932085A

"Summary of Site Investigation Work:
Proposed Target Store Facility"
[Niagara Falls Boulevard
City of Niagara Falls, NY]

WASTE
RESOURCE
ASSOCIATES, INC.

"Summary of Site Investigation Work: Proposed Target Store Facility" [Niagara Falls Boulevard City of Niagara Falls, NY]

prepared for:

RD Management Corp.
810 Seventh Avenue - 28th Floor
New York, New York 10019

and

Gibralter Development Corporation
1280 Court Street
Clearwater, FL 34616

prepared by:

Waste Resource Associates, Inc.
2576 Seneca Avenue
Niagara Falls, NY 14305

November 4, 1994

196-0010

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Appendices

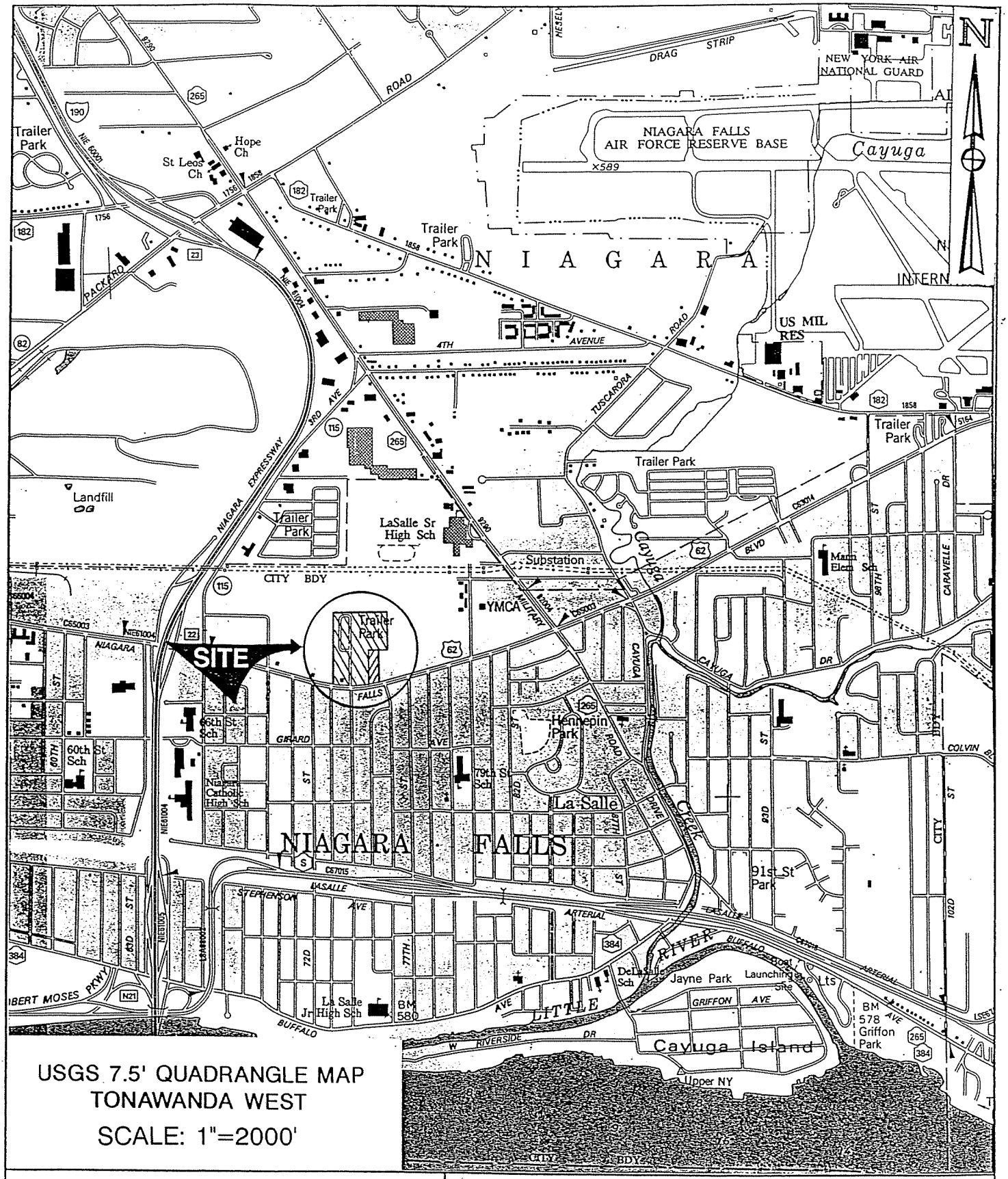
Introduction

RD Management Corporation along with Gibralter Development Corporation are planning to develop an approximate 18.02 acre parcel of land (the subject property) located north of Niagara Falls Boulevard between 73rd Street and 76th Street in the City of Niagara Falls, NY (see Figure 1 - Project Location Map). Future development plans call for construction of a retail facility on-site (see Figure 2 - Proposed Target Store).

The subject property is located immediately east of land which was previously suspected to be part of an inactive hazardous waste disposal site (64th Street North - NYSDEC Site No. 932085A). The adjacent parcel (currently operated by TOPS Markets, Inc.) was subjected to extensive soil sampling and analytical testing which eventually allowed for removal of the property from any association with the 64th Street North inactive hazardous waste disposal site.

Due to the proximity of the subject property to the 64th Street North Site, the New York State Department of Environmental Conservation (NYSDEC) expressed concerns regarding the potential for on-site soil contamination to exist. In order to address these concerns, analytical testing of soil samples collected from the subject property was performed. The results of the sample analysis serve to provide a basis for issuance of any environmental permits under the State Environmental Quality Review Act (SEQR) that may be required to complete the proposed development of the property.

Waste Resource Associates, Inc. has compiled this report in order to summarize the findings of environmental site assessment work previously completed on the subject property.



USGS 7.5' QUADRANGLE MAP
TONAWANDA WEST
SCALE: 1"=2000'

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FIGURE 1

PROJECT LOCATION MAP

FIGURE 2

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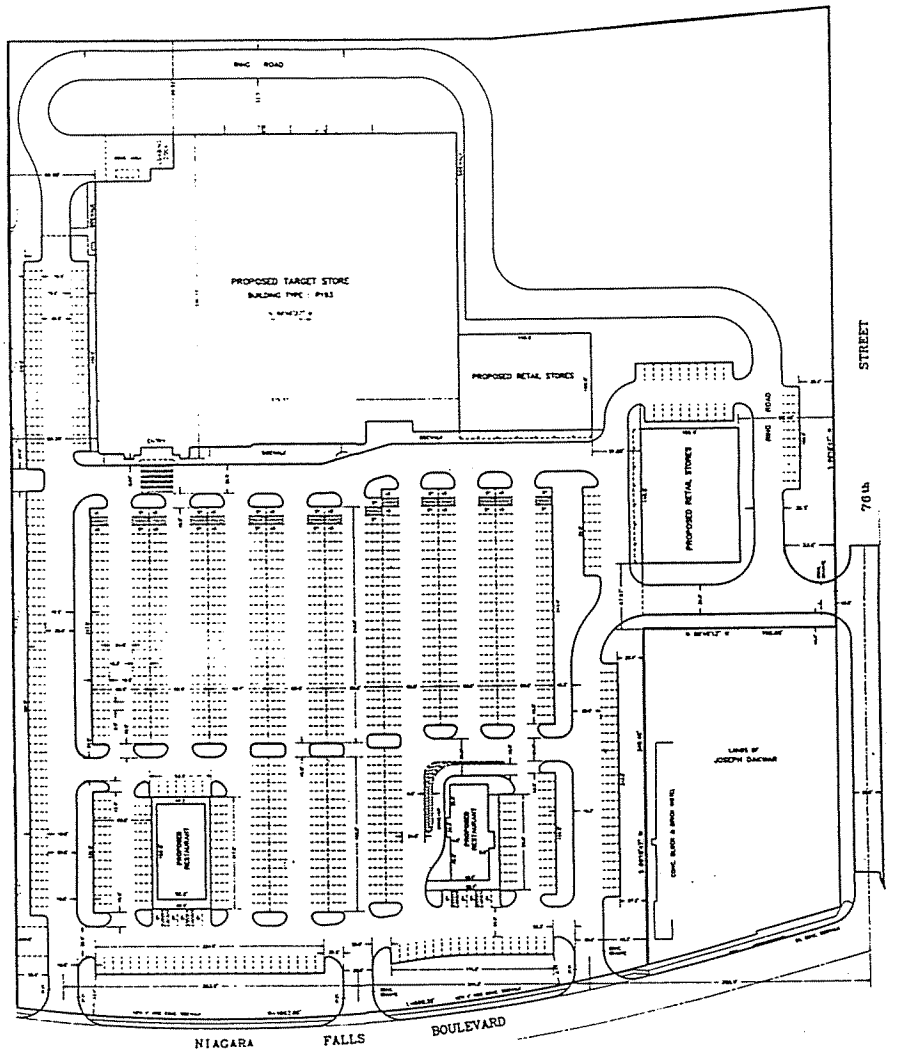

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PROPOSED TARGET STORE
NIAGARA FALLS BOULEVARD
NIAGARA FALLS, NY

Identification of Site Investigation Work

This report summarizes the findings of three (3) individual environmental site assessments conducted by Waste Resource Associates, Inc. on the subject property. The three (3) reports are identified as follows:

- "Preliminary Site Assessment: Johnson Property"
  Niagara Falls Boulevard & 75th Street
  Niagara Falls, New York 14304
  September 1, 1992

- "Remedial Action Site Investigation: Johnson Property"
  Niagara Falls Boulevard
  City of Niagara Falls, New York
  June 27, 1994

- "Preliminary Site Assessment: Santino Corp. Property"
  7414 Niagara Falls Boulevard
  City of Niagara Falls, New York
  October 26, 1994

These three (3) documents are included in their entirety as Appendix A, Appendix B and Appendix C (respectively) of this report.

Hazardous Waste Site Determination

The subject property occupies 18.02 acres, 16.20 acres owned by Jack B. Johnson and 1.82 acres owned by the Santino Corporation (see Figure 3 - Current Landowners). Since the property owned by Mr. Johnson is situated adjacent to the TOPS Markets parcel and close to the location of the 64th Street North Site, a request was made of NYSDEC in May, 1992 to make a determination as to whether any portion of the Johnson property was considered to be part of the identified inactive hazardous waste site. NYSDEC responded (see Appendix A, Exhibit 1) to the request indicating that although the Johnson property was not considered part of the 64th Street North Site, it was suspect for potential soil contamination due to its proximity to the adjacent TOPS Markets parcel.

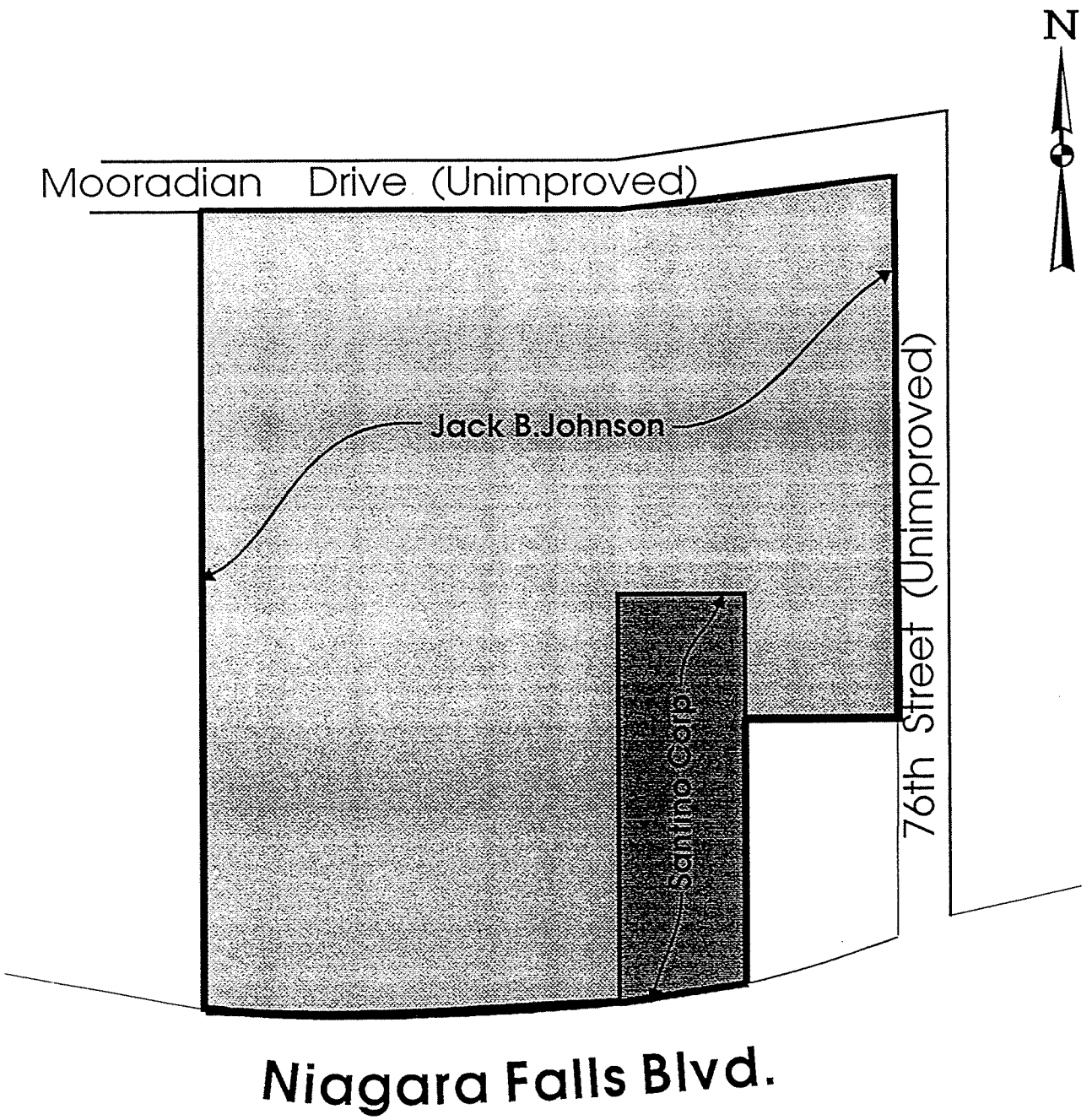

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Figure 3

Current Landowners

Summary of Sampling and Analytical Testing

Evaluation of the subject property involved a variety of soil sampling, field screening and analytical testing techniques. Figure 4 of this report shows the locations from which soil samples were collected. Soil sampling included collection of the following:

- Twenty-five (25) surface soil samples representative of material from the ground surface to approximately six (6) inches below grade.

- Forty-nine (49) shallow subsurface samples representative of material from the ground surface to approximately 3.5-feet below grade.

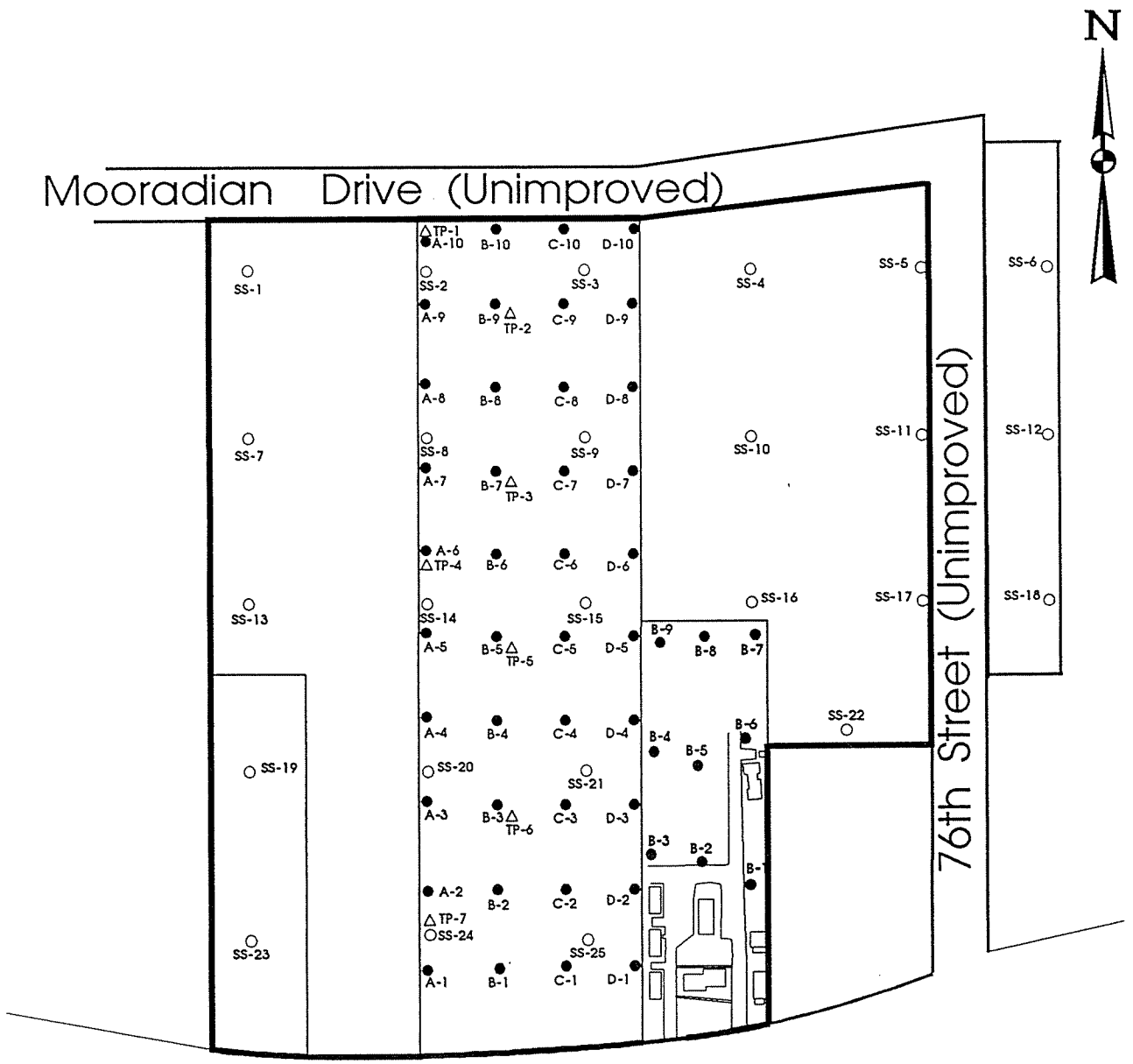
- Seven (7) test pit samples representative of material from the ground surface to approximately 3.5-feet below grade.

