Department of Environmental Conservation

Division of Hazardous Waste Remediation

Record of Decision

Bern/Universal Metals Site
City of Buffalo, Erie County
Site Number 9-15-135

March 1996

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

DECLARATION STATEMENT - RECORD OF DECISION

Bern/Universal Metals Inactive Hazardous Waste Site
City of Buffalo, Erie County, New York
Site No. 9-15-135

Statement of Purpose and Basis

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

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the **Bern/Universal Metals** 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.

Assessment of the Site

Actual or threatened releases of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this ROD, 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 **Bern/Universal Metals** site and the criteria identified for evaluation of alternatives the NYSDEC has selected consolidation and capping of the contaminated soil at the site. The main components of the remedy are as follows:

* **Excavation of certain soil and sediment from off-site areas and consolidation on site.** The sediment from the drainage ditch will be removed and consolidated on site. Contaminated soils from portions of the Conrail and Laub properties will be excavated and consolidated on site. Excavation will be performed in accordance with the recommended cleanup goals in Section 5 above. During design, steps will be taken to balance soil consolidation and grading to maximize the potential for future use of the site.

* **Building demolition and on-site consolidation.** The buildings located on Bern and Universal units will be demolished and will be consolidated at the site.

* A **multi-layered cap** consisting of general fill for grading, a geotextile cushioning layer, a 60-mil HDPE membrane, a 12-inch sand drainage layer or equivalent and 6 inches of soil suitable for vegetative cover will be placed at the site.

* The **excavated areas** in the Conrail and Laub properties will be **backfilled** with clean soil and a vegetative cover will be established.

* A **long-term groundwater monitoring program** will be established to determine the effectiveness of the remedy in addressing the limited groundwater problem at the site.

* A **long-term maintenance program** will be implemented to maintain the cap. This will ensure the integrity of the cap and its long-term effectiveness.

* A **deed restriction** or similar agreement will be sought to provide precautionary measures during future construction activities at the site.

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.

3/29/96
Date

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

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Glossary of Acronyms

CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act
ECL:	Environmental Conservation Law
NCP:	National Contingency Plan
ND:	Not Detected
NYCRR:	N.Y. Codes, Rules, and Regulations
NYSDEC:	N.Y. State Department of Environmental Conservation
NYSDOH:	N.Y. State Department of Health
O&M:	Operation and Maintenance
ppb:	parts per billion
ppm:	parts per million
PRAP:	Proposed Remedial Action Plan
RI/FS:	Remedial Investigation and Feasibility Study
ROD:	Record of Decision
SARA:	Superfund Amendments and Reauthorization Act
SCG:	Standards, Criteria, and Guidance
ug/kg:	microgram per kilogram
mg/kg:	milligram per kilogram
ug/l:	microgram per liter

RECORD OF DECISION
BERN/UNIVERSAL METALS SITE
SITE ID NO. 9-15-135

SECTION 1: SITE LOCATION AND DESCRIPTION

The Bern/Universal Metals site is located at Bender Street and Clinton Avenue in the City of Buffalo, Erie County, New York (Figure 1). The site is in a mixed residential/industrial area approximately one mile north of the Buffalo River and 1.5 miles east of Lake Erie. The Site is bordered on the south and west by the Conrail and Buffalo Creek railroads, on the east by Laub Industries, and on the north by residences and small commercial establishments.

The primary use of the site has been to reclaim metals from used batteries. The primary contaminant was found to be lead in soil, ditch sediments, and groundwater at the site. There is a potential for direct exposure to workers and trespassers from lead contaminated soil and there is also a small possibility that contaminated soil could migrate to residential yards cleaned by the Potentially Responsible Parties (PRP). The groundwater is not a significant flow system at the site because the water-bearing zone is generally thin across the site and it is in perched condition above a low permeability clay layer. The groundwater in the vicinity of the site is not used for potable purposes.

SECTION 2: SITE HISTORY

2.1: Operational/Disposal History

The Site was used to reclaim metals from used batteries, and for reprocessing/recycling of metal sludges, scrap metal, and used batteries. The on-site facilities are currently not in use. The property covers an area of approximately 5.2 acres (Figure 2). Operations at the site occurred from 1938 to 1983. The Site is comprised of two separate units named the Bern Metal Unit and the Universal Metal Unit. Because of the close proximity of these two units, the NYSDEC has registered the units under one site name and one registry number.

2.2 Remedial History

Based on a complaint from residences located adjacent to the site, the NYSDEC conducted a Phase I investigation in 1987 at the Bern Unit. Waste piles, drums, sludges and metal turnings were found at the Bern Unit. NYSDEC asked the USEPA to do an emergency removal action and secure the Bern property to limit access. In 1990, USEPA initiated the field work at the Bern unit. During the removal action, NYSDEC visited the adjacent Universal property and found approximately 25 transformers in bad condition. The Universal Unit was also included in the USEPA's removal action.

The United States Environmental Protection Agency (USEPA) conducted soil sampling during the removal action from late 1990 through 1992. The analytical results of the soil samples showed elevated concentrations of lead. The presence of lead was attributed to the recycling of used batteries and other recycling activities. Elevated concentrations of chromium and copper were also found in some soil samples. However, these metals were detected less frequently than lead. The removal action conducted at the site by the USEPA included the

removal of abandoned drums, waste piles, electrical transformers, soil containing greater than 10,000 parts per million (ppm) of lead, and soil contaminated with PCB from the site. Under an Administrative Order with the USEPA, certain of the identified PRPs performed the excavation and replacement of soil in adjoining residential yards, erected a fence around the site, and constructed an asphalt cap in an area of the Bern Metal unit located adjacent to the residential properties.

In January 1991, the NYSDOH conducted blood lead screening of residents in the vicinity of the site. Fourteen residents responded and participated in the lead screening event. Among eight children 10 to 16 years old, the highest level was 14 micrograms per deciliter (ug/dl). Two children with risk factors for lead poisoning were referred to the County lead program for follow-up. One adult with previous occupational exposure had a level of 23 ug/dl; the next highest level in an adult was 10 ug/dl.

SECTION 3: CURRENT STATUS

The NYSDEC signed an Order on Consent with certain of the identified PRPs to undertake a Remedial Investigation/ Feasibility Study (RI/FS) in February 1993. These PRPs include Allied Signal, Inc., General Motors Corporation, National Fuel Gas Distribution Corporation, and Daniel Tredo, owner of the Universal Metal property.

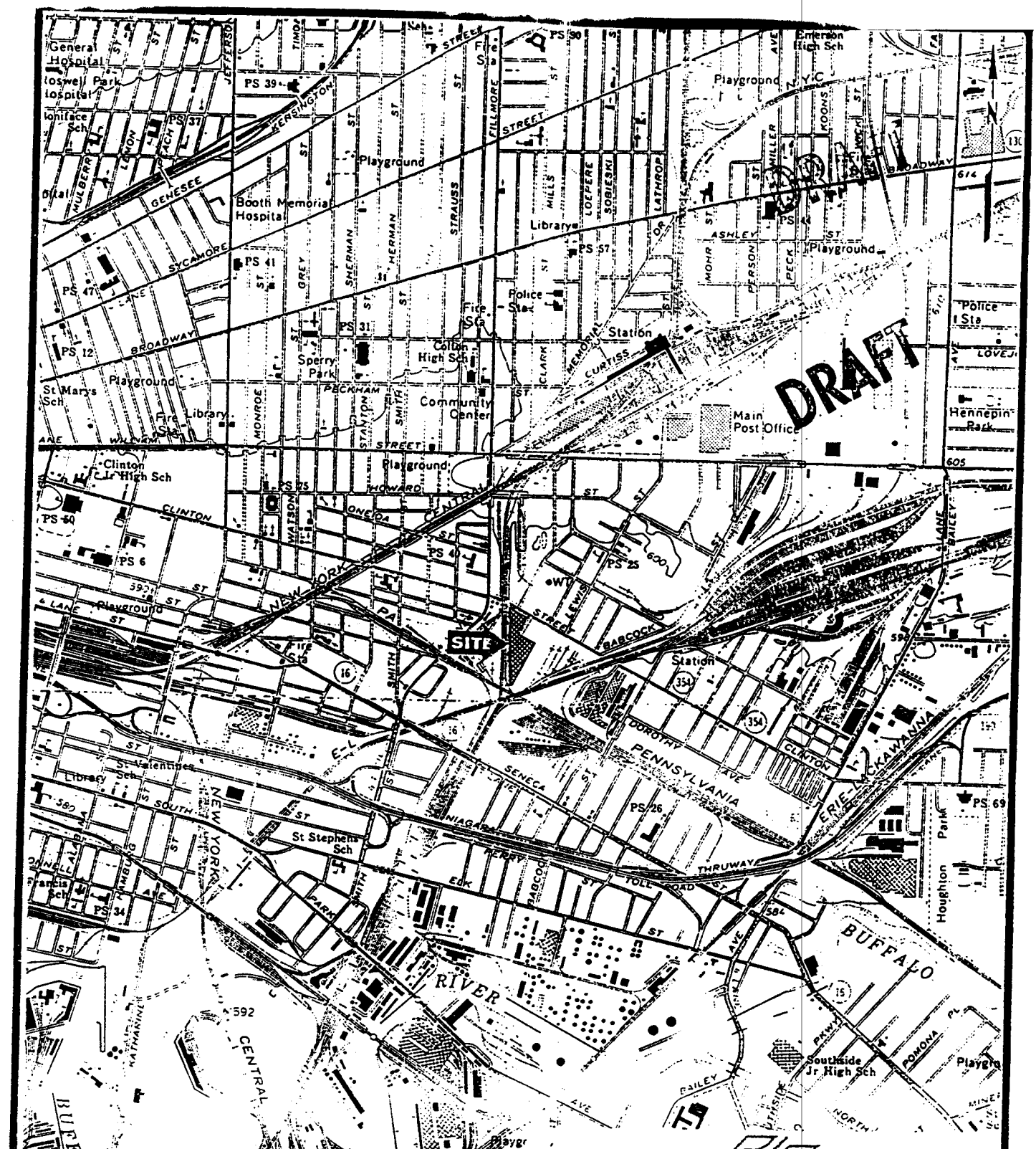
3.1: Summary of the Remedial Investigation

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 between March 1994 and July 1994 and the second phase was conducted between February 1995 and May 1995. A report entitled "Remedial Investigation Report, October 1995," has been prepared describing the field activities and findings of the RI in detail.

