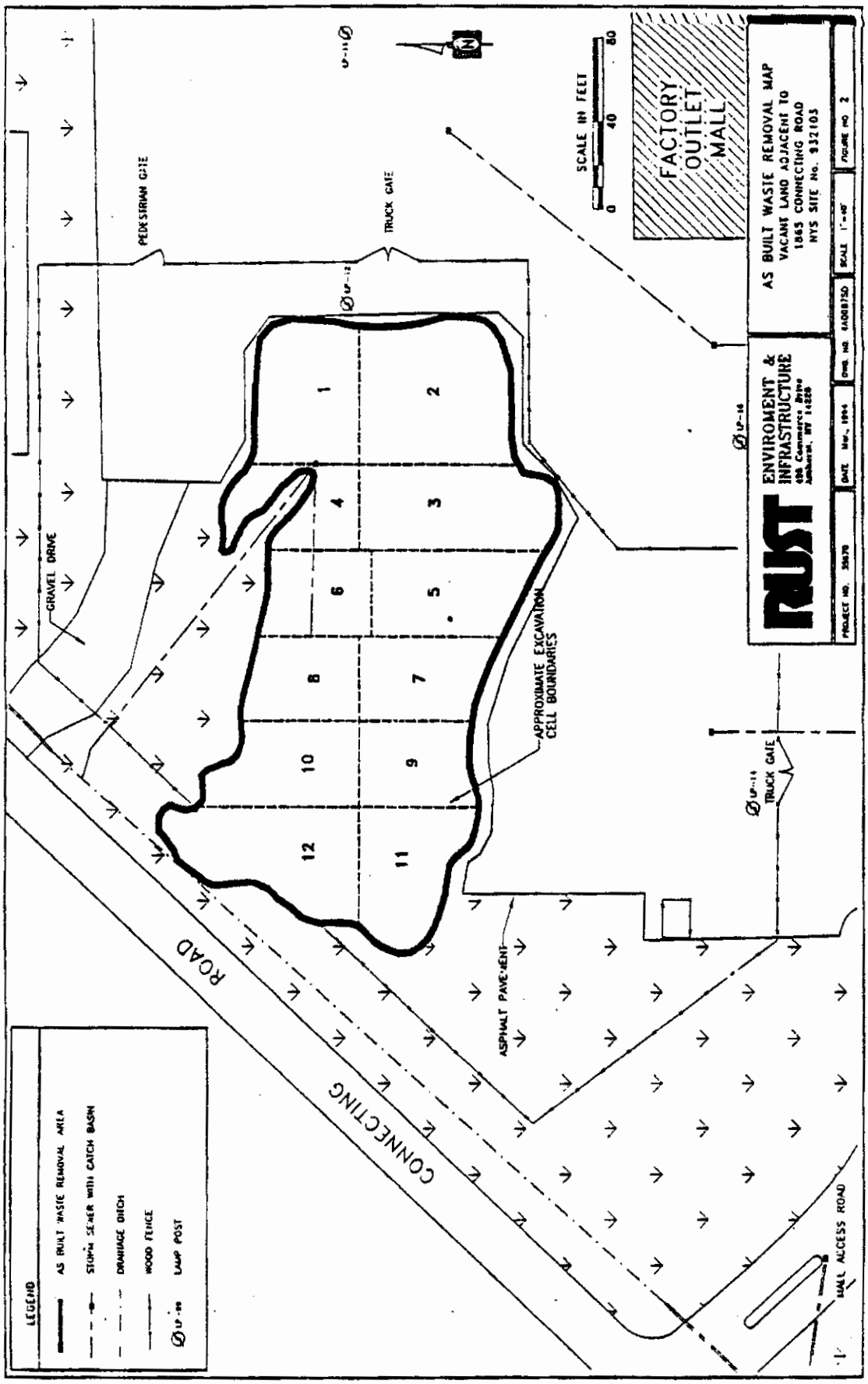

Figure 3 - Site map showing the locations of the twelve excavation cells, and the final lateral extent of the excavation.