An integral component of all site investigation work also included data collection by means of visual observations, field screening and in-house sample evaluation. The scope-of-work included:

- In-field characterization of soil samples by a Geologist including generation of subsurface soil profiles.

- Screening of soil samples for the presence of volatile hydrocarbon compounds using an HNu photoionization detector (PID).

- Evaluation of soil samples for contamination by metals (primarily mercury, lead and chromium) using an Outokumpu X-MET 880 X-ray Fluorescence spectrum analyzer. Sample analysis was performed according to EPA recommended protocol for discrete sample X-ray fluorescence analysis (see Appendix A, page 7 for details of EPA protocol).



○ - Surface Soil Sample

● - Shallow Subsurface Sample

△ - Test Pit

Scale: 1" = 200'

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Figure 4

Soil Sampling Locations

Based on visual observations and the results of field screening and in-house sample evaluation, selected soil samples were submitted for confirmatory analytical testing. Testing was performed by NYSDOH certified laboratories and consisted of the following analysis:

- Extraction Procedure Toxicity (EPTox) testing of four (4) samples for lead and mercury (EPA Methods 1310, 6010 and 7470).

- Analysis of four (4) samples for total lead and mercury content (EPA Methods 6010 and 7471).

- Analysis of twenty-three (23) samples for RCRA metals including total concentration of Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver (EPA Methods 3050, 6010 and 7471).

Evaluation of Analytical Testing Results

In evaluating the analytical testing results of soil samples collected on the subject property, a variety of assessment criteria can be utilized to determine whether or not on-site conditions are potentially detrimental to human health or the environment. Identified assessment criteria includes:

- A comparison of reported analytical data from soil samples with established regulatory levels for the listed test parameters.

- An evaluation of the potential risk for human exposure to contaminated media either by direct contact with impacted soils or consumption of contaminated groundwater.

- An examination of current and future property use and how such use affects the potential risk for human exposure to any identified contaminated media.

Regulatory Guidelines

Concerns expressed regarding the potential for contamination to exist on the subject property have primarily focused on elevated levels of metals in soils, particularly mercury and lead. In order to ascertain whether reported analytical testing data represents elevated metals levels, a data comparison was made to established benchmark or regulatory concentrations for metals in soils. Table 1 of this report contains a summary of total metals concentrations in soils as identified by the New York State Department of Environmental Conservation (NYSDEC), the Niagara County Health Department (NCHD) and the Environmental Protection Agency (USEPA). For purposes of this report, comparisons are offered for NYSDEC and NCHD identified levels.

Since the results of EPTox testing of soil samples confirmed that no hazardous wastes were present on-site (See Appendix A; page 12 and Exhibit III), sampling results based on total metals analysis were selected for comparative purposes. Based on NYSDEC Soil Clean-up Guidelines, a total of eight (8) samples from the subject property exceeded regulatory levels for one (1) or more metallic constituents. Table 2 identifies the eight (8) sampling points and lists the results of in-house screening and associated analytical testing. The locations of the sampling points which exceed NYSDEC regulatory limits are shown on Figures 5 and 6 of this report.

Based on NCHD ambient background levels for metals in soils in the Niagara Falls area, a total of fourteen (14) samples from the subject property exceeded maximum concentration values for one (1) or more metallic constituents. Table 3 identifies the fourteen (14) sampling points and lists the results of in-house screening and associated analytical testing. The locations of the sampling points are shown on Figures 7 and 8 of this report.

Table 1

SUMMARY OF REGULATORY GUIDELINES
METALS CONTENT IN SOILS

(concentrations shown in parts per million - ppm)

	Niagara County [1] Health Dept.		USEPA[2]		NYSDEC [3] Soil Clean-Up Level
	Ave.	Max.	Ave.	Max. of Common Range	Level
Arsenic	11	37	5	50	80
Barium	*	*	430	3000	4000
Cadmium	4	10	0.06	0.6	80
Chromium	37	124	100	1000	Hexa 400 Tri 80,000
Copper	59	203	30	100	*
Lead	103	428	10	200	250
Mercury	0.53	2.1	0.03	0.3	20
Nickel	41	132	40	500	2000
Selenium	*	*	0.3	2	*
Silver	*	*	0.05	5	200
Zinc	238	856	50	300	20,000

(1) Niagara County Health Department in letter to Benderson Development Company, Inc., July 6, 1994, Background Concentrations for Metals in Soils in the Niagara Falls Area.

(2) USEPA Office of Solid Waste and Emergency Response. Hazardous Waste Land Treatment SW 874 (April, 1983) Page 273, Table 6.46, "Trace Chemical Element Content of Natural Soils".

(3) NYSDEC Draft Cleanup Policy and Guidelines, Appendix C, Sub Appendix 1-A, October, 1991.

* - Not Listed

TABLE 2

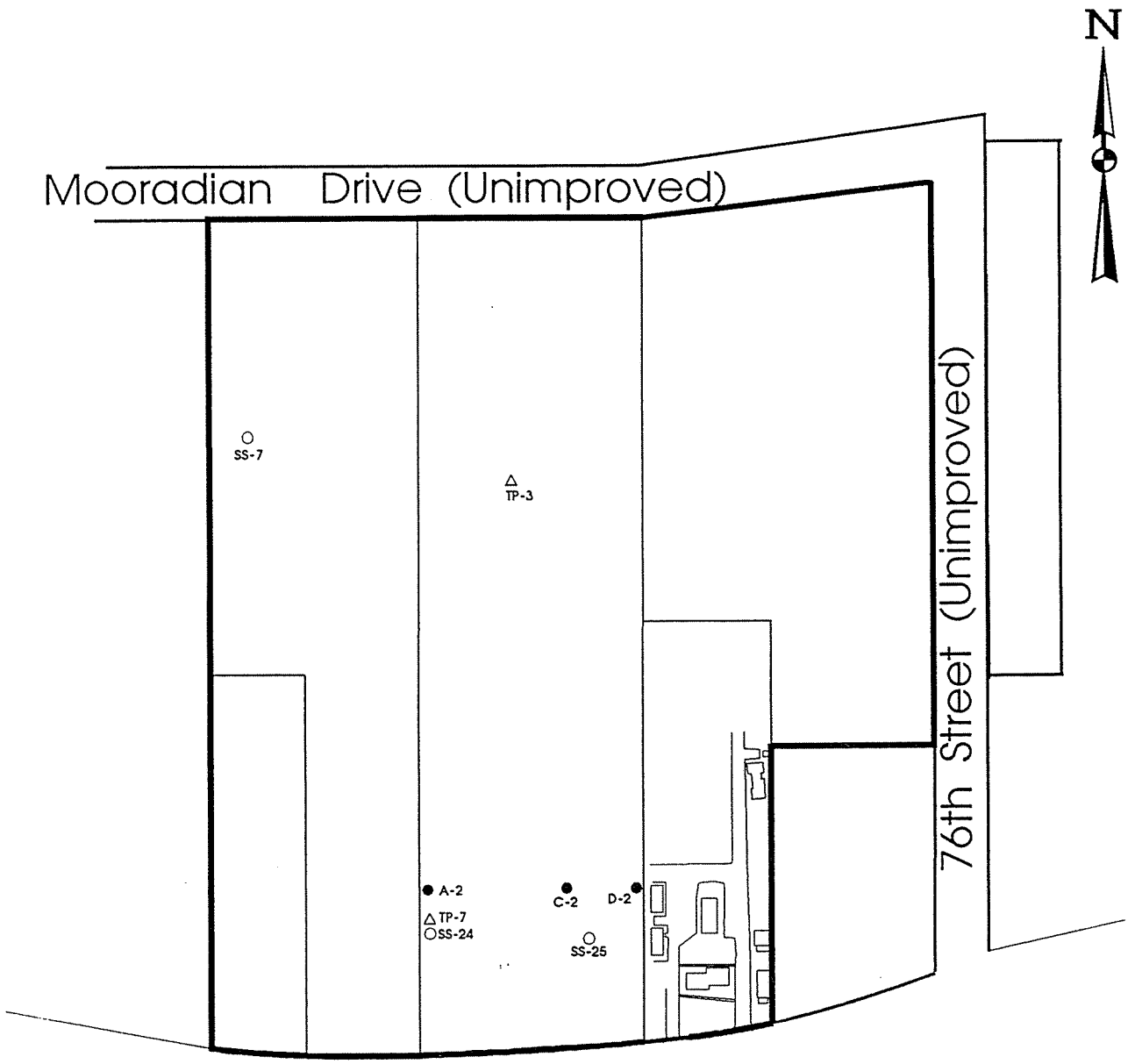
Summary of Soil Sample Testing

Samples Exceeding, NYSDEC Soil Clean-up Levels (concentrations shown in parts per million - ppm)

Sample Identification	XRF Screening Results (Constituent-Concentration)	Confirmatory Analytical Testing Results (Constituent-Concentration)
SS - 7	Hg - 47.88	ND
SS - 24	Pb - 424.0	Hg - 17.3*, Pb - 280.0
SS - 25	Hg - 170.8, Pb - 2969.5	Hg - 0.52*, Pb - 2500.0
TP - 3	Hg - 96.51, Pb - 1546.33	ND
TP - 7	Pb - 302.73	ND
A - 2	Hg - 53.7	Hg - 13.0*
C - 2	Pb - 340.7	Pb - 432.0
D - 2	Pb - 550.0	Pb - 320.0

* - Reported result does not exceed regulatory guidelines

ND - No data available



○ - Surface Soil Sample

● - Shallow Subsurface Sample

△ - Test Pit

Scale: 1" = 200'

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Figure 5

Samples Exceeding NYSDEC Soil Clean-up Levels

FIGURE 6

LOCATIONS OF SAMPLES EXCEEDING NYSDEC SOIL CLEAN-UP LEVELS

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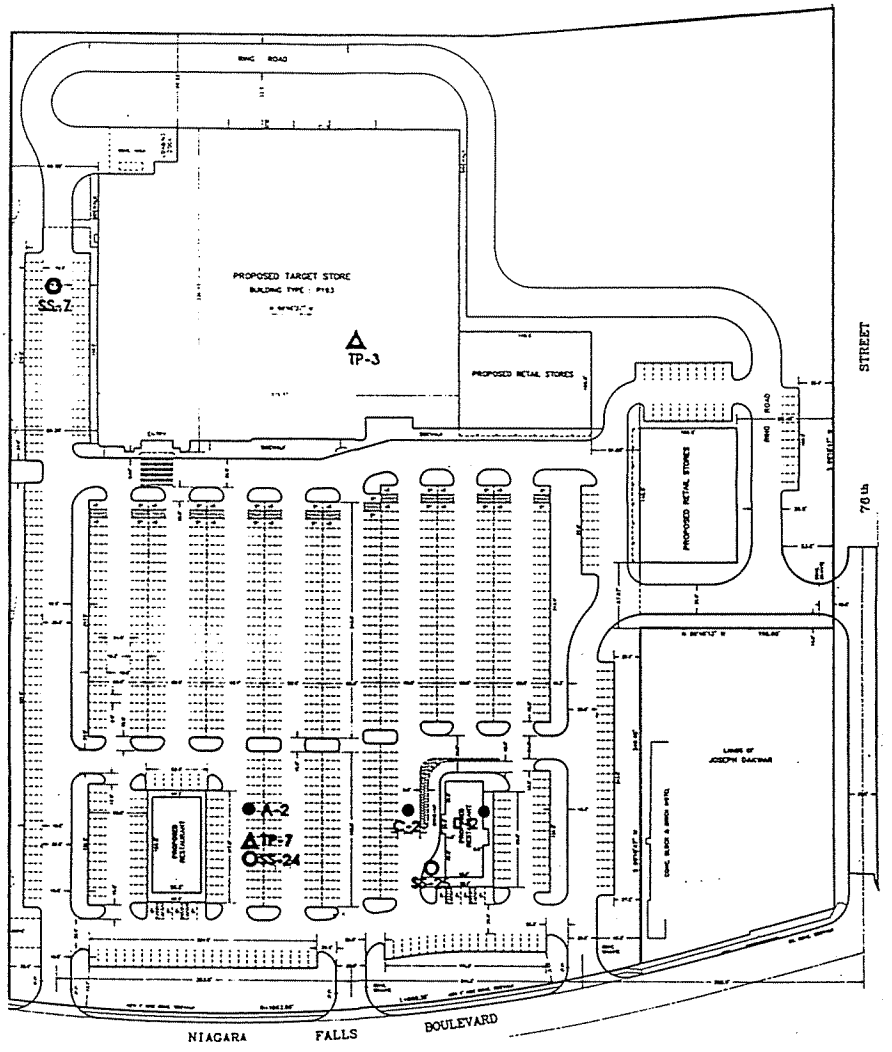

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PROPOSED TARGET STORE
NIAGARA FALLS BOULEVARD
NIAGARA FALLS, NY

TABLE 3

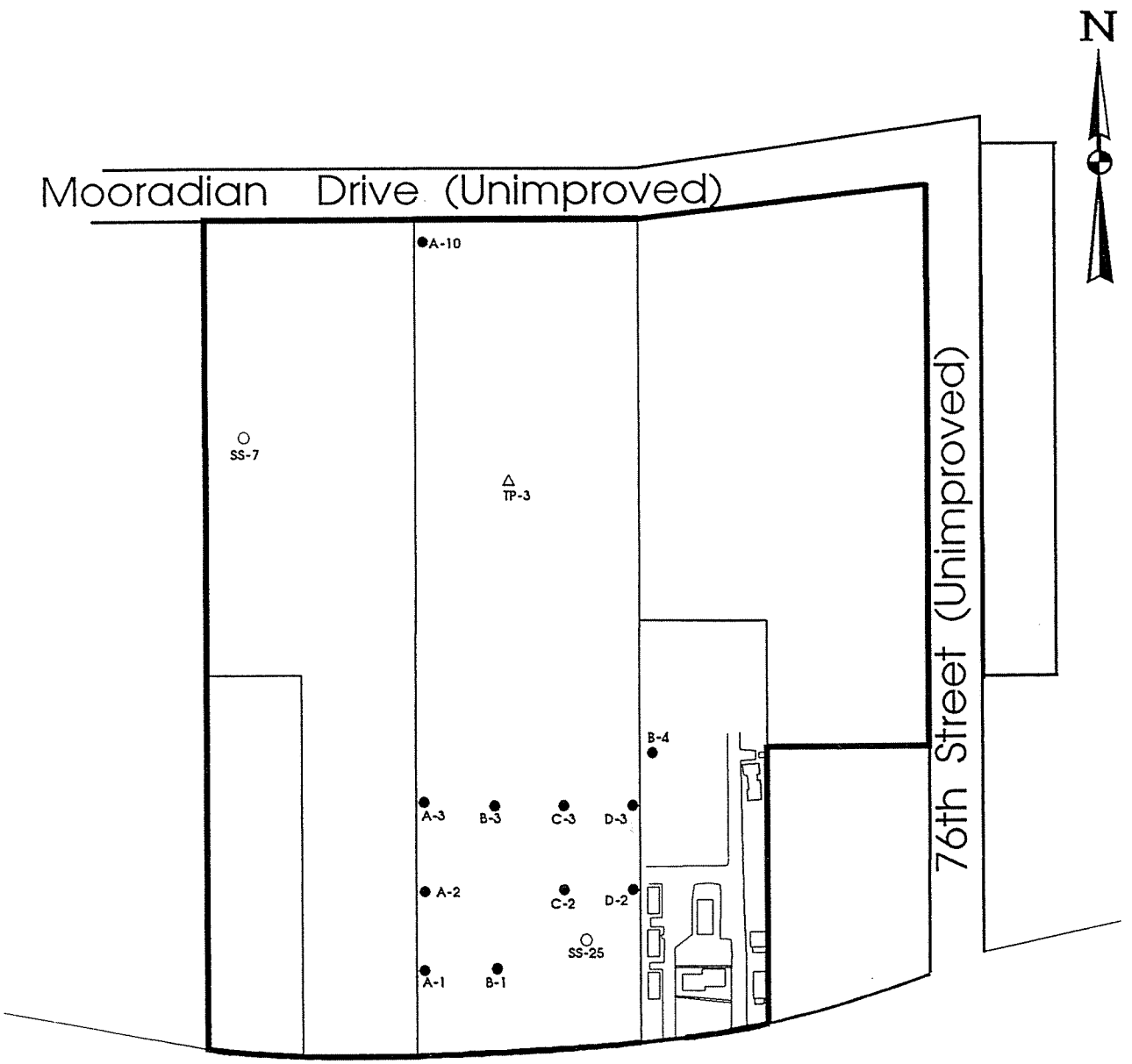
Summary of Soil Sample Testing

Samples exceeding NCHD background levels for soils in the Niagara Falls Area (concentrations shown in parts per million - ppm)