The RI activities consisted of the following:

- Installation of soil borings and monitoring wells to obtain subsurface soil and groundwater samples for analysis. Samples to evaluate the physical and hydrogeologic conditions at the site were also obtained.
- Wipe and floor samples were obtained from building surfaces to determine the extent of contamination.
- Sediment/soil samples were obtained from the ditch located along the site to determine the extent of contamination in the ditch.
- Surface soil samples were obtained from the site and off-site areas to determine the extent of contamination in soil.



BLASLAND, BOUCK & LEE, INC.

ENGINEERS & SCIENTISTS

BERN METAL/UNIVERSAL SITES PRP GROUP
BUFFALO, NEW YORK

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

LOCATION MAP

FIGURE
1

Soil

The general surface of the site is composed of various fill materials. A low permeability clay layer which extends to the bedrock exists below the fill layer. The former Little Buffalo Creek channel crosses the Universal Unit. The channel is covered with fill material. It used to flow from northeast to southwest. The thickness of the fill material at the site varies from approximately two feet to nine feet and extends to 15 feet in the channel.

The water-bearing zone in the fill layer appears to be perched on the low permeability clay layer. The water-bearing zone is generally thin across the site, indicating that the groundwater is not a significant flow system. The groundwater flow at the site converges into the former creek bed from the Universal and Bern Units.

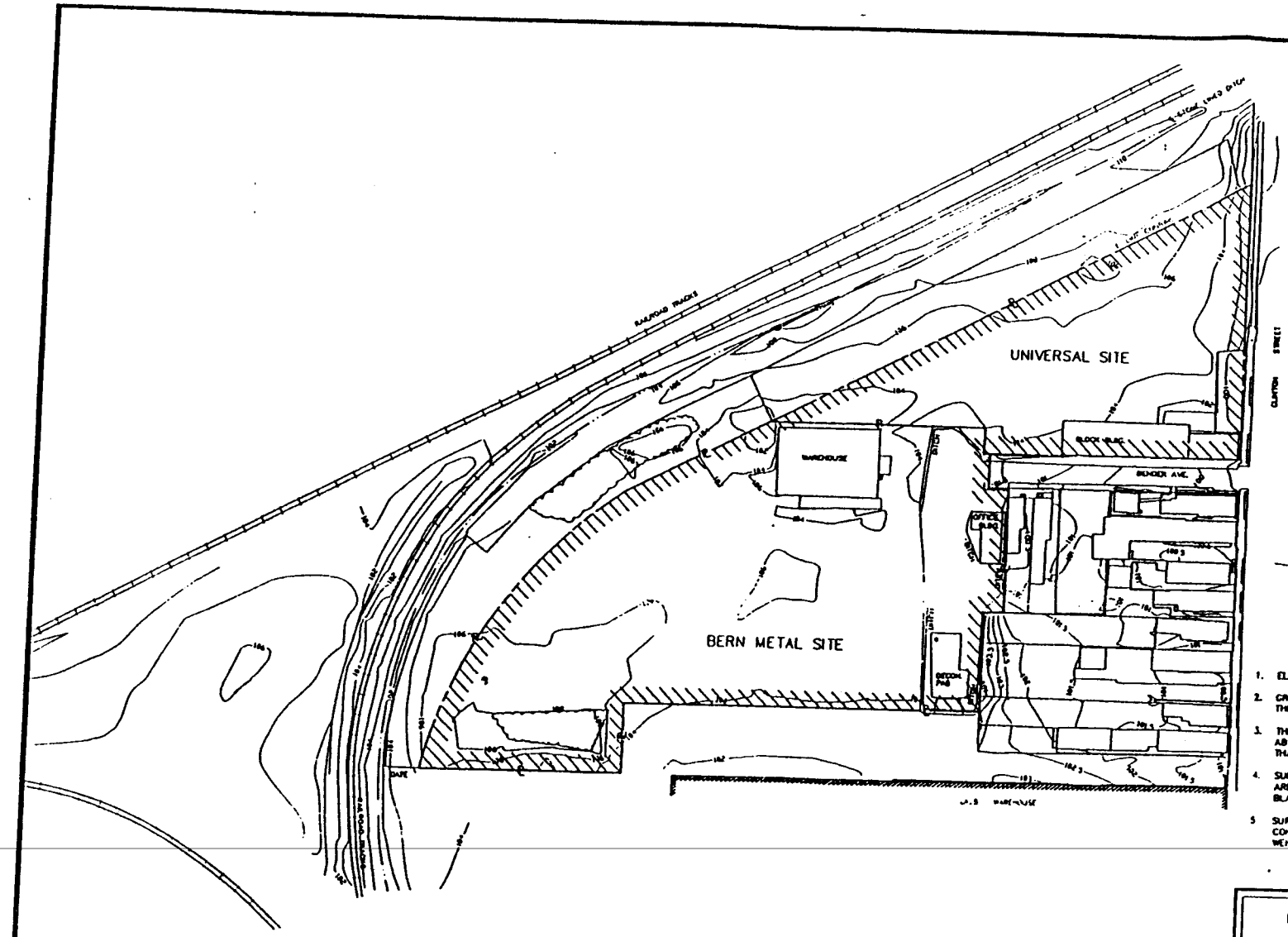
The analytical data obtained from the RI were compared to applicable environmental Standards, Criteria, and Guidance (SCGs, further defined in Section 7.2 below) to determine remedial goals. Groundwater, drinking water, and surface water SCGs identified for the Bern/Universal Metals site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of the 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 for soil.

The results of the Remedial Investigation indicate that on-site and off-site surface soils, and on-site subsurface soils are the primary contaminated media of concern at the site. Table 1 shows all the contaminant concentrations in soil and groundwater which exceeded the soil clean up goal or groundwater standard. The following text summarizes the findings of the RI.

Lead is the predominant contaminant in soil, sediment and groundwater at the site. Lead contamination in soil was found to be high at the surface and gradually decreased with depth. The other contaminants detected in soil samples were polychlorinated biphenyls (PCBs), semi-volatile organics (SVOCs), volatile organics (VOCs), and other metals such as cadmium and chromium. The concentration of lead ranged from 88.8 ppm to 82,600 ppm in the on-site surface soil samples. The concentration of lead detected in the on-site subsurface soil samples ranged from 35.7 ppm to 55,200 at one foot depth. One sample collected from the Bern Metal Unit at two feet deep contained lead at 196,000 ppm which was the highest concentration of lead detected at the site. The lead concentration in the deeper sections of the soil, from one foot to the top of the low permeability clay layer ranged from 45.2 ppm to 4,650 ppm.

The off-site surface soil samples obtained from adjacent Conrail and Laub properties contained lead ranging from 56.8 to 7670 ppm. Figure 3 shows the locations and results of soil samples.

The two background surface soil samples obtained from the locations shown in the Figure 4 contained lead at 262 ppm and 633 ppm. During the removal action, USEPA obtained several background surface soil samples from locations shown in Figure 5. The lead concentration in these samples ranged from 448 ppm to 1,410 ppm and averaged approximately 750 ppm.



DRAFT

LEGEND

GROUND SURFACE ELEVATION CONTOUR LINE (IN FEET)

NOTES:

1. ELEVATIONS BASED ON AN ASSUMED DATUM.
2. GROUND SURFACE CONTOUR INTERVAL = 2 FOOT ON THE BERN METAL/UNIVERSAL SITES.
3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY CHANGES THAT AN EXAMINATION OF SUCH MAY REVEAL.
4. SURVEY OF BERN METAL SITE AND CLINTON/BENDER AREA CONDUCTED IN AUGUST 1992 BY BLASLAND, BOUCK & LEE, INC.
5. SURVEY OF UNIVERSAL SITE AND CONRAIL PROPERTY CONDUCTED IN JULY 1994 AND MAY 1995 BY WENDEL SURVEY.