APPENDIX A

RESPONSIVENESS SUMMARY

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RESPONSIVENESS SUMMARY

I. Questions and Issues Discussed During the August 16, 1994 Public Meeting:

1. Q Were investigations conducted to determine whether waste materials were located on other areas of the property?

   A Prior to implementation of the Soil Boring/Test Pit Excavation Program, information available to the Department suggested that waste materials were limited to the northwest portion of the Niagara Factory Outlet Mall property. Investigation activities, therefore, were restricted to this portion of the property; however, to evaluate the potential existence of isolated pockets of waste in this area, four (4) borings and sixteen (16) test pits were randomly completed once the extent of the waste material had been delineated. Waste materials were not encountered at these locations.

2. Q Since the waste materials were transported to Modern Landfill for disposal, were they hazardous wastes?

   A The waste materials removed from the site during the IRM Source Removal Program were not Resource Conservation and Recovery Act (RCRA) listed or characteristic hazardous wastes.

3. Q If the waste materials were not hazardous, why were they removed?

   A Although by definition the waste materials were not hazardous wastes, they did contain hazardous substances as defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). There was a potential, therefore, for these wastes to adversely impact both the environment and public health. To minimize these potential impacts, the Benderson Development Company agreed to remediate the site.

4. Q Were the waste materials disposed of in a "State of the Art" double lined landfill?

   A The waste materials were transported to Modern Landfill in Model City, New York for disposal in the company's new "State of the Art" double lined landfill.

5. Q Because the IRM Source Removal Program is going to be the final remedy for the site, does anything further need to be done?

   A During the IRM Source Removal Program, all waste materials and most contaminated soils were removed and disposed off-site. In addition, the area has been paved as part of mall expansion activities. Because of these actions the potential for future groundwater contamination and direct contact exposures has been eliminated. Therefore, No Further Action is required at the site.

6. Q I am concerned that the stone backfill will act as a French Drain where it isn't covered by pavement and that collected groundwater will become contaminated by the residual contamination?

   A 2-mercaptobenzothiazole was the only contaminant of concern that exceeded the 0.85 parts per million (ppm) cleanup goal. Exceedance of this goal occurred in only 4 of 24 confirmatory samples. Therefore, the quantity of contaminated soil remaining on-site is extremely small. Of these 4 samples, one contained 2-mercaptobenzothiazole at a concentration of 3.1 ppm, while the other three samples contained this compound at a concentration of 1.6 ppm. Although a cleanup goal of 0.85 ppm was selected for this compound, the methodology of Technical and Guidance Memorandum (TAGM) HWR-92-4046 suggests that a soil cleanup goal of 1.2 ppm would be protective of groundwater. Because the residual concentrations of 2-mercaptobenzothiazole only slightly exceed this level, the residual contamination would not significantly impact perched groundwater entering the stone backfill.

7. Q Is the Benderson Development Company happy with what the NYS DEC has done at the site?

   A All site investigations, as well as the IRM Source Removal Program, were conducted and financed by the Benderson Development Company with Department concurrence and/or oversight. The Department worked closely with Benderson throughout the development and implementation of the investigation and remediation. This was mutually beneficial because it enabled Benderson to move forward with their development plans for the mall and has allowed the Department to consider removing the site from the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

APPENDIX B

ADMINISTRATIVE RECORD

APPENDIX B

ADMINISTRATIVE RECORD

1. *Field Sampling Report:* Wehran-New York Inc., 1988.
2. Field Sampling Report of Niagara Factory Outlet Mall Site: Wehran-New York Inc., 1989.
3. Order on Consent for an IRM Soil Boring Program executed on January 15, 1991.
4. Magnetic Field Survey: Wehran-New York Inc., July 1991.
5. IRM Interim Report - Investigative Results: Wehran-New York Inc., February 1992.
6. Amendment to the January 15, 1991 Order on Consent for an IRM Test Pit Excavation Program executed on July 24, 1992.
7. *Vacant Land Adjacent to 1865 Connecting Road* Supplemental IRM Report: Dunn Engineering Company, November 25, 1992.
8. Interim Remedial Measures (IRM) Removal Action Plan: Dunn Engineering Company, September 1993.
9. Interim Remedial Measures Waste Removal Contract Documents and Technical Specifications: Dunn Engineering Company, September 1993.
10. Order on Consent for an IRM Source Removal Program executed on November 5, 1993.
11. Interim Remedial Measures Removal Action Report: Rust Environment & Infrastructure, May 1994.
12. Proposed Remedial Action Plan (PRAP): NYS DEC, August 1994.