Sample Identification	XRF Screening Results (Constituent-Concentration)	Confirmatory Analytical Testing Results (Constituent-Concentration)
SS - 7	Hg - 47.88	ND
SS - 25	Hg - 170.8, Pb - 2969.5	Hg - 0.52*, Pb - 2500.0
TP - 3	Hg - 96.51, Pb - 1546.33	ND
A - 2	Hg - 53.7	Hg - 13.0
D -2	Pb - 550.0	Pb - 320.0*
A - 1	Cr - 0.0*, Hg - 0.0*	Cr - 436.8, Hg - 7.6
B - 1 (Johnson)	ND	As - 49.3
C - 2	Pb - 340.7*	Pb - 432.0
A - 3	ND	Cd - 48.1
B - 3	ND	Cd - 28.8
C - 3	ND	Cd - 28.6
D - 3	ND	Cd - 27.9
A - 10	Cr - 0.0*	Cr - 326.8
B - 4 (Santino)	Hg - 0.0*	Hg - 18.0

* - Reported result does not exceed regulatory guidelines

ND - No data available



○ - Surface Soil Sample

● - Shallow Subsurface Sample

△ - Test Pit

Scale: 1" = 200'

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Figure 7
Samples Exceeding NCHD Maximum Background Levels For Soils in Niagara Falls

FIGURE 8

LOCATIONS OF SAMPLES EXCEEDING NCHD MAXIMUM BACKGROUND LEVELS FOR SOILS IN THE NIAGARA FALLS AREA

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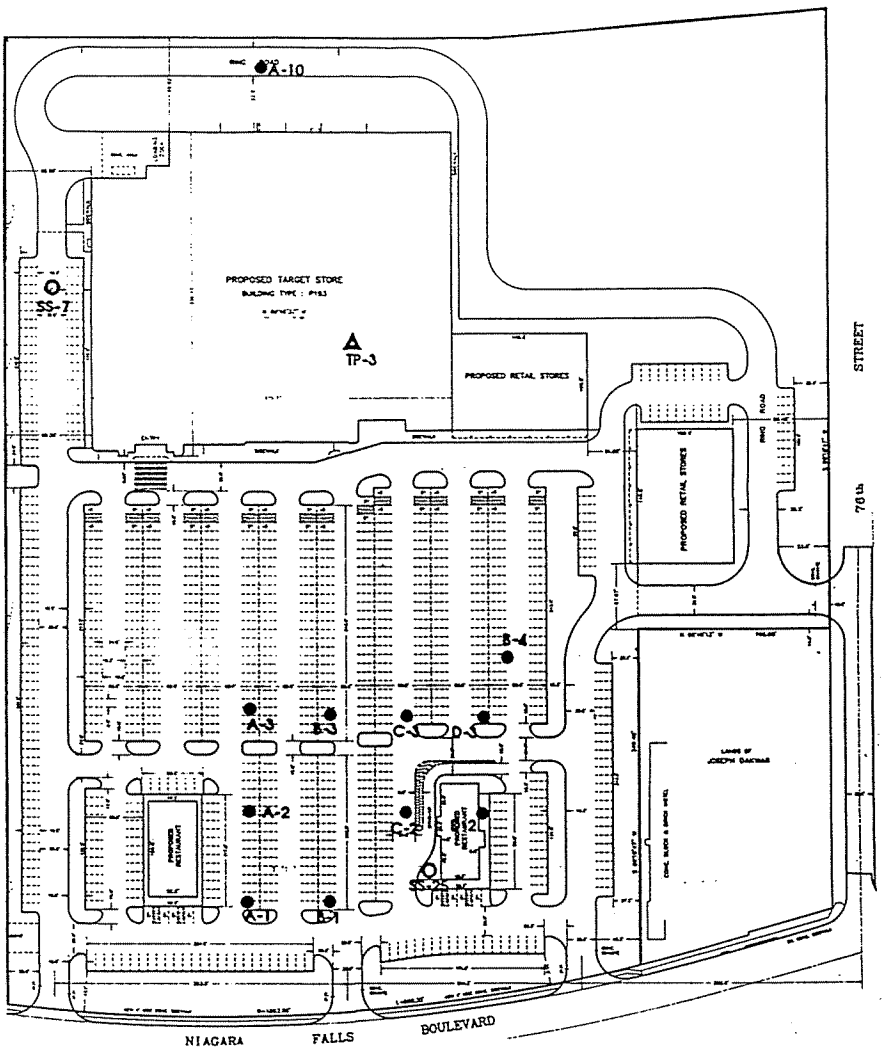

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PROPOSED TARGET STORE
NIAGARA FALLS BOULEVARD
NIAGARA FALLS, NY

Potential for Human Exposure

The primary mechanisms for potential human exposure to contaminated soils on the subject property include;

- consumption of contaminated groundwater, and,
- direct ingestion of contaminated soils.

The potential for exposure through consumption of contaminated groundwater is unlikely for the following reasons:

- Testing of samples by EPTox analysis has shown that the metallic constituents detected in the soil are present in an insoluble matrix and are not being leached to groundwater supplies.

- Examination of soil samples from the subject property has identified a low permeability clay lens existing approximately 2.5 to 3.5 feet below grade across the site. This clay lens serves to isolate contaminants to upper level sediments and impede migration to deeper formations which often contain supplies of potable groundwater.

- Area residents are served by a public water supply system and do not utilize groundwater for drinking purposes.

Direct ingestion of contaminated soils on the subject property would only be likely to occur as a result of unintentional or accidental exposure, primarily by children or on-site residents. The proposed future development plan for the site will change the primary use from residential to commercial and will ultimately result in the relocation of all current residents. The change in primary use of the subject property will serve to minimize (or eliminate) the potential for chronic exposure to contaminated soils that long term residents of the property would potentially face.

Proposed Development Plans and Future Property Use

Future development plans for the subject property involve construction of a large retail facility (See Figure 2 - Proposed Target Store). Design specifications for the completed facility call for construction of several large slab-on-grade buildings and a considerable expanse of associated asphalt parking lot.

By developing the property as planned, any potential risks for exposure to contaminated soils could be minimized or eliminated by the following mechanisms:

1) Figures 6 and 8 of this report show the locations of soil samples which exceeded regulatory or maximum ambient levels. The locations are shown with respect to the proposed design of the completed facility. It should be noted that all of the identified sample points are located in areas where either asphalt parking lot or slab-on-grade structures will exist. Therefore, completion of the project as planned would effectively isolate (or encapsulate) contaminated areas and would serve to prevent direct human contact with impacted soils.

2) Upon completion of the proposed facility, at least 75% of the subject property would be covered by impermeable surfaces (either asphalt parking lot or buildings). Such conditions will serve to minimize or prevent rain or snowmelt waters from contacting contaminated soils and potentially impacting groundwater quality. Since testing of soil samples by EPTox has shown that metallic constituents are essentially insoluble, it is unlikely that any leachate is being formed at all. Furthermore, any such leachate that by chance may be generated would be blocked from downward migration by extensive layers of shallow, impermeable clays that are present beneath the site. Potential contamination of potable groundwater supplies in the area is unlikely. There is no exposure risk since area residents are served by a public water supply.

3) During the construction phase of the proposed facility, air and soil monitoring plans and associated engineering controls can be implemented to ensure compliance under OSHA (29 CFR 1926.62) and NYSDEC Soil Clean-up Policy and Guidelines.

APPENDIX A

"Preliminary Site Assessment:
Johnson Property"
Niagara Falls Boulevard & 75th Street
Niagara Falls, NY 14304

September 1, 1992

196-0010

"Preliminary Site Assessment:
Johnson Property"
Niagara Falls Boulevard
and 75th Street
Niagara Falls, NY 14304

submitted to:
New York State Department
of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-2999

submitted by:
Johnson and Johnson
6638 Mooradian Drive
Niagara Falls, NY 14304

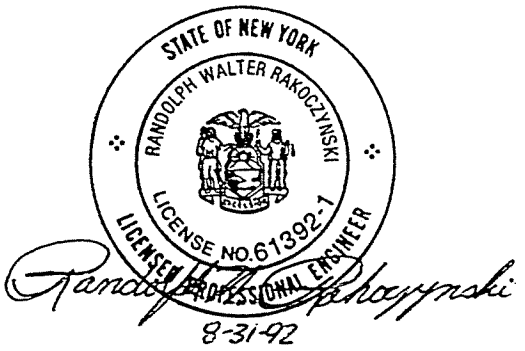
prepared by:
Waste Resource Associates, Inc.
2576 Seneca Avenue
Niagara Falls, NY 14305

September 1, 1992

159-0010

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Randolph W. Rakoczynski

Randolph W. Rakoczynski, P.E.
NYS P.E. License No. 61392

COPY

Table of Contents

Introduction

Johnson and Johnson is the current owner of an approximately 15.7 acre parcel of land (the subject property) located north of Niagara Falls Boulevard between 73rd Street and 76th Street in the City of Niagara Falls, NY (see Figure 1 - Site Location Map). A retail facility has been proposed to occupy the site and preliminary development planning is presently underway.

The subject property is located immediately east of land which was previously suspected to be part of an inactive hazardous waste disposal site (64th Street North - Site No. 932085A). The adjacent parcel (currently under development by Tops Markets, Inc.) was subjected to extensive soil sampling and analytical testing and was subsequently "delisted" from any association with the 64th Street North inactive hazardous waste disposal site.

Despite the "delisting" of the adjacent Tops Markets parcel, the New York State Department of Environmental Conservation (NYSDEC) considers the subject property to have the potential of being contaminated. Consequently, NYSDEC has required that soil sampling and analysis be conducted on the subject property in order to provide a basis for issuance of any required environmental permits identified as a result of conforming with the State Environmental Quality Review Act.

This report summarizes the findings of soil sampling and analytical testing that was conducted on the subject property in order to satisfy the requirements set forth by NYSDEC.

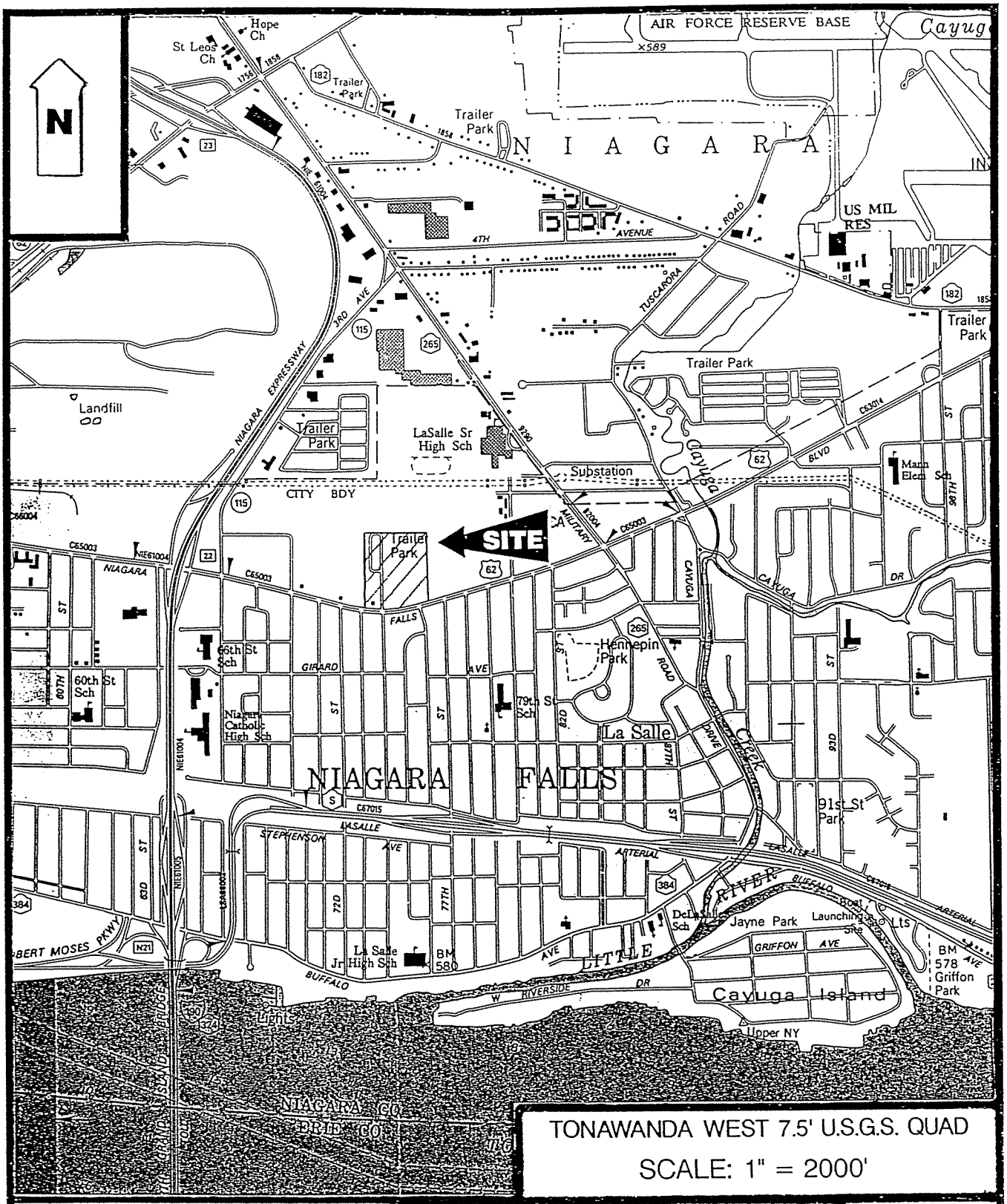


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FIGURE 1 - SITE MAP

JOHNSON PROPERTY

NIAGARA FALLS BOULEVARD & 75th STREET

Background

Site investigation work performed at the Tops Markets, Inc. property by Waste Resource Associates, Inc. revealed that although no hazardous waste was detected, the site contained "fill" material that was contaminated with lead and mercury at concentrations that exceeded normal background levels for these metals. The presence of these constituents at the Tops Markets site has lead to the suspicion by NYSDEC that similar contamination may exist on the subject property.

As part of the development of the Tops Markets parcel, considerable excavation of previously placed "fill" material was required in order to achieve a suitably stable base upon which the building foundation could be constructed. During excavation work, Waste Resource Associates, Inc. performed field screening of excavated material for the presence of lead and mercury. A field-portable x-ray fluorescence (XRF) unit (Outokumpu X-Met 880) was used in making field determinations relative to the presence and concentration of these two metallic constituents. The use of x-ray fluorescence technology for the detection of inorganic metals has been endorsed as a field screening technique by the USEPA.

Hazardous Waste Site Determination

A request was made of NYSDEC to make a determination as to whether any portion of the subject property was associated with, or considered to be part of, the 64th Street North Inactive Hazardous Waste Disposal Site (Site No. 932085A). The response from NYSDEC (see Exhibit I) indicated that the subject property was not considered part of the 64th Street North Site. However, in making this determination, NYSDEC acknowledged that the subject property had the potential to be contaminated based on its location adjacent to the Tops Markets, Inc. parcel. Therefore, soil sampling and analysis would be required to be performed on the Johnson property in order to allow for any necessary environmental permits required to be issued as a result of conformance with to the State Environmental Quality Review Act (SEQR).

Sampling Program

A sampling program was developed in order to characterize the subject property with respect to the presence (or absence) of lead and/or mercury which were identified as the constituents of concern.