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REMEDIAL INVESTIGATION/FEASIBILITY STUDY

SITE MAP

FIGURE 2

Table 1: Representative Contaminants - Bern Metal Site (9-15-135)

			On-Site Surface Soil			
	Concentration Range, ppm			Cleanup	No. that	No. of
Contaminant	Minimum	Maximum	Average	Goal	Exceed	Samples
Benzo(a)anthracene	0.98	2.6	2.0	0.224	4	4
Benzo(b)fluoranthene	1.5	4.5	3.4	1.1	4	4
Benzo(a)pyrene	0.92	2.6	2.0	0.061	4	4
Chrysene	0.89	2.7	2.0	0.4	4	4
PCB 1260	1.4	37	10.7	1	4	4
Cadmium	17.5	55.7	32.9	10	4	4
Chromium	154	954	508.0	50	4	4
Iron	153000	299000	249250.0	2000	4	4
Lead	88.8	82600	9614.8	750	38	42
			Off-Site Surface Soil			
	Concentration Range, ppm			Cleanup	No. that	No. of
Contaminant	Minimum	Maximum	Average	Goal	Exceed	Samples
Lead	56.8	7670	1432.9	750	5	16
			On-Site Subsurface Soil			
	Concentration Range, ppm			Cleanup	No. that	No. of
Contaminant	Minimum	Maximum	Average	Goal	Exceed	Samples
Benzo(a)anthracene	0.22	19	4.2	0.224	8	9
Benzo(b)fluoranthene	0.31	18	4.8	1.1	6	9
Benzo(a)pyrene	0.23	13	3.6	0.061	9	9
Chrysene	0.23	15	3.9	0.4	7	9
PCB 1260	0.04	0.72	0.3	10	0	9
Cadmium	0.5	25.9	8.8	10	4	10
Chromium	18.2	348	122.2	50	4	5
Iron	1350	298000	94795.0	2000	9	10
Lead	8.8	196000	8322.0	1000	26	46
			Ditch Soil/Sediment 6"			
	Concentration Range, ppm			Cleanup	No. that	No. of
Contaminant	Minimum	Maximum	Average	Goal	Exceed	Samples
Lead	78.8	5660	804.3	750	3	12
			Ditch Soil/Sediment 12"			
	Concentration Range, ppm			Cleanup	No. that	No. of
Contaminant	Minimum	Maximum	Average	Goal	Exceed	Samples
Lead	41.1	341	140.4	1000	0	8
			Groundwater			
	Concentration Range, ppb			Cleanup	No. that	No. of
Contaminant	Minimum	Maximum	Average	Goal	Exceed	Samples
Benzene	0.35	10	2.2	0.7	2	6
Vinyl Chloride	1	9	2.3	2	1	6
PCB 1260	0.05	1.9	0.5	0.1	1	4
Iron	1200	27200	8860.0	300	6	6
Lead	0.35	2770	248.7	15	6	14
Manganese	118	2520	997.7	300	5	6
Mercury	0.07	6.1	1.1	2	1	6
Zinc	189	1890	787.3	300	4	6

For calculations, non-detects entered at approx. one-half of detection limit.

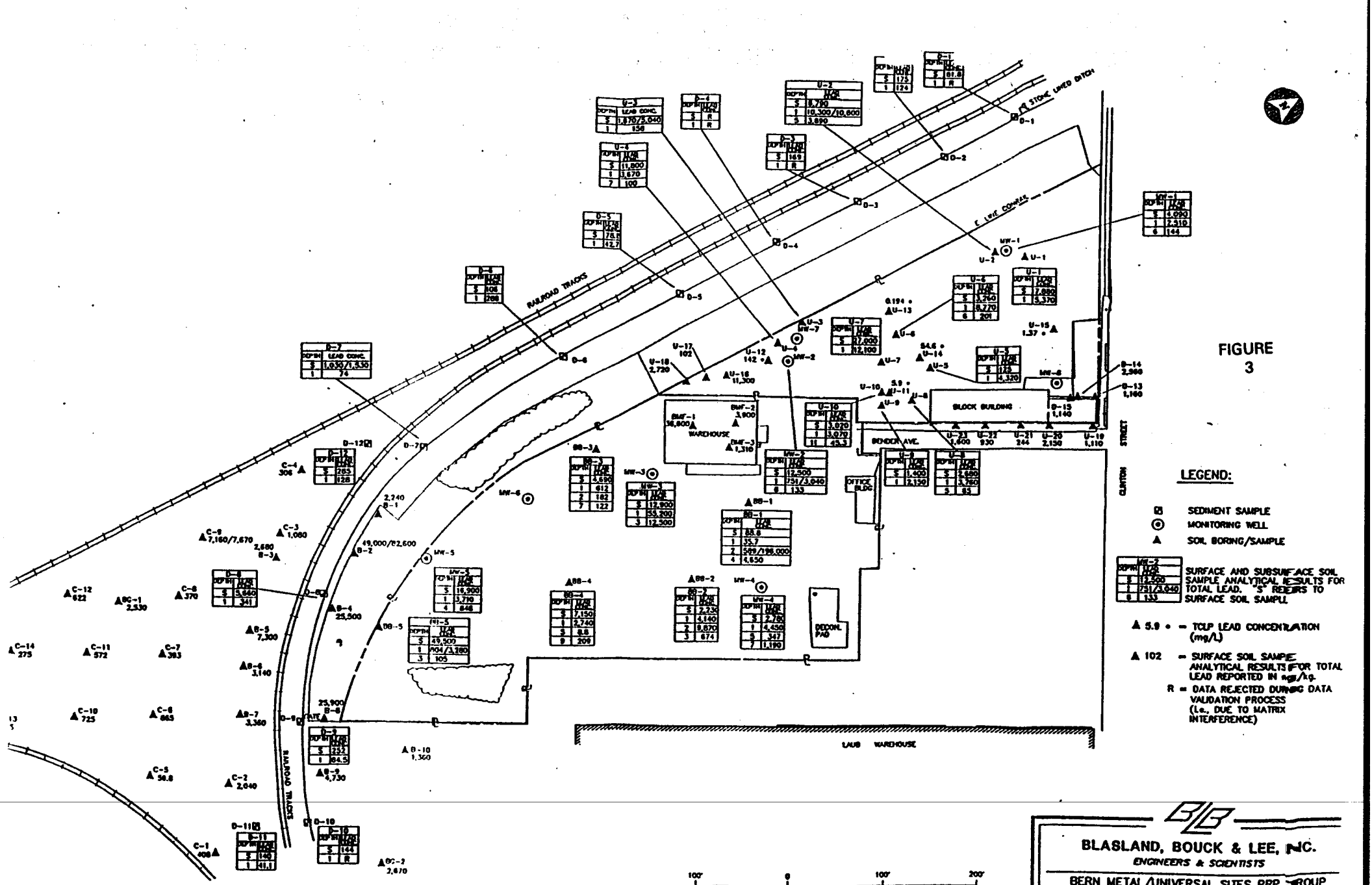

FIGURE 3

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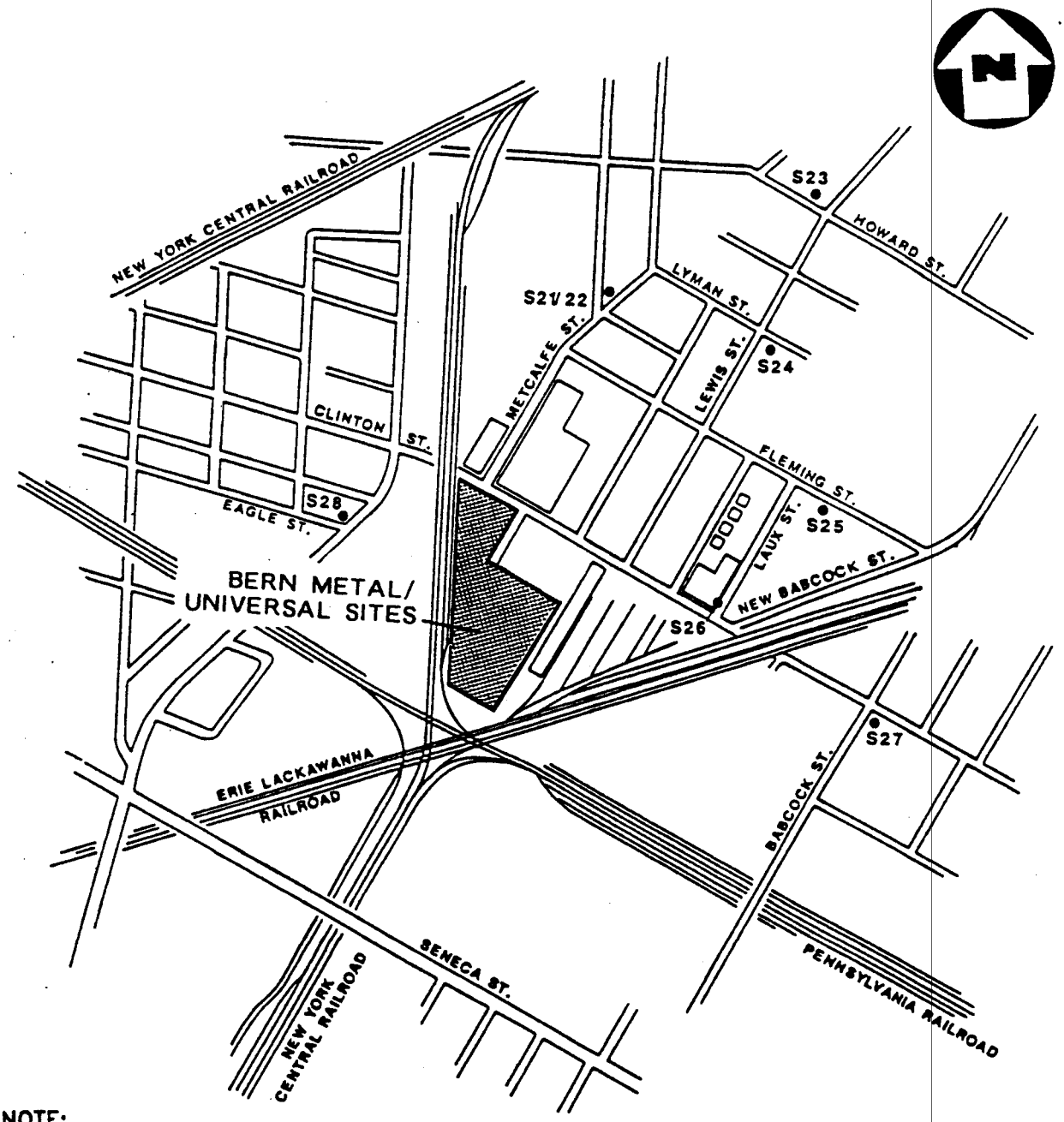
LEAD CONCENTRATION VERTICAL AND HORIZONTAL DISTRIBUTION