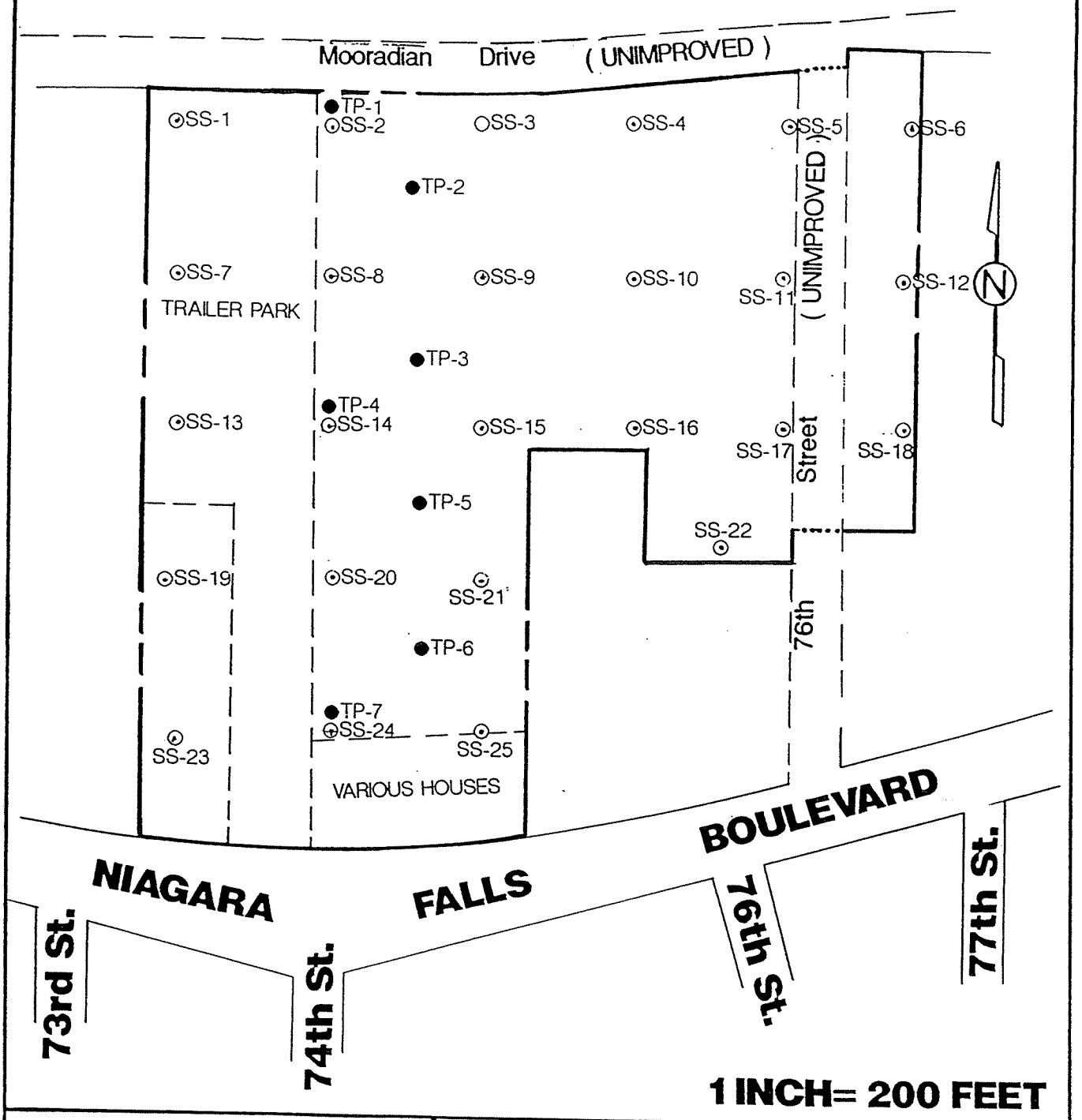
A total of twenty-five (25) surface soil sample locations were established on the property by marking a 200-foot grid pattern across the site (see Figure 2). The sample positions were measured in the field by using hand taping techniques referenced to established property corners. Each surface soil sample was collected from a depth of approximately eight (8) to twelve (12) inches below grade.

Seven (7) test pits were located in the central portion of the subject property (see Figure 2). The test pits were dug by using a small backhoe and were terminated at a depth of approximately three (3) feet below grade. Upon completion of each test pit, an examination of the trench walls was made and the soil profile observed was recorded in the field by a geologist (see Exhibit II). A soil sample was collected from the undistrubed walls of each test pit that was representative of the existing soil profile from the surface grade to the base of the trench.

FIGURE 2

⊙SS-1 - SURFACE SOIL SAMPLES

●TP-1 - TEST PITS



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PLOT PLAN
Johnson Property
Niagara Falls Boulevard
Niagara Falls, NY

159-C-01

Sample Analysis

All samples collected in the field were subjected to analysis for lead and mercury content through use of an Outokumpu X-Met 880 x-ray fluorescence unit.

Each sample was prepared and analyzed according to EPA recommended protocol for discrete sample x-ray fluorescence analysis*. The procedure involved the following sequence of steps:

- air dry samples,
- remove non-representative organic debris,
- sieve through a 20-mesh stainless steel sieve,
- homogenize sample by thoroughly mixing,
- prepare a 31 mm x-ray fluorescence sample cup with an aliquot of the homogenized sample,
- analyze on X-Met unit for 60 seconds,
- record concentration values,
- agitate material in sample cup and reanalyze,
- repeat procedure for a total of three (3) readings on each sample.

The results of sample analysis by x-ray fluorescence techniques are presented on Figure 3 of this report. Figure 4 is a site map which shows the test points where detectable levels of mercury were encountered. Figure 5 is a site map which shows the test points where detectable concentrations of lead were recorded.

(Note: The results of the initial screening by XRF detected elevated levels of mercury and/or lead in SS-24, SS-25, and the test pit composite. These three (3) samples, along with SS-16, were subsequently selected for

* Ref: "Field-Portable X-ray Fluorescence" EPA/ERT Quality Assurance Technical Information Bulletin, Vol. 1, No. 4, May 1991.

confirmatory lab analysis. Additional soil material from each of these samples was prepared (as described by steps 1-4 above) in order to meet volume requirements specified by the lab. An aliquot of the additional material from SS-24, SS-25 and the test pit composite was prepared in a second sample cup and analyzed by XRF. SS-16 was not reanalyzed based on initial readings of zero for both constituents).

X-Met 880 X-ray Fluorescence Analyzer

Final Testing Results
(all concentrations are in parts per million-ppm)

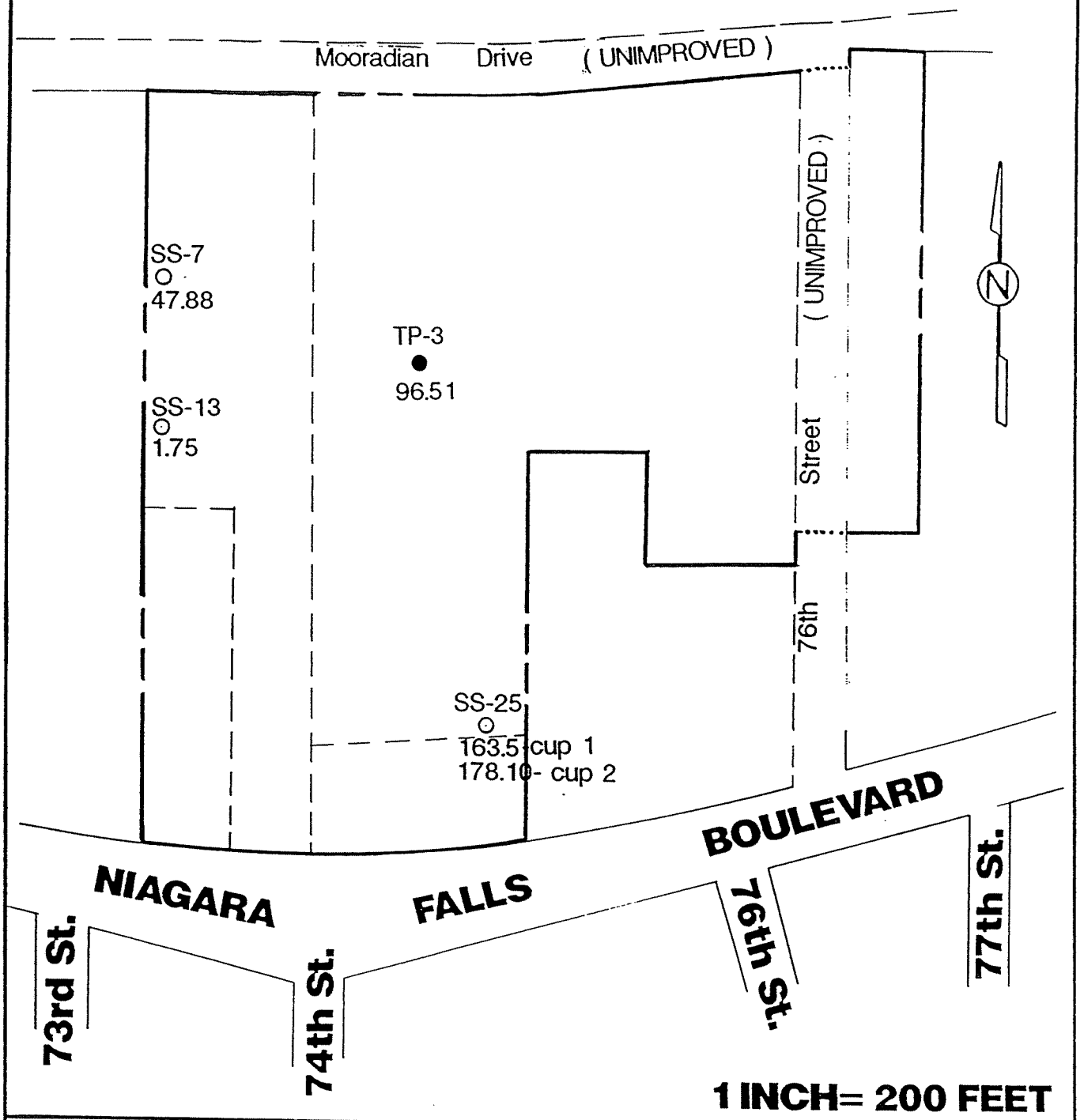
	Run 1		Run 2		Run 3		Average	
Sample I.D.	Hg	Pb	Hg	Pb	Hg	Pb	Hg	Pb
SS-1	0	0	0	0	0	0	0	0
SS-2	0	0	0	0	0	0	0	0
SS-3	0	0	0	0	0	0	0	0
SS-4	0	0	0	0	0	0	0	0
SS-5	0	0	0	0	0	0	0	0
SS-6	0	0	0	0	0	0	0	0
SS-7	58.17	0	41.51	0	43.96	0	47.88	0
SS-8	0	0	0	0	0	0	0	0
SS-9	0	23.91	0	113.20	0	129.40	0	88.83
SS-10	0	0	0	0	0	0	0	0
SS-11	0	0	0	0	0	0	0	0
SS-12	0	0	0	0	0	0	0	0
SS-13	0	0	0	0	5.25	0	1.75	0
SS-14	0	0	0	0	0	6.80	0	2.26
SS-15	0	0	0	0	0	0	0	0
SS-16	0	0	0	0	0	0	0	0
SS-17	0	0	0	0	0	0	0	0
SS-18	0	0	0	0	0	0	0	0
SS-19	0	0	0	0	0	0	0	0
SS-20	0	0	0	0	0	0	0	0
SS-21	0	0	0	0	0	0	0	0
SS-22	0	0	0	0	0	0	0	0
SS-23	0	0	0	0	0	0	0	0
SS-24 (cup 1) SS-24 (cup 2)	0 0	478.10 397.40	0 0	495.90 328.60	0 0	502.50 341.30	0 0	492.90 355.80
SS-25 (cup 1) SS-25 (cup 2)	120.90 225.20	2999.00 2825.00	202.70 127.70	3110.00 2934.00	166.90 181.40	3002.00 2949.00	163.50 178.10	3037.00 2902.00
TP-1	0	0	0	19.72	0	0	0	6.57
TP-2	0	0	0	0	0	0	0	0
TP-3	74.41	1591.00	141.30	1424.00	73.82	1624.00	96.51	1546.33
TP-4	0	0	0	0	0	0	0	0
TP-5	0	0	0	0	0	0	0	0
TP-6	0	0	0	0	0	0	0	0
TP-7	0	267.50	0	303.40	0	337.30	0	302.73
TP-COMPOSITE (cup 1) TP-COMPOSITE (cup 2)	49.94 0	1540.00 563.20	70.08 0	1855.00 581.40	82.22 0	2348.00 613.60	67.42 0	1915.00 586.00

FIGURE 3

159-0010

XRF ANALYSIS
AVERAGE MERCURY CONCENTRATION (PPM)

FIGURE 4



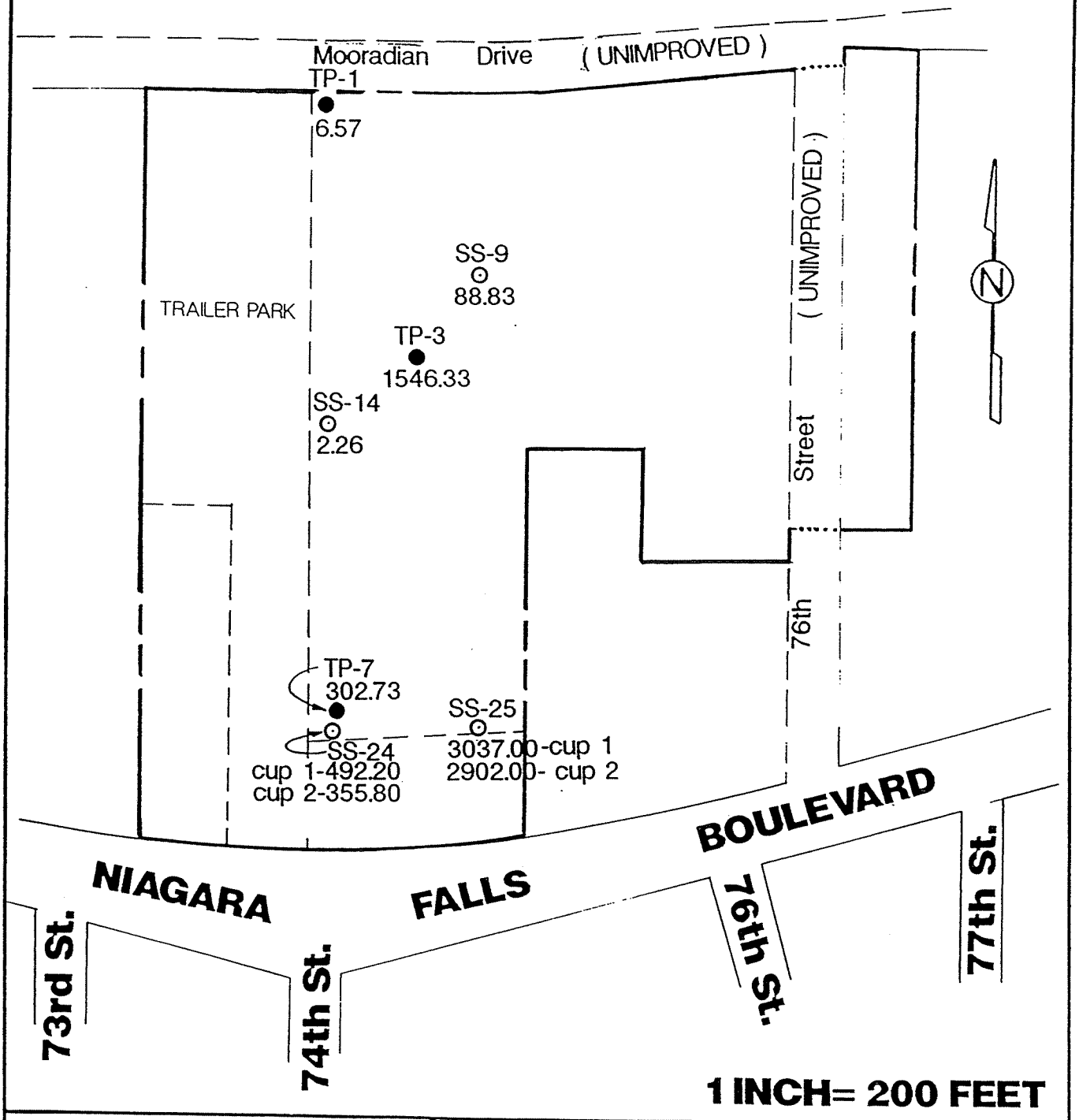
WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

PLOT PLAN
Johnson Property
Niagara Falls Boulevard
Niagara Falls, NY

159-C-01

XRF ANALYSIS
AVERAGE LEAD CONCENTRATION (PPM)

FIGURE 5



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Niagara Falls, NY

159-C-01

Confirmatory Sample Analysis

A total of four (4) samples were submitted to a NYSDOH certified laboratory for confirmatory analytical testing. Each of these samples had been previously homogenized and an aliquot of material removed for analysis by XRF. The remaining portions served as confirmatory samples and were subjected to analysis for total concentration of lead and mercury by EPA Method 7000 and for Extraction Procedure Toxicity (EP Tox) for lead and mercury. The results of this testing (along with the corresponding XRF readings) are presented below and also are included as Exhibit III of this report. Exhibit IV contains the Chain-of-Custody Record for the confirmatory samples. The test pit composite sample was labeled as TP-1 for laboratory identification purposes.

	Totals		XFR Data Ave. of cups 1 and 2		EP Tox		Reg. Limit EP Tox	
Sample Identification	Hg	Pb	Hg	Pb	Hg	Pb	Hg	Pb
Test Pit Composite	3.13	700.00	33.71	1250.50	*BQL	BQL	0.20	5.00
SS-16	0.00	190.00	0.00	0.00	BQL	BQL	0.20	5.00
SS-24	17.27	280.00	0.00	424.00	BQL	BQL	0.20	5.00
SS-25	0.52	2500.00	170.80	2969.50	BQL	BQL	0.20	5.00
(all concentrations shown are in parts per million-ppm)					*BQL - Below Quantifiable Limit			

Conclusions

A total of thirty-three (33) soil samples collected at the subject property were screened for the presence of lead and/or mercury by using an X-MET 880 x-ray fluorescence analyzer. The samples consisted of:

- twenty-five (25) surface soil samples,
- seven (7) samples collected from test pits, and,
- a composite sample generated from the seven (7) test pits.

Detectable levels of mercury were reported by XRF analysis in a total of five (5) samples ranging in concentration from 2.26 ppm to 178.10 ppm (based on the average concentration of three (3) runs). Confirmatory lab analysis was performed on three (3) of these samples and resulted in reported mercury concentrations ranging from 0.52 ppm to 17.27 ppm.

Detectable levels of lead were reported by XRF analysis in a total of seven (7) samples ranging in concentration from 6.57 ppm to 3037 ppm (based on the average concentration of three (3) runs). Confirmatory lab analysis was performed on three (3) of these samples and resulted in reported lead concentrations ranging from 280 ppm to 2500 ppm.