NOTE:

FIGURE ADOPTED FROM FIGURE 4 OF "SOIL SAMPLING AND ANALYSIS – UNIVERSAL METAL SITE, BUFFALO, NEW YORK" (USEPA, SEPTEMBER 1991).

SAMPLE NO.	LEAD CONCENTRATION (mg/kg)
S21	842 (E)
S22	829 (E)
S23	625 (E)
S24	448 (E)
S25	571 (E)
S26	1,410 (E)
S27	468 (E)
S28	856 (E)

(E) ESTIMATED

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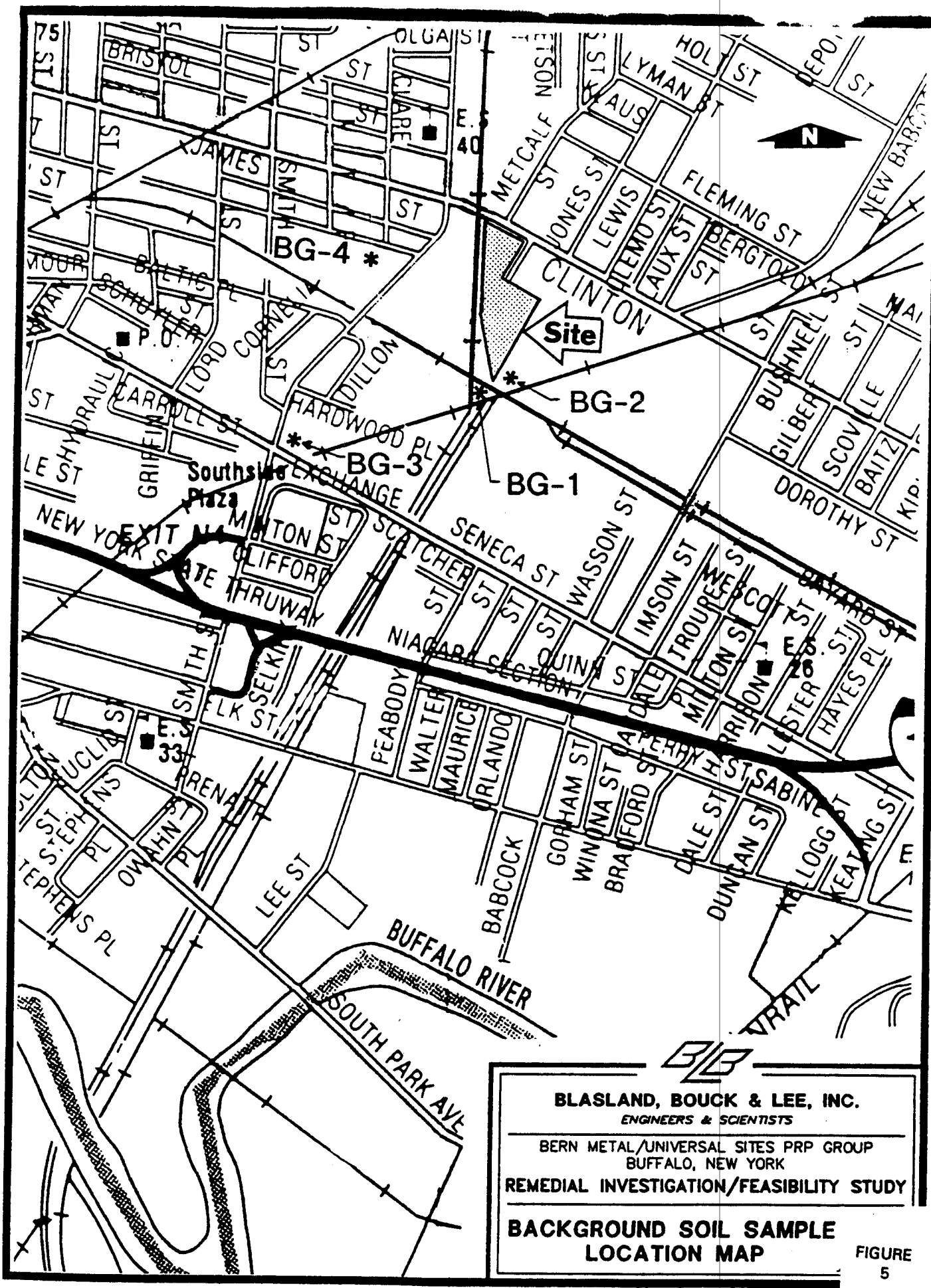
USEPA BACKGROUND SOIL SAMPLING MAP

FIGURE 4



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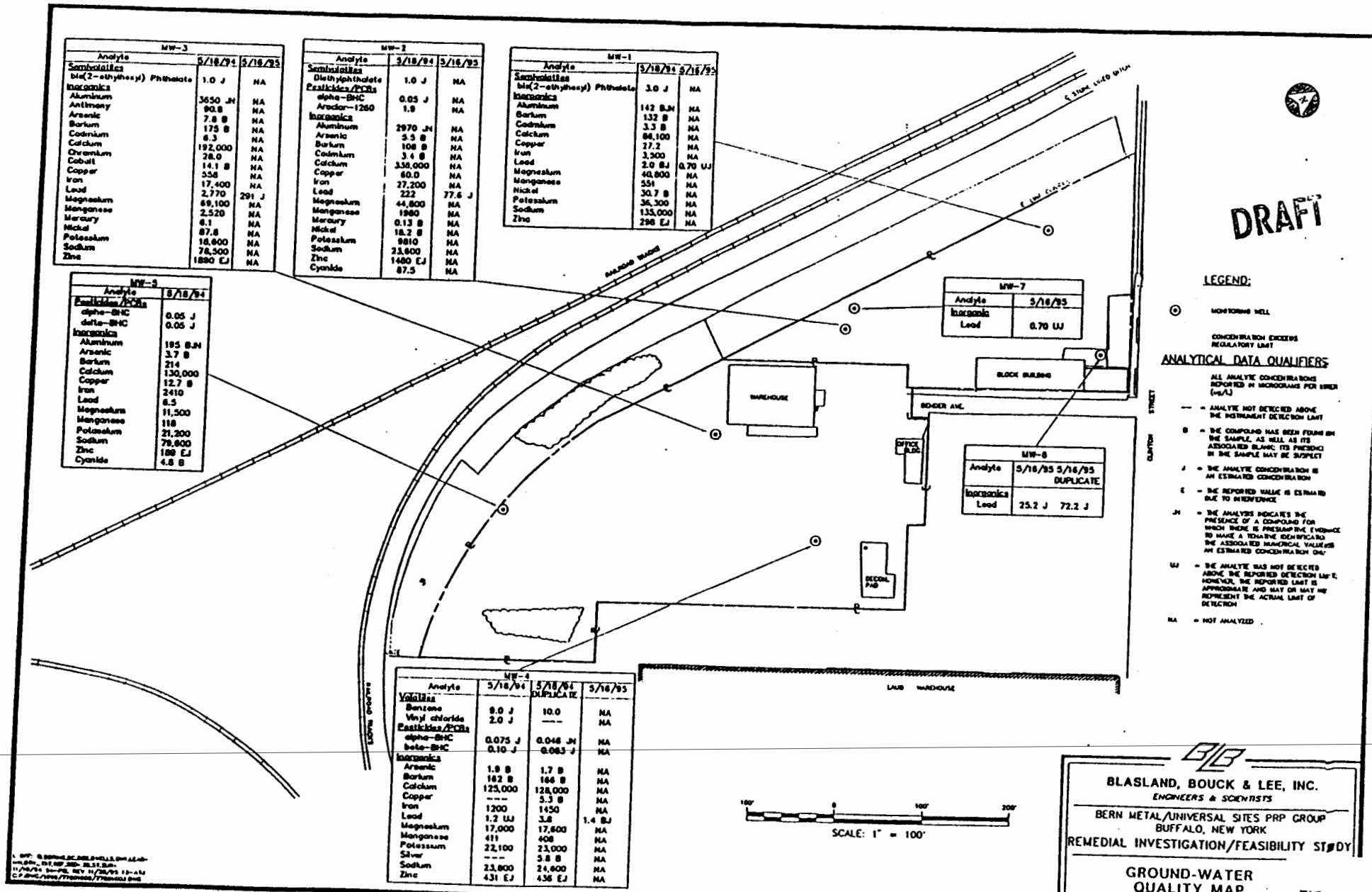
BACKGROUND SOIL SAMPLE LOCATION MAP