A total of four (4) samples were analyzed for Extraction Procedure Toxicity (EP Tox) for lead and mercury. The samples selected were representative of the full range of concentrations detected on a "totals" basis for both metallic constituents. The results of this testing indicated that the concentrations of lead and mercury were below the quantifiable limit (BQL) of the analytical procedure for all four (4) samples.

The results of confirmatory analysis for total lead concentration indicated that elevated levels of this consitutent are present

over limited areas of the subject property (primarily in the vicinity of SS-24 and SS-25 and at TP-3).

Confirmatory results for total mercury concentration indicates that the levels of this constituent are probably slightly lower than the levels reported by XRF analysis. The minimal discrepancies in reported values is likely due to inference caused by interelement effects. Such interference can occur during XRF measurements when two or more elements are present in the same sample at widely varying concentrations. In this case, low mercury levels may have been inflated by the presence of elevated lead concentrations.

Extraction Procedure Toxicity testing results indicate that the lead and mercury detected on-site exists in an insoluble matrix form and therefore would be highly unlikely to contribute to groundwater contamination through normal leaching processes due to weather conditions (i.e. rainfall) which would occur at the site.

Exhibit I

New York State Department of Environmental Conservation

Thomas C. Jorling
Commissioner

May 8, 1992

Mr. Randolph Rakoczynski
Waste Resources Associates, Inc.
2576 Seneca Street
Niagara Falls, NY 14305

Dear Mr. Rakoczynski:

In response to your letter of May 1, 1992 we have determined that the Walter S. Johnson properties as identified on the map (attached) are not considered as part of the 64th Street North inactive hazardous waste site (Site No. 932085A).

Although the subject property is not listed in the New York State Inactive Hazardous Waste Disposal Sites Registry, it has the potential of being contaminated. This is likely since the Tops parcel, directly adjacent, is known to be contaminated with mercury, even though wastes at that location are now defined as "non-hazardous". Therefore, before the subject parcel is developed, and issuance of any required Department Freshwater Wetland Permit can take place, additional soil testing is necessary in order to provide a basis for issuance pursuant to the State Environmental Quality Review Act.

These requirements were discussed at an April 18th meeting with the Mayor of the City of Niagara Falls. During the May 6, 1992 telephone conference, Mr. Steven Doleski of our Regional Regulatory Affairs Unit again highlighted the same requirements to you. Please be sure to have all sampling protocols reviewed in advance by this office and the New York State Health Department.

Should you have any questions on this matter, please call Mr. Doleski at 716-851-7165.

Yours truly,

Yavuz Erk

Yavuz Erk, P.E.
Environmental Engineer II

YE/ad

cc: Mr. Steven Doleski
Mr. Joseph Sciascia
Niagara County Health Dept.

Exhibit II

JOHNSON PROPERTY

TEST PIT SOIL PROFILE DESCRIPTION

TEST PIT NO. 1 (Depth - 3'4")	Surface to 8.0" - Top soil 8.0" to 3'4" - Light brown silt clay, moist
TEST PIT NO. 2 (Depth - 3'3")	Surface to 6.0" - Top soil, dark gray to black, humus-like 6.0" to 2.0' - Light brown to gray silty clay 2.0' to 3'3" - Gray and brown clayey silt, some sand
TEST PIT NO. 3 (Depth - 3'6")	Surface to 6.0" - Top soil 6.0" to 1'3" - Brown silty clay 1'3" to 2'6" - Debris, abundant brick, glass, concrete and wood fragments 2'6" to 3'6" - Brown silty clay, wet
TEST PIT NO. 4 (Depth - 3'2")	Surface to 6.0" - Top soil 6.0" to 2'0" - Light brown silty clay, trace gravel 2'0" to 3'2" - Brown and gray silty to sandy clay, very wet
TEST PIT NO. 5 (Depth - 3'0")	Surface to 8.0" - Top soil, dark brown, humus-like 8.0" to 3'0" - Light brown silty clay, very wet at base
TEST PIT NO. 6 (Depth - 3'2")	Surface to 6.0" - Top soil 6.0" to 2'2" - Light brown silty clay 2'2" to 3'2" - Gray/green clay, dense, stiff
TEST PIT NO. 7 (Depth - 3'6")	Surface to 1.0' - Primarily limestone gravel with some intermixed clay 1.0' to 3'6" - Light brown clay, slightly silty

Exhibit III

WASTE RESOURCE ASSOCIATES, INC.

JOHNSON PROPERTY

Prepared By:

ADVANCED ENVIRONMENTAL SERVICES INC.

"A Company Dedicated to Honesty, Quality and Service"

August 28, 1992
Ref. # FLF20GH

QA/QC Verification

The following report, as well as the supporting data, have been carefully reviewed for accuracy, adherence to the cited methods, and completeness. All data contained in this report was generated in accordance with the AES Laboratory Quality Assurance/Quality Control Program.

Denise R. Tuhovak
Organics Supervisor

Linda A. Ratka
Inorganic Senior Technician

Paul T. McMahon
Quality Control Officer

Joseph J. Curtis
Project Manager

All "Total" results on soil matrices are calculated on a dry weight basis, unless otherwise noted.

The following are standard abbreviations:

BQL - Below Quantifiable Limits
ND - None Detected
NG - No Growth of Colonies
NR - Not Requested

ADVANCED ENVIRONMENTAL SERVICES, INC.
LABORATORY REPORT
==========

PROJECT ID 20GH

Client Name: Waste Resource Associates, Inc.

A.E.S. Job Code: FLF

Analytical Parameter(s)	Method No.	Method Detection Limit	Practical Quantifiable Limit	Units	A.E.S. Lab Number. 1 Customer ID. TP-1 08/19/92 Composite	2 SS-16 08/19/92 Grab	3 SS-24 08/19/92 Grab	4 SS-25 08/19/92 Grab
Total Lead	SW 846 6010	5.0	---	mg/kg	700	190	280	2,500
Total Mercury	SW 846 7471	0.25	---	mg/kg	3.79	ND	18.5	0.52
Total Mercury	SW 846 7471	0.25	---	mg/kg	2.80	ND	17.9	0.52
Total Mercury	SW 846 7471	0.25	---	mg/kg	2.80	ND	15.4	0.52

Client Name: Waste Resource Associates, Inc.

A.E.S. Job Code: FLF

Analytical Parameter(s)	Method No.	Method Detection Limit	Practical Quantifiable Limit	Units	A.E.S. Lab Number. / Customer ID. METHOD BLANK			
Total Lead	SW 846 6010	5.0	---	mg/kg	ND			
Total Mercury	SW 846 7471	0.25	---	mg/kg	ND			

ADVANCED ENVIRONMENTAL SERVICES, INC.

PROJECT ID: 20GH

LABORATORY REPORT

EXTRACTION PROCEDURE TOXICITY (EP TOX)

Customer Sample Identification: TP-1
Sample Collection Date: 08/19/92

A.E.S. Job Code: FLF
A.E.S. Sample Number: 1

Method of Collection: Composite
Sample Type: Soil
The MATRIX SPIKE was conducted on Sample Number: NR

Analytical Parameters	Observed Concentration	Matrix Spike Percent Recovery	Adjusted Concentration	Maximum Allowable Concentration (mg/l)	Quantifiable Limit	Analysis Date	Method No.	Reference No.
Lead	BQL	---	---	5.00	0.25	08/21/92	SW 846 6010	---
Mercury	BQL	---	---	0.2	0.001	08/26/92	SW 846 7470	---

ADVANCED ENVIRONMENTAL SERVICES, INC.
LABORATORY REPORT

PROJECT ID: 20GH

EXTRACTION PROCEDURE TOXICITY (EP TOX)

Customer Sample Identification: SS-16
Sample Collection Date: 08/19/92

A.E.S. Job Code:
A.E.S. Sample Number: 2

Method of Collection: Grab
Sample Type: Soil
The MATRIX SPIKE was conducted on Sample Number: NR

Analytical Parameters	Observed Concentration	Matrix Spike Percent Recovery	Adjusted Concentration	Maximum Allowable Concentration (mg/l)	Quantifiable Limit	Analysis Date	Method No.	Reference No.
Lead	BQL	---	---	5.0	0.25	08/21/92	SW 846 6010	---
Mercury	BQL	---	---	0.2	0.001	08/26/92	SW 846 7470	---

ADVANCED ENVIRONMENTAL SERVICES, INC.
LABORATORY REPORT

EXTRACTION PROCEDURE TOXICITY (EP TOX)

Customer Sample Identification: SS-24
Sample Collection Date: 08/19/92

Method of Collection: Grab
Sample Type: Soil
The MATRIX SPIKE was conducted on Sample Number: NR

A.E.S. Job Code: FLF
A.E.S. Sample Number: 3

Analytical Parameters	Observed Concentration	Matrix Spike Percent Recovery	Adjusted Concentration	Maximum Allowable Concentration (mg/l)	Quantifiable Limit	Analysis Date	Method No.	Reference No.
Lead	BQL	---	---	5.0	0.25	08/21/92	SW 846 6010	---
Mercury	BQL	---	---	0.2	0.001	08/26/92	SW 846 7470	---

ADVANCED ENVIRONMENTAL SERVICES, INC.
LABORATORY REPORT

PROJECT ID: 20GH

EXTRACTION PROCEDURE TOXICITY (EP TOX)

Customer Sample Identification: SS-25
Sample Collection Date: 08/19/92

A.E.S. Job Code: FLF
A.E.S. Sample Number: 4

Method of Collection: Grab
Sample Type: Soil
The MATRIX SPIKE was conducted on Sample Number: NR

Analytical Parameters	Observed Concentration	Matrix Spike Percent Recovery	Adjusted Concentration	Maximum Allowable Concentration (mg/l)	Quantifiable Limit	Analysis Date	Method No.	Reference No.
Lead	BQL	---	---	5.0	0.25	08/21/92	SW 846 6010	---
Mercury	BQL	---	---	0.2	0.001	08/26/92	SW 846 7470	---

ADVANCED ENVIRONMENTAL SERVICES, INC.

PROJECT ID: 20GH

LABORATORY REPORT

EXTRACTION PROCEDURE TOXICITY (EP TOX)

Customer Sample Identification: METHOD BLANK
Sample Collection Date:

A.E.S. Job Code:
A.E.S. Sample Number: 5

Method of Collection:
Sample Type:
The MATRIX SPIKE was conducted on Sample Number: NR

Analytical Parameters	Observed Concentration	Matrix Spike Percent Recovery	Adjusted Concentration	Maximum Allowable Concentration (mg/l)	Quantifiable Limit	Analysis Date	Method No.	Reference No.
Lead	BQL	---	---	5.0	0.25	08/21/92	SW 846 6010	---
Mercury	BQL	---	---	0.2	0.001	08/26/92	SW 846 7470	---

Advanced Environmental Services
Sample Traceability Report
Inorganics Analysis

AES Job Code FLF

AES Job No. 20GH

AES Sample Number	Sample Date	Sample Prep			Analysis		
		Method Number	Date	Analyst	Method Number	Date	Analyst
20GH-(1-4)	8-19-92	3010	8-21-92	Paula Donovan	6010 (EP Tox)	8-21-92	CD
		3050		Paula Donovan	6010	8-21-92	CD
		Soil mercury		Paula Donovan	7470	8-21-92	DTR
					7471	8-26-92	DTR

Exhibit IV

CHAIN OF CUSTODY RECORD

ADVANCED
ENVIRONMENTAL SERVICES, INC.
2186 LIBERTY DRIVE
NIAGARA FALLS, NY 14304 • (716) 283-3120

WASTE RESOURCE ASSOCIATES

PROJECT NAME: JOHNSON PROPERTY

SAMPLER'S SIGNATURE: Mark T. Schwippert

JOB CODE: FLF 2006H

IDENTIFICATION OF BLIND FIELD DUPLICATE SITE: _____

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION: UNPRESERVED	HNO_3	H_2SO_4	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	PARAMETERS/REMARKS
8/19/92		TP-1		✓	SOIL	✓							1	TOTAL LEAD + MERCURY
"		SS-16	✓		"	✓							1	BY EPA METHOD 7000
"		SS-24	✓		"	✓							1	AND
"		SS-25	✓		"	✓							1	E.P. TOXICITY FOR
														LEAD AND MERCURY

TOTAL NUMBER OF CONTAINERS 4

NOTE: Please indicate required analysis, and whom we may contact with questions, if you have not yet done so through your customer service representative.

	DATE	TIME	RECEIVED BY:
1. RELINQUISHED BY:	8/19/92	3:00PM	
2. RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
3. RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

APPENDIX B

"Remedial Action Site Investigation:
Johnson Property"
Niagara Falls Boulevard
City of Niagara Falls, NY

June 27, 1994

196-0010

"Remedial Action Site Investigation:
Johnson Property
[Niagara Falls Boulevard
City of Niagara Falls, NY]

prepared for:

Gibraltar Development Corporation
1280 Court Street
Clearwater, FL 34616

and

RD Management Corp.
810 Seventh Avenue - 28th Floor
New York, NY 10019

prepared by:

Waste Resource Associates, Inc.
2576 Seneca Avenue
Niagara Falls, NY 14305

June 27, 1994

196-0005

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Randolph W. Rakoczynski, P.E.
NYS P.E. License No. 61392

COPY

Table of Contents

PAGE

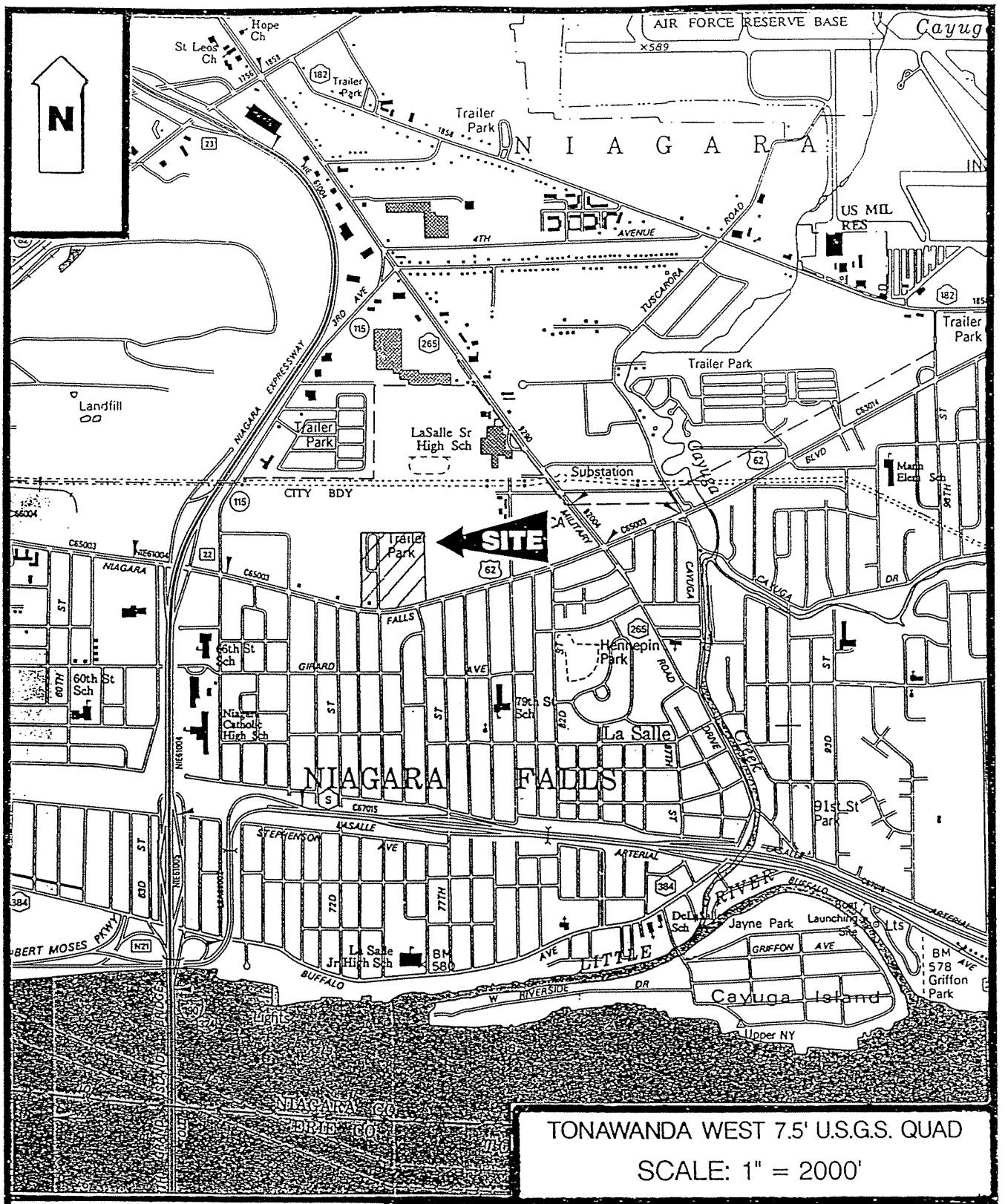
Exhibits

Introduction

Gibraltar Development Corporation along with RD Management Corporation is planning to develop an approximate 17.6 acre parcel of land (the subject property) located north of Niagara Falls Boulevard between 73rd Street and 76th Street in the City of Niagara Falls, NY (see Figure 1 - Site Location Map). Site development plans call for construction of a retail facility on the subject property.

The subject property is located immediately east of (and adjacent to) land which was formerly suspected of being part of an inactive hazardous waste disposal site (64th Street North - Site No. 932085A). Previous surface soil sampling and analysis performed on the subject property (Waste Resource Associates, Inc., September 1992) indicated that while no hazardous wastes had been disposed of on-site, certain areas of the property had received non-indigenous "fill" material which contained elevated levels of lead and mercury.

Waste Resource Associates, Inc. has compiled this report to summarize the findings of a Remedial Action Site Investigation performed on the subject property. The site investigation was designed to more accurately delineate the extent of contaminated "fill" material present across an identified area of concern located on the subject property.



TONAWANDA WEST 7.5' U.S.G.S. QUAD

SCALE: 1" = 2000'

WASTE RESOURCE ASSOCIATES, INC.

2576 Seneca Avenue
Niagara Falls, New York 14305

FIGURE 1 - SITE MAP

JOHNSON PROPERTY

NIAGARA FALLS BOULEVARD & 75th STREET

Previous Site Investigation Work

A preliminary site investigation was completed on the subject property in September 1992, by Waste Resource Associates, Inc. Evaluation of the property consisted of collecting a total of twenty-five (25) surface soil samples and seven (7) subsurface soil samples from test pits. Figure 2 is a plot plan drawing of the subject property which shows the locations of the surface soil sampling points and test pits.

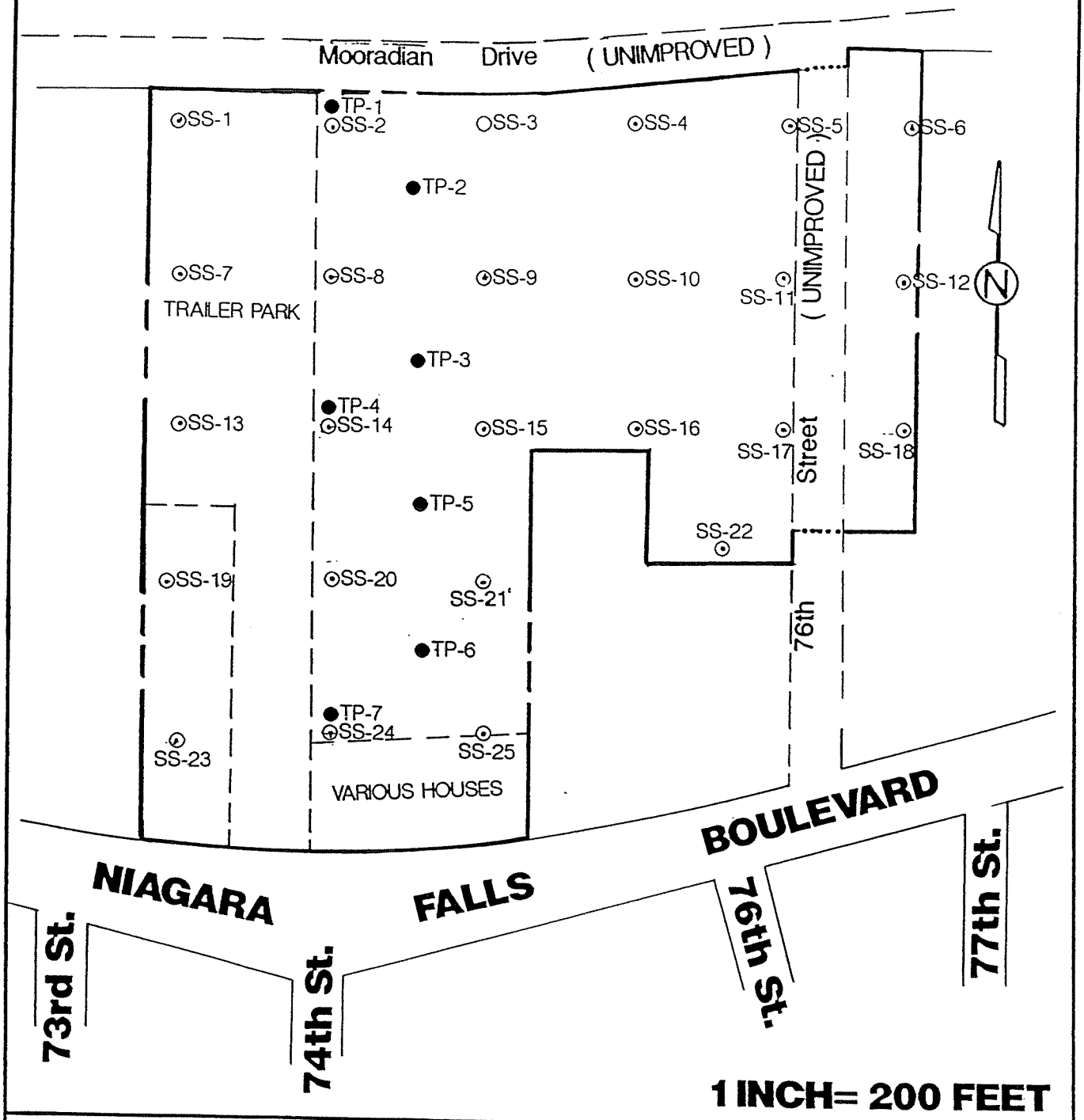
All samples collected were evaluated for lead (Pb) and mercury (Hg) content using an Outokumpu X-MET 880 x-ray fluorescence (XRF) spectrum analyzer. Selected samples were submitted to an analytical laboratory for confirmatory testing. A summary of the results of sample analysis is shown on Figure 3. Based on the results of sample analysis, an "area of concern" was identified in the central portion of the property which occupies approximately 6.1 acres.

Exhibit I of this report includes the final report (in its entirety) for the "Preliminary Site Investigation" previously conducted on the subject property.

FIGURE 2

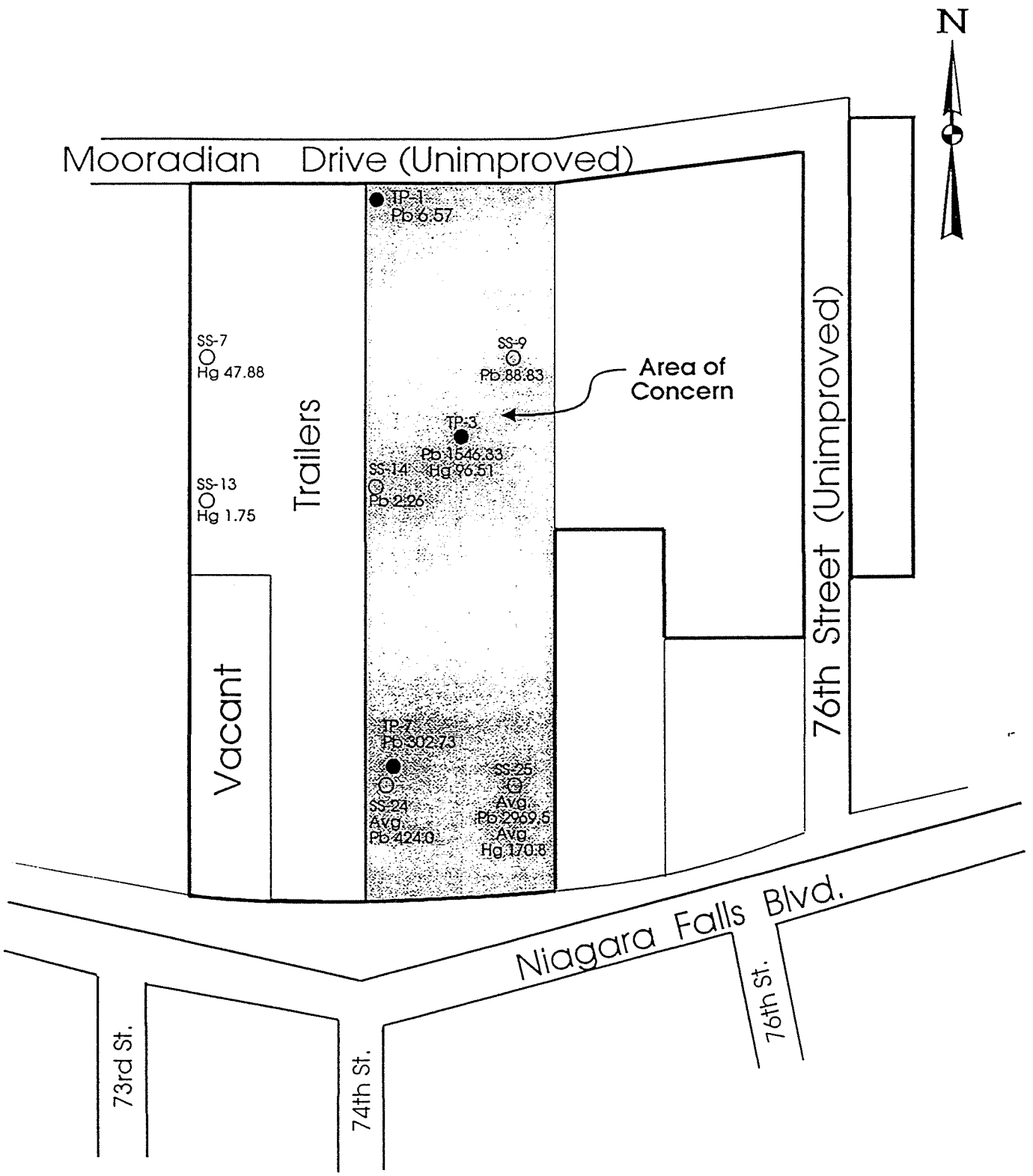
⊙SS-1 - SURFACE SOIL SAMPLES

●TP-1 - TEST PITS



WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

PLOT PLAN
Johnson Property
Niagara Falls Boulevard
Niagara Falls, NY



Scale: 1" = 200'

WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

FIGURE 3
Summary of previous XRF Analysis
of Surface Soil Samples
Lead (Pb) and Mercury (Hg) Concentration

Remedial Action Site Investigation

Study Area

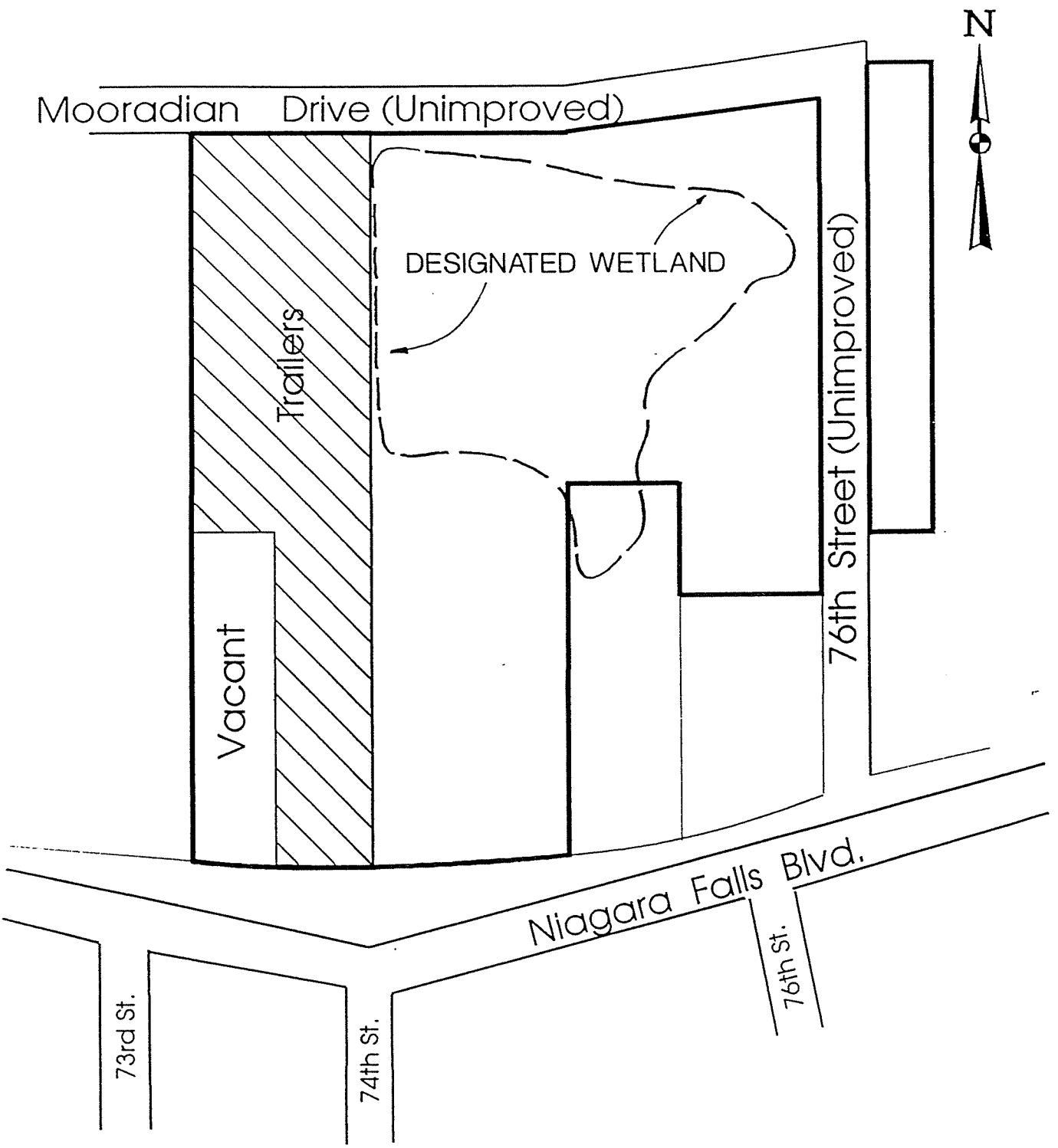
The subject property is comprised of approximately 17.6 acres located north of Niagara Falls Boulevard between 73rd Street and 76th Street in the City of Niagara Falls, NY. The property is bounded on the north by the unimproved right-of-way for Mooradian Drive. The unimproved right-of-way for 76th Street (north of Niagara Falls Boulevard) runs through the property near its eastern boundary.

The subject property is generally comprised of two (2) separate areas:

1) An existing mobile home park is located in the western portion of the property and occupies approximately one-third of the total acreage of the property. This area is generally of slightly higher elevation than lands to the east and was presumably built-up to provide suitable grade and foundation for the mobile home park.

2) The remaining property to the east of the mobile home park is lightly wooded and largely undeveloped with the exception of a few small residential lots located along Niagara Falls Boulevard. This portion of the property is low-lying and poorly drained and contains approximately five (5) acres of designated wetland.

Figure 4 of this report is a plot plan drawing of the subject property which shows the proposed acreage to be developed. This acreage corresponds exactly to that which was subject to a previous preliminary site assessment (WRA, September, 1992).



Scale: 1" = 200'

WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

FIGURE 4
Johnson Property
to be Developed

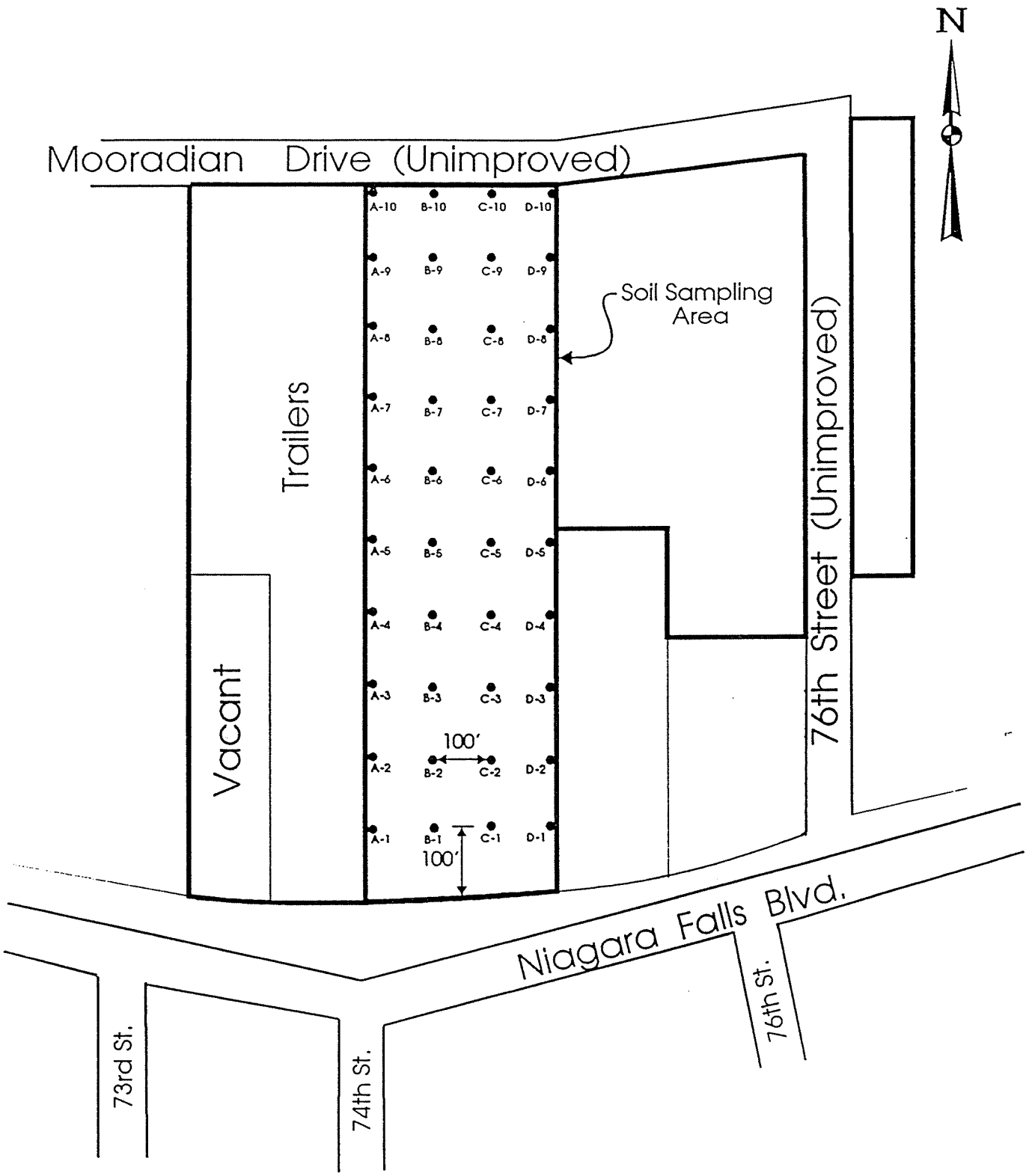
Field Operations

Field operations were completed over a two (2) day period from Tuesday, May 31st to Wednesday, June 1st, 1994.