FIGURE 5



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LEGEND:

⊙ MONITORING WELL

CONCENTRATION EXCEEDS REGULATORY LIMIT

ANALYTICAL DATA QUALIFIERS

ALL ANALYTE CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (ug/L)

--- = ANALYTE NOT DETECTED ABOVE THE INSTRUMENT DETECTION LIMIT

B = THE COMPOUND HAS BEEN FOUND IN THE SAMPLE, AS WELL AS ITS ASSOCIATED BLANK; ITS PRESENCE IN THE SAMPLE MAY BE SUSPECT

J = THE ANALYTE CONCENTRATION IS AN ESTIMATED CONCENTRATION

E = THE REPORTED VALUE IS ESTIMATED DUE TO INTERFERENCE

JN = THE ANALYSIS INDICATES THE PRESENCE OF A COMPOUND FOR WHICH THERE IS PRESUMPTIVE EVIDENCE TO MAKE A TENTATIVE IDENTIFICATION; THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY

UJ = THE ANALYTE WAS NOT DETECTED ABOVE THE REPORTED DETECTION LIMIT; HOWEVER, THE REPORTED LIMIT IS APPROXIMATE AND MAY OR MAY NOT REPRESENT THE ACTUAL LIMIT OF DETECTION

NA = NOT ANALYZED

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GROUND-WATER QUALITY MAP

FIGURE 6

Sediment samples obtained from the drainage ditch located south of the Bern Metal Unit contained lead ranging from 78.8 to 1530 ppm at a depth of zero to six inches and from 41.1 to 341 ppm at one foot depth.

Groundwater samples obtained from three monitoring wells contained lead above the groundwater standard which is 15 parts per billion (ppb). The highest lead concentration of 2,770 ppb was detected in the sample from on-site monitoring well MW-3. On-site monitoring wells MW-2 and MW-8 contained lead at 222 ppb and 72.2 ppb respectively. Figure 6 shows the location of the monitoring wells and the contaminant concentration in each location.

3.2 Interim Remedial Measures:

Interim Remedial Measures (IRMs) were conducted at the site based on findings as the RI progressed. An IRM is implemented when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS.

Soil samples from an unpaved area along the west side of Bender Street contained elevated levels of lead ranging from 2,778 ppm to 4,722 ppm. There was a potential for the public to come into contact with the soil in this area and the soil from this area had a potential to recontaminate the residential yards cleaned prior to the investigation. Therefore, an IRM was completed in March 1995 which included the removal of approximately 20 cubic yards of contaminated soil, placement of this soil at the site and covering it with a plastic sheet. Figure 7 shows this IRM area on Bender Street.

The soil samples obtained from Conrail property, immediately south of the Bern Metal Unit, contained lead at elevated levels. To limit access to this area, the Bern Metal unit property fenceline was relocated to enclose the area. Approximately 360 linear feet of new fenceline was installed to accomplish this IRM which was completed in May 1995. Figure 8 shows the fenceline relocation area.

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.

An exposure pathway is how an individual may come into contact with a contaminant. The five elements of an exposure pathway are: 1) the source of contamination, 2) the environmental media and transport mechanism, 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. When one or more of these elements are missing, an exposure pathway is not complete.

The exposure pathways identified for the site under current conditions were incidental ingestion, inhalation, and dermal exposure to surface soils from all areas by on-site trespassers, and surface soils from off-site areas by Conrail workers and trespassers. The current condition also considered inhalation exposure to fugitive dust by off-site residents. Under future

conditions, oral, dermal, and inhalation exposures to on-site surface and subsurface soils by construction workers was also considered.

To determine potential exposure routes and doses relative to lead-impacted media, an exposure assessment was performed. The lead concentration in on-site and off-site surface and subsurface soils indicated that they may pose a threat to trespassers and workers via incidental ingestion and/or direct contact if prolonged exposure occurs; therefore, the potential for exposures exists at the site. The potential threat of lead exposure by inhalation is minimal. However, there is potential for airborne contaminated soils to be redeposited in the residential areas where cleanup has been completed. The selected remedy will eliminate these exposure pathways.

3.4 Summary of Environmental Exposure Pathways:

The site appears to present minimal risks to fish and wildlife. To confirm this, an impact analysis was performed to determine the potential for surface water in the perimeter drainage ditch to transport contaminants to a downstream water body such as the Niagara River or Lake Erie.

The results of this assessment indicate that the site and perimeter drainageway is not considered a regulated wetland and is not in the buffer area of any regulated wetlands. The assessment concluded that there is no potential for surface waters from the site to be transported to any downstream wetland areas or other natural areas, since the drainageway configuration provides hydrologic barriers to surface water flow. The site is found to be outside the 100-year flood plain.

SECTION 4: ENFORCEMENT STATUS

The potentially responsible parties for the site signed a consent order agreement with the NYSDEC on February 2, 1993. Another consent order agreement will be negotiated with the PRPs to complete the design and construction of the remedy.

SECTION 5: SUMMARY OF THE REMEDIATION GOALS

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

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

The goals selected for this site are:

- Eliminate the potential for direct human contact with the contaminated soils and groundwater on site.

- Eliminate off-site migration of contaminated soils and surface water via storm-water runoff.

- Minimize to the extent practicable the contribution of contamination from soils to groundwater.

- Eliminate direct human contact with contaminated building structures.

For this site, inorganics are the primary site-specific constituents of concern, with lead being the most prevalent. In areas where other metals and compounds were detected, lead was generally found in significant concentrations. A cleanup goal of 750 ppm of lead in soil will be used to determine the extent of soil cleanup.

Lead-impacted groundwater is present at the site. The highest concentrations were detected in the monitoring well located in the center of the Bern unit. The groundwater flow zone in the fill material at the site ranges from zero feet to approximately three feet thick; the saturated fill thickness appears to vary seasonally based on the infiltration of precipitation.

The limited thickness of the saturated fill, coupled with the shallowness of the water-bearing zone at the site, indicate that the groundwater is not a significant flow system. A low permeability clay unit exists below the water-bearing zone. The clay unit limits the downward movement of the impacted groundwater. Based upon the limited extent of contamination in the shallow aquifer, the NYSDEC believes that no groundwater remediation is necessary. It is anticipated that remediation of the soil, in conjunction with groundwater monitoring, will serve to adequately prevent future releases into the groundwater.

SECTION 6: SUMMARY OF THE EVALUATION OF ALTERNATIVES

Potential remedial alternatives for the Bern/Universal Metals site were identified, screened and evaluated in a Feasibility Study. This evaluation is presented in the draft report entitled Draft Feasibility Study Report, January 1996, prepared by Blasland, Bouck & Lee, Inc. A summary of the detailed analysis follows.

6.1: Description of Alternatives

The potential remedies are intended to address the contaminated soils, groundwater, sediments and building debris at the site.

Alternative 1: No Action

Present Worth:	$ 164,300
Capital Cost:	$ 0
Annual O&M:	$ 17,424
Time to Implement:	0 months

The no action alternative is evaluated as a procedural requirement and as a basis for comparison. It requires maintenance of the fence around the site to restrict unauthorized entry. It would allow the site to remain in an unremediated state. The fence maintenance would be carried out on a long-term basis.

This is an unacceptable alternative as the site would remain in its present condition, and human health and the environment would not be adequately protected due to continued exposure to contaminated soils and sediments.

Alternative 2: Institutional Controls

Present Worth:	$ 225,600
Capital Cost:	$ 0
Annual O&M:	$ 22,068
Time to Implement:	0 months

Under this alternative, groundwater would be monitored in addition to the maintenance of the perimeter fence. This alternative would also include deed restrictions on future land and groundwater uses.

This is an unacceptable alternative as the site would remain in its present condition, and human health and the environment would not be adequately protected due to continued exposure to contaminated soils and sediments.

Alternative 3: On-site consolidation of soil and sediment and placement of a multi-layered synthetic geomembrane cap over the site

Present Worth:	$ 1,858,000
Capital Cost:	$ 1,441,100
Annual O&M:	$ 47,000
Time to Implement:	9 months

The contaminated soil and sediment from certain off-site areas would be consolidated on-site. A multi-layered cap would be placed at the site. This cap would consist of general fill for grading, a geotextile cushioning layer, a 60-mil HDPE liner, a 12-inch sand drainage layer and 6 inches of soil suitable for vegetative cover. The building structures would be demolished and the debris would be placed under the cap. The buildings need to be demolished to create the space for and to facilitate the construction of the cap. A long-term groundwater monitoring program would be implemented to monitor the groundwater contamination. A long-term maintenance program would be implemented to maintain the cap.