Prior to initiating soil sampling, a total of forty (40) sampling points were located and marked in the field. A 100-foot grid pattern was established across the area of concern by using hand taping techniques and measuring from confirmed property corners. Figure 5 is a map of the subject property which shows the grid pattern across the area of concern and identifies each individual sampling point.

A single soil sample was collected at each sampling location. Samples were obtained using an AMS Soil Auger and generally consisted of materials from the ground surface to approximately three (3) to three and one-half (3.5) feet below grade. All sample material collected was examined and described in the field by a geologist. A representative soil sample from each location was collected and retained for further in-house screening and laboratory analysis. Upon completion of sampling at each collection point, the soil auger was decontaminated by scrubbing with a solution of detergent and water and rinsing with clean, potable water.

Exhibit II of this report contains photographic documentation which shows the sampling techniques employed during field operations.



Scale: 1" = 200'

WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

FIGURE 5
Soil Sampling Locations

Field Observations and Sample Screening Results

The area of concern can generally be described as low-lying, poorly drained and swampy. Approximately one-half of the acreage within the area of concern is designated wetland. An examination of soil samples collected within the area would indicate that non-indigenous "fill" has been placed on-site. The "fill" material is generally comprised of construction/demolition debris (wood, glass, brick, concrete, asphalt) and lesser amounts of apparent industrial debris including slag, cinders and foundry sands.

"Fill" material was encountered over a limited extent within the area of concern and was generally located in close proximity to those areas of the property which had previously been built-up for development purposes. These areas would include the trailer park and in the vicinity of several small houses located along Niagara Falls Boulevard. Much of the construction/demolition debris encountered is likely to be present as the result of demolition of several small cottages which served as individual units of a motel which previously existed on-site.

Exhibit III of this report contains a full summary of field descriptions for all samples collected and identifies those areas where "fill" material was encountered.

Headspace Testing

All soil samples collected were placed in sealed plastic bags and were transported to the offices of Waste Resource Associates, Inc. for further processing and evaluation. The samples were allowed to reach ambient temperatures and were subjected to headspace testing for volatile hydrocarbon compounds using an HNu photoionization detector. Headspace testing results are shown on Table 1. HNu meter readings ranged from 0.0 ppm to 1.8 ppm and indicate that elevated levels of volatile hydrocarbon compounds are not present in the samples analyzed. Based on field observations and the results of headspace testing, no further analytical testing for petroleum compounds was performed.

Sample Evaluation by XRF

After headspace testing had been completed, the samples were prepared for screening for metals content by XRF analysis. Each sample was prepared and analyzed according to EPA recommended protocol of discrete sample x-ray fluorescence analysis*. The procedure involved the following sequence of steps:

- air dry samples,
- remove non-representative organic debris,
- sieve through a 20-mesh stainless sieve,
- homogenize sample by thoroughly mixing,
- prepare a 31 mm x-ray fluorescence sample cup with an aliquot of the homogenized sample,
- analyze on X-MET unit for 60 seconds,
- record concentration values,
- agitate material in sample cup and reanalyze,
- repeat procedure for a total of three (3) readings on each sample.

*Ref: "Field-Portable X-ray Fluorescence" EPA/ERT Quality Assurance Technical Information Bulletin, Vol. 1, No. 4, May 1991.

Table 1

Headspace Testing Results*
Johnson Property Samples
(all results shown in ppm - parts per million)

Sample	Result	Sample	Result	Sample	Result	Sample	Results
A-1	0.0	B-1	0.0	C-1	0.0	D-1	0.2
A-2	0.0	B-2	0.0	C-2	0.0	D-2	0.4
A-3	0.0	B-3	0.0	C-2	0.0	D-3	0.2
A-4	0.0	B-4	1.3	C-4	0.0	D-4	0.4
A-5	0.0	B-5	0.0	C-5	0.4	D-5	0.0
A-6	0.0	B-6	0.6	C-6	0.1	D-6	0.2
A-7	0.0	B-7	0.0	C-7	0.0	D-7	1.8
A-8	0.0	B-8	0.0	C-8	0.0	D-8	0.1
A-9	0.1	B-9	0.0	C-9	0.0	D-9	0.0
A-10	0.0	B-10	0.0	C-10	0.0	D-10	0.1

* Headspace testing performed using an HNu PI 101 photoionization detector equipped with a 10.2eV probe

In-house XRF screening focused on evaluating samples for mercury, lead and chromium content. Of the forty (40) samples that were analyzed, only five (5) contained detectable levels of these three constituents. Table 2 contains a summary of in-house XRF screening results. In evaluating the concentrations reported, it is noted that the level of mercury in samples A-2 and A-10 and the level of lead in samples C-2 and D-2 exceed common range values for these constituents in natural soils (see Exhibit IV - Trace Chemical Element Content of Natural Soils). Field descriptions of all five (5) samples listed in Table 2 identify the presence of non-indigenous "fill" material including slag, cinders and foundry sands. It is therefore reasonable to conclude that elevated levels of metallic contaminants are most likely to be associated with the presence of "fill" material. Exhibit V of this report contains final results for all samples evaluated by XRF screening.

Analytical Testing Results

Of the forty (40) samples collected, a total of twenty (20) samples were selected and submitted for analytical testing. The selection process was based on the following criteria;

- field examination of sample with regard to appearance and composition,
- detectable levels of metallic constituents being reported as a result of XRF screening,
- locations adjacent to current sample points where detectable levels of metallic constituents were reported as a result of XRF screening, and,
- locations in close proximity to previous sampling points where elevated levels of metallic constituents were detected.

All samples submitted were analyzed by EPA Method 6010 ICP and Atomic Absorption/Cold Vapor Extraction.

Table 2

Summary of In-House XRF Screening
Johnson Property Samples
(results shown in parts per million-ppm)

Sample Identification	Screening Parameters		
	Mercury (Hg)	Lead (Pb)	Chromium (Cr)
A-2	53.7**	81.7	ND
A-10	1.9**	ND	ND
B-1	ND*	37.6	ND
C-2	ND*	340.7**	ND
D-2	ND*	550.0**	79.2

Note: All remaining samples reported 0.0 for all screening parameters.

Samples analyzed using an Outokumpu X-MET 880 x-ray fluorescence (XRF) spectrum analyzer. Sixty (60) second measurement time.

* ND - Not Detected

** Exceeds Common Range Values for Trace Chemical Element Content of Natural Soils

The results of the analysis reported the "total" concentration of the following metallic constituents;

- Arsenic
- Barium
- Cadmium
- Chromium
- Lead
- Mercury
- Selenium, and
- Silver.

Table 3 contains a summary of analytical testing results for all samples submitted. Of the twenty (20) samples analyzed, a total of nine (9) samples contained levels of one (1) or more constituents which exceeded common range values for trace chemical element content of natural soils (see Exhibit IV).

These samples are identified below.

Sample	Constituent/Concentration
A-1	Mercury - 7.6 ppm
A-2	Mercury - 13.0 ppm
C-2	Mercury - 0.37 ppm, Lead - 432.0 ppm
D-2	Mercury - 0.53 ppm, Lead - 320.0 ppm
A-3	Cadmium - 48.1 ppm
B-3	Cadmium - 28.8 ppm
C-3	Cadmium - 28.6 ppm
D-3	Cadmium - 27.9 ppm
A-10	Mercury - 0.7 ppm

Figure 6 locates these sample points on a plot plan drawing of the subject property. Exhibit VI contains final analytical testing results and chain-of-custody documentation.

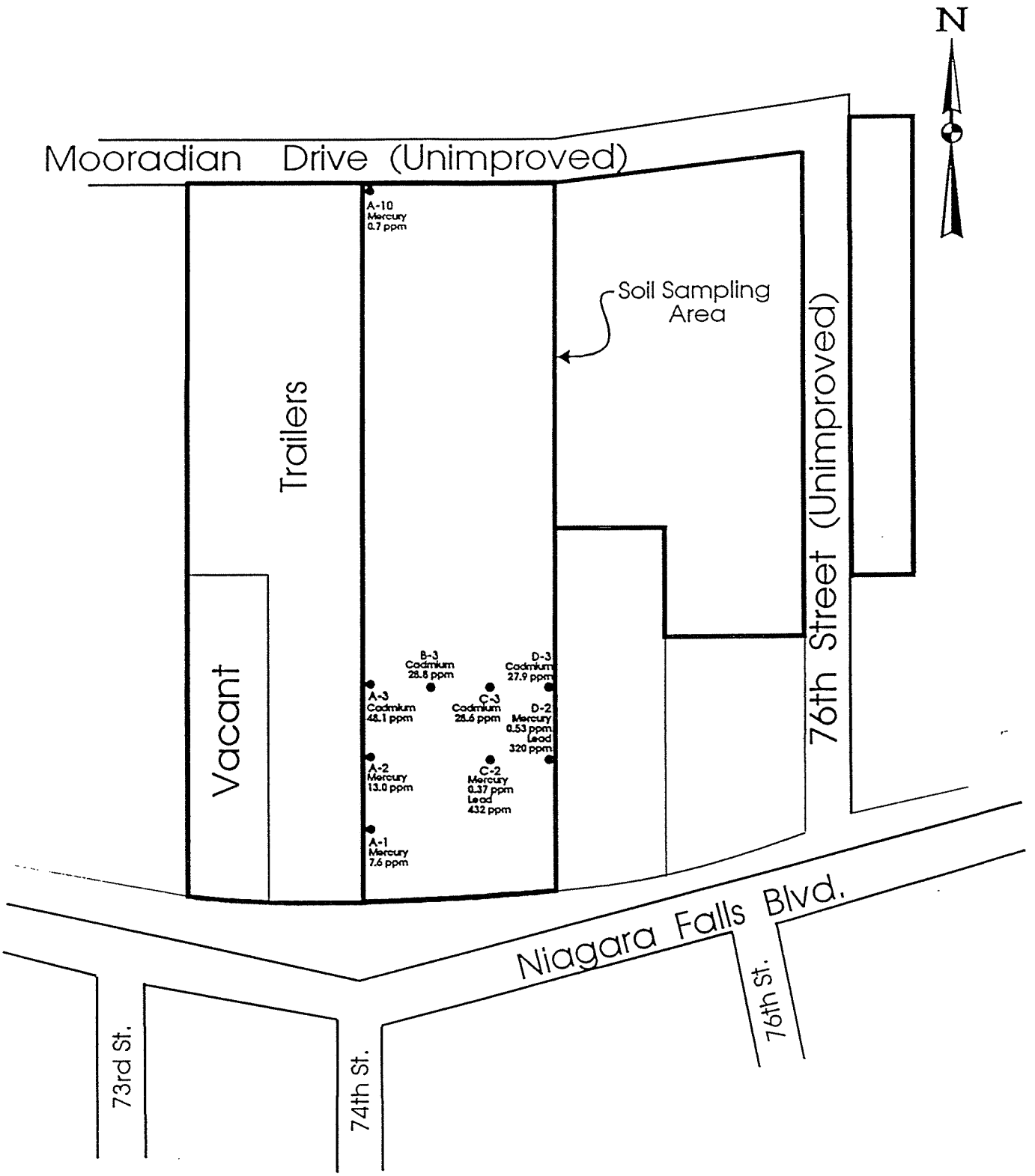
Table 3

Summary of Analytical Testing Results
Johnson Property Samples
(results shown parts per million-ppm)
Sample Identification

Analytical Parameters	A-1	B-1	C-1	D-1	A-2	B-2	C-2	D-2	A-3	B-3	C-3	D-3	B-6	C-6	B-7	C-7	A-9	B-9	A-10	B-10
Arsenic	5.9	49.3	BQL	4.6	3.3	3.7	5.2	5.8	BQL	BQL	BQL	BQL	4.06	2.42	BQL	2.5	3.2	3.1	BQL	12.1
Barium	91	131	17.4	34.1	125	114.7	287.3	104.3	BQL	BQL	BQL	BQL	29.4	22.8	62.2	23.6	63.7	30.5	41.8	28.4
Cadmium	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	48.1*	28.8*	28.6*	27.9*	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Chromium	436.8	40.4	9.3	18.3	43.3	31.1	56.9	42.8	19.8	13.2	13.5	13.8	11.5	9.0	18.7	8.8	31.8	11.2	326.8	11.7
Lead	92	82	6.1	32	167	46.8	432*	320*	29.2	8.3	10.3	14.1	7.7	7.35	31	6.3	41.9	6.9	136.1	8.9
Mercury	7.6*	BQL	BQL	BQL	13*	0.24	0.37*	.53*	0.12	BQL	BQL	BQL	0.08	BQL	BQL	BQL	BQL	BQL	0.7*	BQL
Selenium	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
Silver	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL

BQL - Below Quantifiable Limits

* - Exceeds Common Range Values for Trace Chemical Element Content of Natural Soils



Scale: 1" = 200'

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FIGURE 6
Soil Sampling Locations
Where Common Range Values
Were Exceeded*

*-BASED ON ANALYTICAL TESTING RESULTS

Conclusions

The following conclusions are based on the findings of both the current "Remedial Action Site Investigation" and the "Preliminary Site Assessment" (September 1992) previously performed on the subject property by Waste Resource Associates, Inc.

1) Analytical testing of subsurface soil samples detected the presence of elevated levels of various metallic constituents. The primary contaminants identified were lead and mercury with lesser amounts of cadmium being reported. Visual examination of samples and subsequent evaluation by headspace testing with a photoionization detector did not identify the presence of any volatile organic compounds.

2) Visual examination of subsurface soil samples identified the presence of non indigenous "fill" material that was primarily comprised of construction/demolition debris (brick, concrete, asphalt, glass, wood, etc.) and industrial debris (slag, cinders, foundry sands, etc.). The "fill" material is located in close proximity to those areas of the subject property which have been developed, particularly in the area of the trailer park and along Niagara Falls Boulevard where several small houses are located.

3) A strong correlation exists between the presence of "fill" material and elevated levels of metallic constituents. "Fill" material was identified in nearly all samples which contained elevated metals levels. Materials such as slag, cinders and other types of foundry sands are common waste products of industrial metals processing facilities.

4) Samples identified as containing elevated levels of metallic constituents were compared to common range values for trace elements in natural soils. A total of twenty (20) samples were subjected to analytical testing for total concentration of eight (8) individual metallic constituents. A total of nine (9) samples were identified as containing elevated levels of metallic compounds. Only three (3) of the eight (8) metals tested for were present at elevated concentrations.

5) To determine whether a sample is considered hazardous or non-hazardous, testing for Extraction Procedure Toxicity (EPTox) can be performed. Testing by EPTox measures the relative solubility, or leachability, of contaminants within a sample. Such testing was performed on samples that were previously collected on-site. The results indicated that none of the samples were considered to be hazardous. The samples that were selected for EPTox analysis contained concentrations of metallic constituents up to five (5) times greater that those levels detected in the samples that were collected most recently. It is therefore reasonable to conclude that none of the samples recently collected would be considered hazardous.

6) In making determinations regarding requirements for removal actions, regulatory agencies cite mandates pertaining to protection of "human health and the environment". Concerns are usually focused on the potential for humans to be exposed to contaminants either by direct contact or by consuming contaminated groundwater. With respect to the limited contamination present on the subject property, relief from these concerns can be achieved by the following mechanisms:

- The planned development of the property calls for the construction of a large retail facility which presumably would be surrounded by a vast expanse of asphalt parking lot. In this case, subsurface contaminants would be effectively encapsulated by the building itself and surrounding parking lot and the potential for direct exposure to humans would be eliminated.

- Testing of samples by EPTox has shown that the metallic constituents detected are present in an insoluble form and are not likely to be contributing to groundwater degradation due to contaminant leaching. Encapsulation of the "fill" material with impermeable structures such as a building or parking lot would further reduce the potential for leaching to occur by preventing rain water and snow melt water from contacting the "fill". Furthermore, residents in the area are all served by a public water supply system and would not be likely to be utilizing area groundwater for consumption purposes. Under this scenario, neither degradation or consumption of groundwater is occurring.

Removal Requirements and Volume Calculations

In determining the potential for a removal action to occur on the subject property, two (2) different scenarios will be examined:

1) What must be removed in order for the site to be considered clean (i.e. uncontaminated).

2) What must be removed in order to satisfy regulatory agency concerns regarding protection of human health and the environment. (In this case, the regulatory agency is the New York State Department of Environmental Conservation - NYSDEC).

Under each of the scenarios listed above, an action level must be established to govern the extent of removal activities. Action levels for each of the contaminants of concern are shown below.