Alternative 4: On-site stabilization of excavated soil and sediment, and demolition debris

Alternative 4 A: Ex-Situ Stabilization

Present Worth:	$ 5,055,600
Capital Cost:	$ 4,762,900
Annual O&M:	$ 37,000
Time to Implement:	9 months

In this alternative, contaminated soil from on-site and off-site areas would be excavated and stabilized on-site. The contaminated sediments and the demolition debris generated from the demolition of the building would also be stabilized on-site. The stabilized soil, sediment and demolition debris would be placed back in the excavated areas. The site would be graded and vegetative cover would be established. A long-term groundwater monitoring program would be implemented to monitor the groundwater contamination.

Alternative 4 B: In-Situ Stabilization

Present Worth:	$ 4,915,400
Capital Cost:	$ 4,622,700
Annual O&M:	$ 37,000
Time to Implement:	9 months

In this alternative, contaminated soil would be stabilized in place. Soil and sediment would be excavated from off-site areas and would be stabilized on-site along with the demolition debris generated from the demolition of the building. The site would be graded and vegetative cover would be established. A long-term groundwater monitoring program would be implemented to monitor the groundwater contamination.

Alternative 5: Soil Washing/Soil Leaching

Present Worth:	$10,300,500
Capital Cost:	$10,265,300
Annual O&M:	$ 9,000
Time to Implement:	9 months

Under this alternative, contaminated soil and sediment would be excavated and placed in a processor containing a washing fluid. This fluid, formulated with surfactants, solvents, or acids would leach the contaminants from the soil into the liquid phase. The soil would then be dried and replaced in the excavated area. The liquid from the treatment process would be disposed off-site. A long-term groundwater monitoring program would be implemented to monitor the groundwater.

Alternative 6: Excavation and off-site disposal

Present Worth:	$ 6,654,600
Capital Cost:	$ 6,619,400
Annual O&M:	$ 9,000
Time to Implement:	6 months

In this alternative, contaminated soil from the on-site and off-site areas would be excavated and disposed of in an off-site landfill. The contaminated sediments from the drainage ditch would be excavated and disposed of in an off-site landfill along with the demolition debris generated from the demolition of the building. The total estimated volume of contaminated soil, sediment and debris for disposal would be approximately 25,028 cubic yards.

After excavation and removal of contaminated soils, demolition debris, and ditch sediments, the excavated areas would be backfilled to grade with clean soil and vegetative cover would be established. A long-term groundwater monitoring program would be implemented to monitor the groundwater contamination.

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 criteria are considered as "threshold criteria" which must be satisfied in order for an alternative to be eligible for selection process.

1. 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.

Alternatives 1 and 2 would not comply with this criterion because the public would not be protected from direct contact with contaminated material and they would not prevent migration of contaminated soil. Alternative 3 would comply by eliminating the exposure of contaminated material to the public which would be accomplished by the placement of a multi-layered cap and prevent migration of contaminated soil. The treatment processes under Alternative 4 would limit mobility of the contaminants in the soil but would need a cover over the treated soil to limit contact exposures. Alternative 5 would eliminate the exposure of contaminated material to the public. Alternative 6 would comply by the removal and off-site disposal of soil and debris.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy would meet applicable environmental laws, regulations, standards, and guidance.

The SCGs applicable for the site are NYS DEC's Technical and Administrative Guidance Memorandum on soil cleanup objectives, 6 NYCRR Part 372 for off-site disposal, NYSDEC's Air Guide 1 for air emissions and 6NYCRR Part 375 for removing the hazardous waste and remediating the site. Alternatives 1 and 2 would not comply with this criterion because it would not treat, contain or remove the contaminated material from the site. Alternatives 3, 4, 5 and 6 would comply with all applicable SCGs except for groundwater standards. The groundwater at the site would not attain the groundwater standards immediately but contaminant concentration would likely decrease over time after the completion of the soil remediation.

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

Alternatives 1 and 2 are not evaluated for the remaining criteria because they did not comply with the threshold criteria.

3. Short-term Effectiveness and Impacts. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and implementation of the remedy are evaluated.

The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Short-term impacts such as dust emissions during excavation and construction activities would be greater under Alternatives 4, 5 and 6 compared to Alternative 3. This is because the amount of off-site soil and sediment excavated under Alternative 3 would be limited whereas under other alternatives, all the contaminated soil would be excavated. Control measures such as water spray during excavation would be implemented to minimize the impacts. It would take approximately six to nine months to complete the construction of Alternatives 3 and 6 but would take more time for Alternatives 4 and 5 because of the treatability study required under these alternatives.

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.

Alternative 6 would be a permanent remedy relative to the site and would provide long-term effectiveness. Alternative 3 is not considered as a permanent remedy but would be effective in the long-term with periodic maintenance. Even though contaminated soil would stay at the site under Alternative 3, the containment system would reliably prevent contact and minimize migration of contaminants to the environment. Alternatives 4 and 5 are considered permanent remedies which would treat the contaminated material and provide long-term effectiveness.

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.

Alternative 6 would comply with this criterion as all the contaminated soil, sediment, and debris would be removed from the site and disposed in a secure landfill. Alternatives 3 and 4 would not reduce the toxicity or volume of the soil but would control the mobility of the contaminants. Alternative 5 would reduce the mobility and volume of the contaminated material relative to the site. The treatment under Alternative 5 would be irreversible, in other words, the treatment would be complete in removing the contaminants from the soil media. The treatment under Alternative 4 would not be considered irreversible because the contaminants are not removed from the soil media but would be bound into a solid mass that would reduce the mobility of the contaminants.

6. Implementability. The technical and administrative feasibility of implementing each alternative is evaluated. Technical feasibility includes the difficulties associated with the construction, the reliability of the technology, and the ability to monitor the effectiveness of the remedy. Administratively, the availability of the necessary personnel and equipment are

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

Alternatives 3 and 6 are easily implementable with readily available technologies. Pilot-scale studies would be required prior to the implementation of the treatment technologies under Alternatives 4 and 5. Alternatives 4A, 5 and 6 would involve large excavation operations in a small area with residents nearby. This would require periodic control of dust, noise, traffic, and safety of the workers and the public.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Alternative 1 would have the lowest cost but would not be protective of human health and the environment. The capital cost of Alternative 5 is much higher than other Alternatives. Capital cost of Alternatives 4 and 6 are greater than 3. Alternative 3 satisfies the selection criteria and is more cost effective than the other alternatives. The costs for each alternative are presented in Table 2.

8. **Community Acceptance** - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. A " Responsiveness Summary" has been prepared that describes public comments received and how the Department has addressed the concerns raised. The selected remedy is the same as was proposed in the PRAP.

A public meeting was held on March 6, 1996 at 7:00 P.M. at the NYSDEC's Buffalo Office Meeting Room, 270 Michigan Avenue, Buffalo, NY. The Department presented the details of the PRAP and received comments from the public. The public comment period established for the site ran from February 26, 1996 to March 27, 1996. The responsiveness summary is incorporated as Appendix A to this Record of Decision (ROD).

SECTION 7: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 6, the NYSDEC is selecting Alternative 3 as the remedy for this site.

This recommendation is based upon the following factors:

Alternatives 1 and 2 are not protective of human health and the environment, therefore, have been rejected. Alternatives 3, 4, 5 and 6 would meet the threshold criteria. These alternatives would be effective and protective in the long-term. The short-term impacts would be greater under Alternatives 4, 5 and 6 compared to 3. Alternative 5 would not be cost effective when compared to other Alternatives. Alternatives 4 and 5 would require a pilot-scale study prior to its implementation. Alternative 3 will be more cost-effective in mitigating the threats posed by the site than Alternatives 4, 5, and 6. Since Alternative 3 best satisfies all the criteria, it is the selected remedy for the site.

The estimated capital cost to implement the remedy is $1,441,100. The estimated present worth of the operation and maintenance costs including groundwater monitoring is $416,900. The estimated total cost (capital + O&M costs) is $1,858,000.

The main elements of the selected remedy are as follows:

1. **Excavation of certain soil and sediment from off-site areas and consolidation on-site.** The sediment from the drainage ditch will be removed and consolidated on site. Contaminated soils from portions of the Conrail and Laub properties will be excavated and consolidated on site. Excavation will be performed in accordance with the recommended cleanup goals in Section 5 above. During remedial design, steps will be taken to balance soil consolidation and grading to maximize the potential for future use of the site.

2. **Building demolition and on-site consolidation.** The buildings located on the Bern and Universal units will be demolished and will be consolidated on the site. The buildings need to be demolished to create the space for and to facilitate the construction of the cap.

3. A **multi-layered cap** consisting of general fill for grading, a geotextile cushioning layer, a 60-mil HDPE liner, a 12-inch sand drainage layer, or equivalent, and 6 inches of soil suitable for vegetative cover will be placed at the site. Currently, the plan is to cap the entire Bern and Universal Units. The Department advocates excavating as much soil as possible from the Universal Unit and consolidating it on the Bern Unit to provide more usable space along Clinton Avenue. Depending on the magnitude of the consolidation, the height of the cap will change. Currently, the final height of the cap is estimated to be five to six feet above existing grade.

4. The **excavated areas** in the Conrail and Laub properties will be **backfilled** with clean soil and a vegetative cover will be established.

5. A **long-term groundwater monitoring program** will be established to determine the effectiveness of the remedy in addressing the limited groundwater problem at the site.

6. A **long-term maintenance program** will be implemented to maintain the cap. This will ensure the integrity of the cap and its long-term effectiveness.

7. A **deed restriction** or similar agreement will be sought to provide precautionary measures during future construction activities at the site.

SECTION 8: HIGHLIGHTS OF COMMUNITY PARTICIPATION

Citizen Participation Activities were implemented to provide concerned citizens and organizations with opportunities to learn about and comment upon the investigations and studies pertaining to the Bern/Universal Metals Site. All major reports were placed in a document repository in the vicinity of the site and made available for public review. A public contact list was developed and used to distribute fact sheets and meeting announcements.

On March 6, 1996, a public meeting was held at the NYSDEC's Buffalo Office Meeting Room, 270 Michigan Avenue, Buffalo, NY to describe the PRAP. Prior to the meeting, a public notice/fact sheet was mailed to those persons in the contact list. The public comment period extended from February 26, 1996 to March 27, 1996. Comments received regarding the PRAP have been addressed and are documented in the Responsiveness Summary (Appendix A). The selected remedy in this Record of Decision is the same as the remedy described in the PRAP.

TABLE
2

BERN METAL AND UNIVERSAL SITES
COST SUMMARY FOR REMEDIAL ALTERNATIVES

ITEM	ALT 1	ALT 2	ALT 3	ALT 4A	ALT 4B	ALT 5	ALT 6
ESTIMATED CAPITAL COSTS							
MSG Cap	--	--	$1,361,716	--		--	--
Ex-Situ S/S	--	--	--	$4,627,925		--	--
In-Situ S/S	--	--	--	--	$4,487,759	--	--
Soil Washing/Acid Extraction	--	--	--	--		$10,130,316	--
Off-Site Disposal	--	--	--	--		--	$6,473,610
Building Demolition	--	--	$59,552	$104,509	$104,509	$104,509	$104,509
Monitoring Wells	--	--	$15,120	$15,120	$15,120	$15,120	$15,120
Pre-Design Investigation	--	--	$4,694	$15,328	$15,328	$15,328	$26,128
Total Capital Costs	**$0**	**$0**	**$1,441,100**	**$4,762,900**	**$4,622,700**	**$10,265,300**	**$6,619,400**
ESTIMATED OPERATIONS AND MAINTENANCE COSTS							
Groundwater Monitoring	--	$4,644	$4,644	$4,644	$4,644	$4,644	$4,644
Fencing	$17,424	$17,424	$17,424	$17,424	$17,424	--	--
Geomembrane Cap Maintenance	--	--	$20,287	--	--	--	--
Soil Cap Maintenance	--	--	--	$9,889	$9,889	--	--
Total Annual O&M Costs							
(Years 1 - 5)	**$17,424**	**$26,711**	**$46,998**	**$36,600**	**$36,600**	**$9,287**	**$9,287**
(Years 6 - 30)	**$17,424**	**$22,068**	**$42,355**	**$31,957**	**$31,957**	**$4,644**	**$4,644**
Present Value of O&M Costs	**$164,300**	**$225,600**	**$416,900**	**$292,700**	**$292,700**	**$35,200**	**$35,200**
Total Costs: Capital + O&M	**$164,300**	**$225,600**	**$1,858,000**	**$5,055,600**	**$4,915,400**	**$10,300,500**	**$6,654,600**

Alternative 1 - No Further Action
Alternative 2 - Institutional Controls
Alternative 3 - Capping
Alternative 4 - Solidification/Stabilization
Alternative 5 - Soil Washing
Alternative 6 - Excavation/Off-Site Disposal

Present worth analysis for Alternatives 1, 2, and 3 based upon a 30 year performance at 10% rate of return.
Present worth analysis for Alternative 4 based upon a 5 year performance for groundwater monitoring and a 30 year performance for soil cap and fencing maintenance (both at 10% rate of return).
Present worth analysis for Alternatives 5 and 6 based upon a 5 year performance at 10% rate of return.

APPENDIX A

BERN\UNIVERSAL METALS SITE
SITE I.D. NO. 9-15-135

RESPONSIVENESS SUMMARY

The Bern/Universal Metals site is located at Bender Street and Clinton Avenue in the City of Buffalo, Erie County, New York. The site is in a mixed residential/industrial area approximately one mile north of the Buffalo River and 1.5 miles east of Lake Erie. The Site is bordered on the south and west by Conrail and Buffalo Creek railroads, on the east by Laub Industries, and on the north by residences and small commercial establishments.

The Site was used to reclaim metals from used batteries, and for reprocessing/recycling of metal sludges, scrap metal, and used batteries. The on-site facilities are currently not in use. The property covers an area of approximately 5.2 acres. Operations at the site which contributed contamination in the soil and sediment occurred from the early part of 1938 and continued until 1983. The Remedial Investigation (RI) conducted at the site showed contamination in soil, sediment and groundwater. The primary contaminant was found to be lead.

The Feasibility Study (FS) conducted based on the RI, identified several remedial alternatives to remediate the site. These alternatives were evaluated against eight criteria of the remedial action selection process. One of the criteria is the protection of human health and the environment. Based on this evaluation process, the Department is selecting a remedy which consists of the following activities:

1) excavating soils and ditch sediments from off-site areas followed by on-site consolidation,
2) demolition of building structures and on-site consolidation,
3) placement of a cap at the site,
4) long-term groundwater monitoring and
5) long-term maintenance program for the cap with institutional controls.

A public participation meeting was held on March 6, 1996 at 7:00 P.M. at the NYSDEC's Buffalo Office Meeting Room, 270 Michigan Avenue, Buffalo, NY. The Department presented the details of the proposed remedy and received comments from the public. This responsiveness summary addresses the public comments received during the public meeting and the Department's responses to the comments. The public comment period established for the site ran from February 26, 1996 to March 27, 1996.

The following are the comments raised during the Public Meeting:

Question 1: If the site will be capped, how will surface water runoff be managed? Where will surface water runoff from the cap be discharged? Will runoff to sewers be tested?

Response 1: Drainage channels will be constructed around the cap to carry the surface water runoff from the cap and discharge the water appropriately. The details of these drainage channels will be determined during the design of the remedy. The surface water runoff from the cap will essentially be clean and testing the surface water runoff will not be necessary.

Refer also to Response No. 10, page 4 of the Responsiveness Summary.

Question 2: Was adequate drainage provided with the asphalt cap constructed between the Bern Unit and the residences?

Response 2: Proper drainage was provided for the collection of surface water from the asphalt cap and discharge of the collected water appropriately. In addition to the construction of the asphalt cap, grading was done to divert the surface water runoff away from the areas adjacent to the asphalt cap.

Refer also to Response No. 10, page 4 of the Responsiveness Summary.

Question 3: When will this project (capping of the site and related activities) begin?

Response 3: The Department is expecting to complete the Record of Decision (ROD) for this site by the end of March 1996. The ROD is an official document which formalizes the final remedial action plan for the site. Negotiations between the potentially responsible parties for the site and the Department to perform the remedial design and construction will begin after the completion of the ROD. These negotiations may take six months or more to complete. The remedial design normally takes another nine months to twelve months to complete.

Question 4: What area of the site will be capped? Has the Department considered consolidating more soils to increase the amount of usable space?

Response 4: Currently, the plan is to cap the entire Bern and Universal Units. The Department advocates excavating as much soil as possible from the Universal Unit and consolidate it on the Bern Unit. This would provide more usable space along Clinton Avenue. This task will be discussed in detail with the consultant during the remedial design.

Question 5: Why is the Department proposing the cheaper remedy? Why didn't the Department propose the excavation and off-site disposal remedy? If the site is capped, will that prevent future use of the site and thereby limit taxes that could be generated for the City of Buffalo?

Response 5: The Department is strongly in favor of maximizing the potential for future use of sites. If there is a significant cost difference between a remedy that is protective and another that increases the potential for future use, a funding source for that difference must be identified. In this case, the cost difference between capping the site and treating contaminated soils is approximately $4 - $5 million. Since a realistic source of these additional funds cannot be identified and it would not be appropriate to indefinitely postpone site remediation, the Department is selecting containment. During the design of the selected remedy, consideration will be given to consolidate more soil from the Universal Unit which will provide additional clean space for future use along Clinton Street. Future developments such as making the capped area as ball-field or constructing a warehouse or a parking lot is possible at the site.

Question 6: Why does the United States Environmental Protection Agency (EPA) want to clean the interior of the residences prior to the completion of the construction activities at the site?

Response 6: The schedule for the interior cleanup and the construction activities at the site has not been finalized. The schedule will be discussed in detail with all the agencies involved in this project during the design. The concern raised in this question will be evaluated during this discussion.

Question 7: Did the cost estimate include the cost of monitoring the site? How often will groundwater testing be done? How many samples will be taken during a round of sampling? Will the samples be tested individually or will they be combined and tested?

Response 7: The total cost estimate presented at the meeting for the proposed remedial action plan includes the cost of monitoring the site and maintaining the site. After the completion of construction activities at the site, the site will be monitored periodically. The frequency of the monitoring will be determined during the design of the selected remedy. Wells will be sampled and analyzed individually for each monitoring event.

Question 8: A few years after the completion of construction at the site, will the site look like an abandoned field?

Response 8: After the completion of the construction activities, the site will be maintained on periodic intervals and will look like a mounded grassy field.

Question 9: How will the dust generated during the construction activities be controlled? Will there be some kind of a warning system during emergencies? Will there be adequate sanitary facilities for the construction workers? Will the construction contractor have their own electrical supply or they will plug their equipment into residential electrical supplies? Will the residents be relocated during the construction activities?

Response 9: The dust generated during construction will be monitored continuously. If the concentration exceed the action levels, control measures such as water spray will be used to control the dust. A community health and safety plan will be prepared for the construction activities to be conducted at the site. The Department cannot envision an emergency situation involving contaminated soils that would require evacuation or immediate response by residents. The contractor will provide proper and adequate sanitary facilities for the workers and will obtain a separate electrical power connection for the project. Since the construction work will be conducted at the site, the residents will not be relocated during these activities.

Question 10: Is the existing runoff water (flooding the residences) from the site contaminated? When was the last time the residential yards were sampled?

Response 10: The most significant contaminated soil from the site was removed during the EPA's removal action. The surface water runoff from the asphalt cap or the adjacent areas may not be contaminated in excess of the clean up levels established for the site. The residential yards were sampled during the cleanup activities performed in the yards. The Department will examine the flooding issue and will take appropriate measures, if needed. Soil samples will be collected from the areas affected by the flooding from the site to determine whether flooding from the site has contaminated the yards.

Question 11: Is the Laub property area contaminated? When was the last time sampling was done on that property?

Response 11: Soil samples were collected in January 1996 from the areas located between the Laub building and the railroad tracks and also adjacent to the Bern property. The results of the sampling showed that some of the sampling areas are contaminated with lead above the cleanup goal established for the site. Soils on Laub property contaminated by activities conducted on Bern site will be excavated and placed under the cap at the site.

Question 12: Are the properties (the site) currently being taxed? How much has been spent on the project so far? Why have not the PRPs bought our properties? It would be cheaper for them.

Response 12: For information on property taxes, please contact the appropriate offices with the City of Buffalo. The questioner should contact the PRPs for information on past costs and property acquisition. For further information regarding the PRPs, contact Vivek Nattanmai, Project Manager, at (518) 457-0315.

Question 13: A concern was raised by a questioner regarding activities of unknown nature occurring at the Bern Unit.

Response 13: During the investigation, field personnel reported signs of trespassing at the site. The purpose of the trespassing was not known. As required by the consent agreement, the PRPs are inspecting and maintaining the fence around the site periodically.

Question 14: Residents from around the site raised concerns about the possibility that they have been exposed to lead from the site and requested that an opportunity for blood lead level screening be provided to them.

Response 14: The NYSDOH is evaluating different options for responding to this issue. Once this evaluation is completed, a full response will be provided.

The following are responses to written comments received on the PRAP:

Question 15: The project manager, Vivek Nattanmai, received a comment letter from James W. Pitts, President of the City of Buffalo Common Council on March 6, 1996. The major issues raised in the letter were: 1) capping the site will limit the future use of the site, 2) leaving the contaminants at the site will place a burden on the nearby residents who will always worry about whether they are really being protected, 3) The Department should involve the City and County Governments in the remedy selection process for a site early in the process by sending a condensed Feasibility Study prior to the public participation process, and 4) DEC and DOH should file a report with the Buffalo Common Council detailing the steps taken to measure the community health impacts and how the Departments have communicated with the residents.

Response 15: Response to Issue No. 1

Refer to Response No. 5 on page 3 of the Responsiveness Summary.

Response to Issue No. 2

Capping is a well demonstrated technology used at various hazardous waste sites to contain wastes. In general, capping is performed when extensive subsurface contamination at a site precludes excavation and removal of wastes because of potential hazards and/or unrealistic costs. With long-term maintenance, capping is a reliable technology that eliminates the exposure of contaminated soils to the public. It will be unlikely for someone to come into

contact with the contaminated waste which is buried several feet below the cap.

The selected remedy for the site will mitigate the threats posed by the site to human health and the environment. The consolidation of the soil and installation of a multilayered cap will eliminate the direct exposure of contaminated soil to the public and will reduce the infiltration of surface water through the contaminated soil. The selected remedy will minimize the contribution of contamination from the soil into the groundwater and be cost effective.

Response to Issue No. 3

With few exceptions the process used to involve Municipalities at hundreds of sites works well. The Feasibility Study report is available for comment at the local repository. Also, the alternatives are summarized in the PRAP which in most cases is 15 - 20 pages in length. The Department, therefore believes that Municipalities are provided with adequate notice and opportunity to review and comment on PRAP remedies. During the RI/FS, fact sheets providing updates on the RI/FS are periodically mailed to the contact list established for a site. The contact list is prepared to include all the local officials, nearby residents and other interested parties. These fact sheets also provide an opportunity to comment on the RI/FS being conducted at a site. Department staff are available to meet with concerned officials regarding site issues as needed. Additional efforts will be made by the Department to address the concerns of public officials, as needed.

Response to Issue No. 4

A complete response to this issue shall be provided in the near future.

Question 16: The project manager, Vivek Nattanmai, received a comment letter from James A. Smith, Director, Office for the Environment, City of Buffalo on March 27, 1996. The letter recommended that the following issues be considered in the development of the remedial action for the site:

1) neighborhood safety: To provide surrounding residents with an acceptable, long-term level of safety, all of the contaminated soil should be removed from the site.

Response to Issue No. 1:

See Response 5 and the Response to Question 15, Issue No. 2, of the Responsiveness Summary.

2) tax base for the City of Buffalo: It is unacceptable to take prime City land out of productive use when feasible alternatives exist.

See Response No. 5.

3) future use of the site: Consideration should be given to retaining a portion of the site's frontage for potential economic activity.

Response to Issue No. 3:

See Response No. 5.

4) impact on the property values in the area: Removal of all contaminated soil from this site would go a long way towards restoring the area as a productive and safe place to work and live.

Response to Issue No. 4

See Response No. 5. Although the impact on the property values is a reasonable consideration, the Department did not have information that would justify the significant difference in the cost of the off-site disposal remedy compared to capping.

APPENDIX B

BERN\UNIVERSAL METALS SITE
SITE NO. 9-15-135

ADMINISTRATIVE RECORD

Reports:

1. Scope of Work - Remedial Investigation/Feasibility Study, ERM Northeast (ERM).
2. Remedial Investigation/Feasibility Study Work Plan, ERM, October 1993.
3. Preliminary Remedial Investigation Report, Blasland, Bouck & Lee (BBL), December 1994.
4. Bender Street Soil Removal IRM Work Plan, Hazard Evaluations, December 1994.
5. Fenceline Relocation IRM Work Plan, BBL, April 1995.
6. Remedial Investigation Report, BBL, November 1995.
7. Preliminary Technology Screening Summary, Feasibility Study, BBL, September 1995.
8. Feasibility Study Report, BBL, January 1996.
9. Proposed Remedial Action Plan, NYSDEC, February 1996.
10. Citizen Participation Plan, NYSDEC, December 1993.
11. Record of Decision, NYSDEC, March 1996.

Order on Consent

12. Order on Consent Index No. B9-0371-91-05, dated February 2, 1995 to complete the RI/FS.

Correspondence:

13. Comment letter from the Department to PRP's attorney on the Scope of Work and RI/FS Work Plan, September 9, 1993.
14. Comment letter from the Department to PRP's attorney on the Scope of Work and RI/FS Work Plan, September 9, 1993.
15. Letter from the Department to PRP's attorney suggesting that the contaminated soil from Bender Street be removed as an IRM. May 4, 1992.

16. Comment letter from V. Nattanmai (DEC) to D. Paley (PRP) on the Bender Street Soil Removal IRM Work Plan. December 23, 1994.

17. Comment letter from V. Nattanmai (DEC) to T. Hasek (BBL) on Preliminary Remedial Investigation Report. January 9, 1995.

18. Response letter from D. Paley (PRP) to V. Nattanmai (DEC) on the Bender Street Soil Removal IRM Work Plan. January 11, 1995.

19. Response letter from T. Hasek (BBL) to V. Nattanmai (DEC) on Preliminary Remedial Investigation Report. January 23, 1993.

20. Response letter from V. Nattanmai (DEC) to T. Hasek (BBL) on Preliminary Remedial Investigation Report. January 27, 1995.

21. Comment letter from V. Nattanmai (DEC) to T. Hasek (BBL) on Draft RI report. September 5, 1995.

22. Comment letter from V. Nattanmai (DEC) to T. Hasek (BBL) on Preliminary Technology Screening Summary, Feasibility Study. September 26, 1995.

23. Response letter from T. Hasek (BBL) to V. Nattanmai (DEC) on Preliminary Technology Screening Summary, Feasibility Study. October 9, 1995.

24. Comment letter from V. Nattanmai (DEC) to T. Hasek (BBL) on Draft FS report. February 7, 1995.

25. Response letter from T. Hasek (BBL) to V. Nattanmai (DEC) on Draft FS report. February 21, 1995.

26. Letter from J. Pitts, President , City of Buffalo Common Council to V. Nattanmai (DEC) on the Proposed Remedial Action Plan. March 4, 1996.