Constituents	Action Levels (ppm)	
	Scenario No. 1*	Scenario No. 2**
Cadmium (Cd)	0.7	80
Lead (Pb)	200	250
Mercury (Hg)	0.3	20

* USEPA, SW-874 Hazardous Waste Land Treatment, 4/83, p. 273, Table 6.46

** NYSDEC, Draft Clean-up Policy and Guidelines, Vol. II, 10/91, Appendix C.

Once the action levels have been established, remedial activities would focus on removing materials from site which contained concentrations of the identified contaminants in excess of the designated action level.

Scenario No. 1

In order for the site to be considered "clean" (or uncontaminated), all "contaminants" must be removed. In this situation, a contaminant would be considered either a substance not naturally occurring in soils or an indigenous substance that is present at concentrations elevated beyond what is normally or commonly exhibited. Detection of these types of situations would support a theory that human activities somehow contributed to or caused the contamination that was present.

Figure 7 is a plot plan drawing of the subject property which shows the areas on-site that would require remediation under the action levels proposed for Scenario No. 1. The areas shown are essentially those parts of the property where common range values are exceeded for the constituents of concern. Assuming an excavation depth of three (3) feet below grade (or until indigenous, uncontaminated clays are encountered), excavation in these areas would result in the removal of approximately 7,000 cubic yards of contaminated soil (or approximately 10,000-12,000 tons of soil).

Scenario No. 2

Regulatory concerns which result in removal actions stem from environmental regulations which focus on protection of human health and the environment. Guidelines are set forth with these goals and objectives in mind. Under Scenario No. 2, the action levels that would be in place during removal are concentrations which NYSDEC has established as being protective of human health based on the potential for direct exposure.

Figure 8 is plot plan drawing of the subject property which shows the areas on-site that would require remediation under the action levels proposed for Scenario No. 2. Since the action levels are higher than those under Scenario No. 1, removal under Scenario No. 2 affects a considerably smaller portion of the property. Assuming a removal depth of three (3) feet below grade within the identified areas, the required excavated soil volumes would be approximately 2,560 cubic yards (or approximately 3,800-4,500 tons of soil).

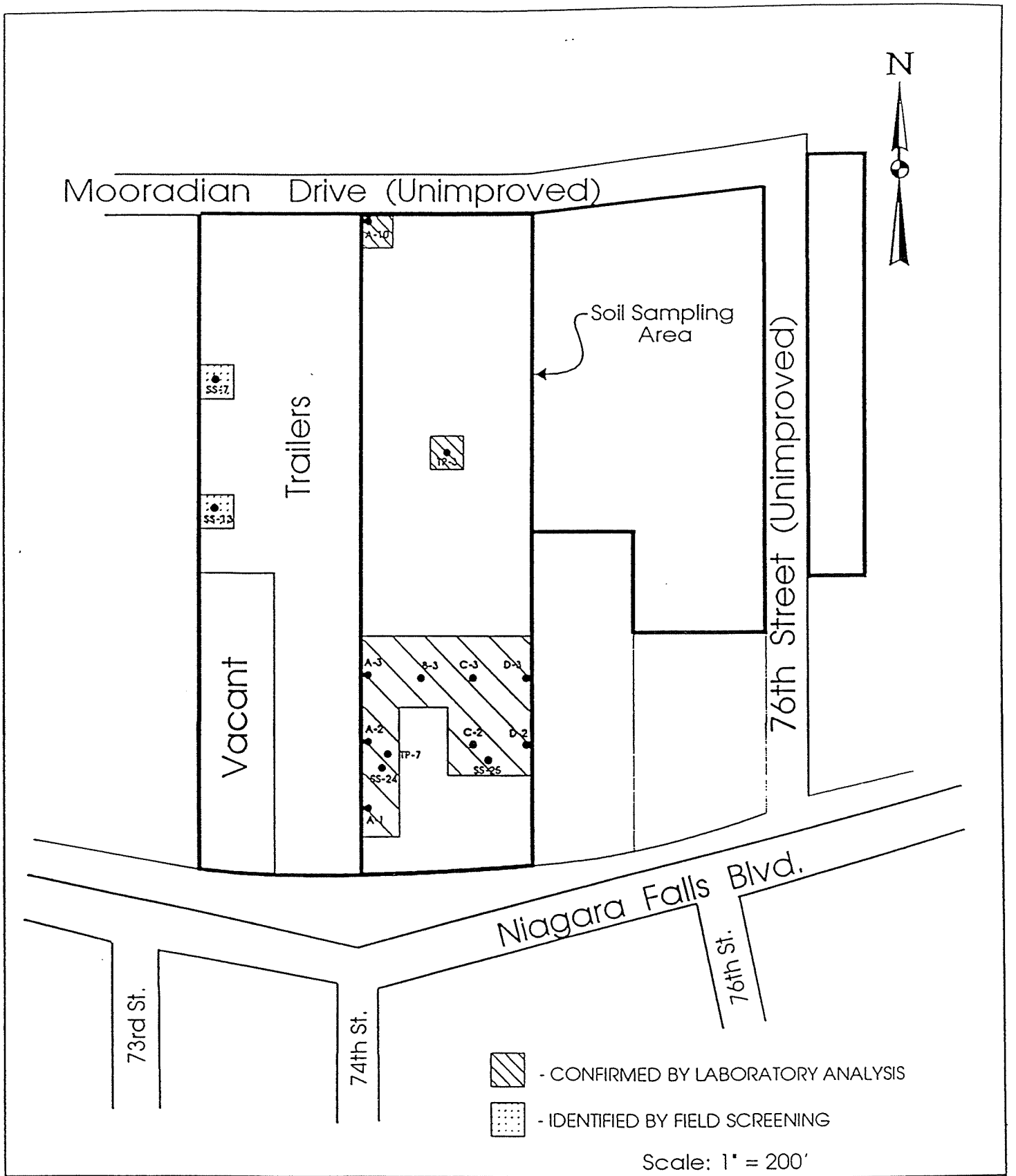

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FIGURE 7

Areas of Potential Removal
Scenario No. 1

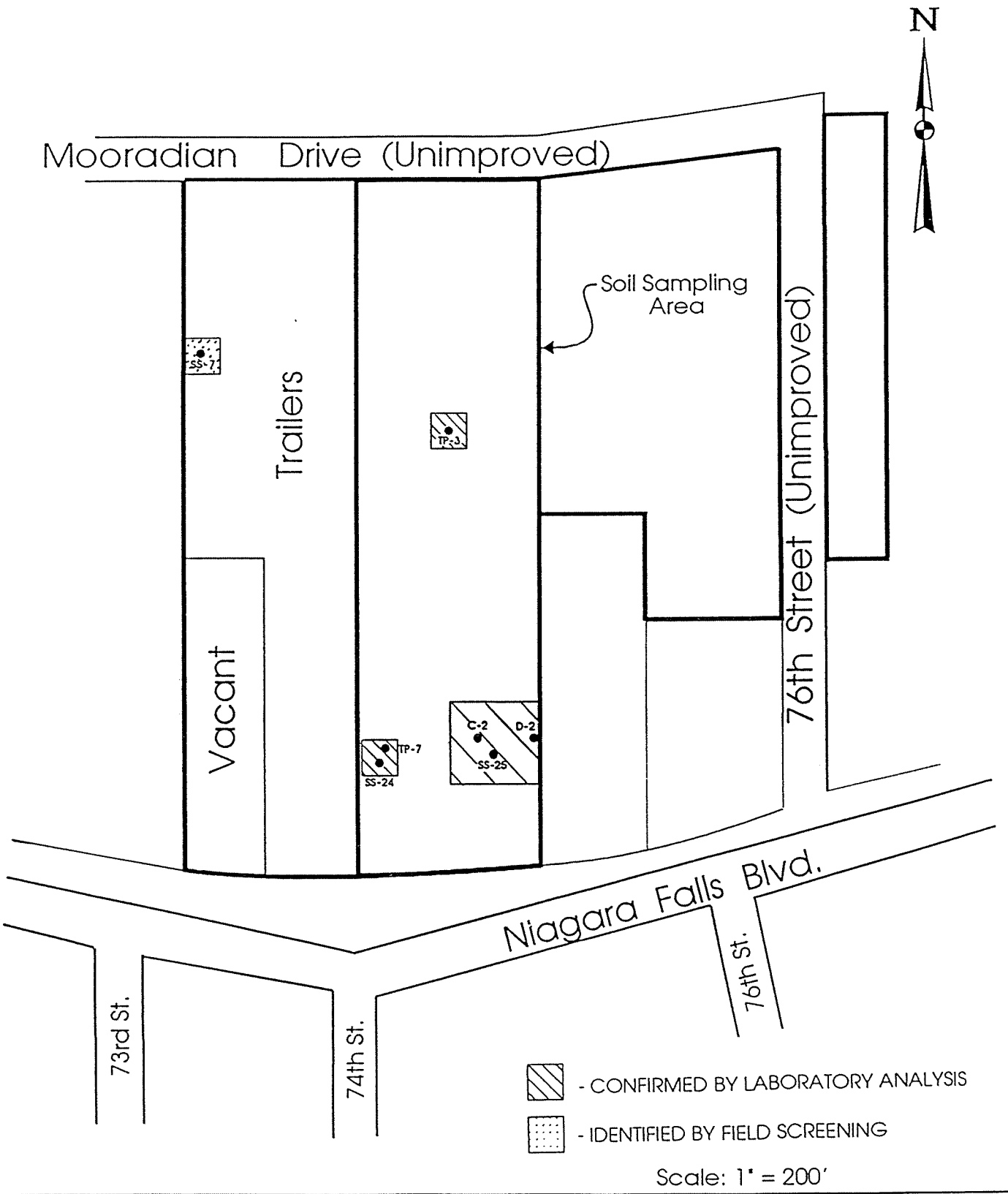

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FIGURE 8
Areas of Potential Removal
Scenario No. 2

Alternatives

The action levels presented under Scenario No. 2 were developed by NYSDEC to be protective of human health and assumes that some mechanism for human exposure would remain after clean-up activities removed materials containing contaminants at concentrations above the action level. As an alternative to removal actions, regulatory agencies will often accept other means to provide for protection of human health. In many cases, these means seek to eliminate any potential future exposure to humans by effectively isolating the contaminated material. Efforts in this regard can involve something as simple as erecting a fence around a contaminated area or may employ various methods of encapsulation such as construction of earthen berms, clay caps, cement caps or blacktopping.

With regards to the subject property, it appears that the future development plan would in itself represent an effective mechanism to eliminate any potential future exposure routes which would result in direct human contact with any subsurface contamination. Of primary consideration are the following factors:

1) The property will be rezoned from residential to commercial (people will no longer able to be living on-site).

2) Once fully developed, the majority of subsurface material would be encapsulated by either the building itself, black-topped parking areas or landscaped green-spaces where clean topsoil has been placed.

3) Laboratory testing of contaminated soils has shown them to be non-hazardous (i.e. the constituents of concern are present in an insoluble form and are not contributing to any groundwater contamination). Therefore, the possibility of any future human exposure due to consumption of contaminated groundwater is highly unlikely because residents in the area utilize public supplies.

Exhibit I

"Preliminary Site Assessment:

Johnson Property"

[Niagara Falls Blvd. & 75th Street]

Niagara Falls, NY

September 1, 1992

INCLUDED AS APPENDIX A OF THIS REPORT

Exhibit II

Photographic Documentation

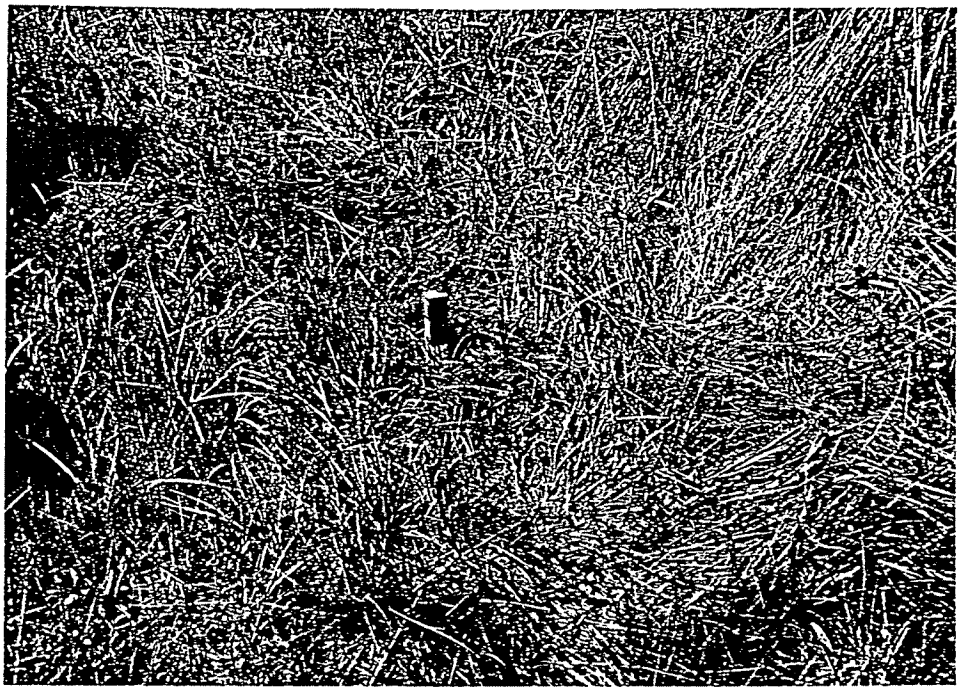


Photo No. 1

Sample Location B-8

Photo No. 2

Soil Auger

Photo No. 3

Soil Auger and Collected Sample

(Soil Auger at 3.0' below surface)

Photo No. 4

Representative Sample Retained in Plastic Bag

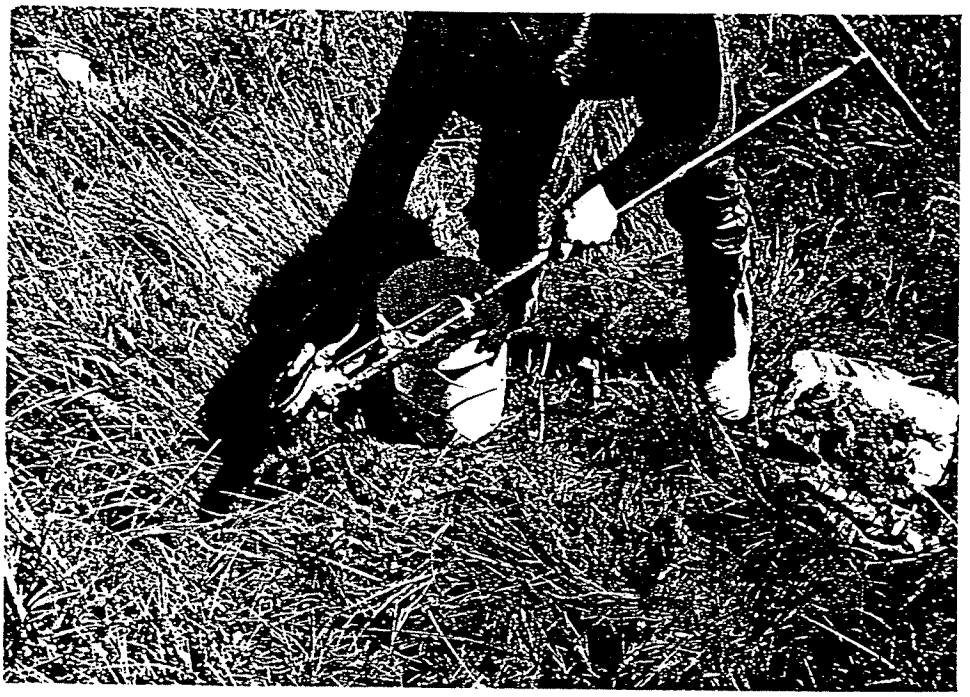


Photo No. 5

Decontamination of Soil Auger

Exhibit III

Field Descriptions

Summary of Field Descriptions
Johnson Property Samples

Sample Identification (Boring Depth)	Description
A-1 (3.0 feet)	Abun. brick/gravel/slag (fill) to 2.5', clayey sand 2.5-3.0'
A-2 (2.0 feet)	Fill material as above (A/A), auger blocked at 2.5' by concrete slab
A-3 (2.0 feet)	Predom. brick/stone/concrete frag., auger blocked at 2.0' by concrete slab
A-4 (3.0 feet)	Fill material to 2.5', sand and clayey sand 2.5-3.0'
A-5 (2.5 feet)	Dark gray top soil and clay mix to 2.0' sandy clay, tr. silt at 2.0-2.5'
A-6 (3.0 feet)	Top soil to 1.5', tr. fill (brick/wood) sand and silt, tr. clay 1.5-3.0'
A-7 (3.0 feet)	Top soil and gravel mix to 1.5', sand 1.5-2.5', tr. fill Clayey sand 2.5'-3.0'
A-8 (3.5 feet)	Soil and gravel mix A/A to 1.5', sandy clay and clay 1.5-3.5'
A-9 (3.0 feet)	Top soil, tr. fill (wood, brick) to 2.0', clay and wet sand 2.0-3.0'
A-10 (3.0 feet)	Abun. gravel to 2.5' (slag), sandy clay 2.5-3.0'

Sample Identification (Boring Depth)	Description
B-1 (3.0 feet)	Slag and foundry sands (fill) to 2.0', sandy clay 2.0-3.0'
B-2 (2.0 feet)	(Location submerged, center of wetland) dense clay, hard 0.5-2.0'
B-3 (3.0 feet)	Hard clay, tr. silt and sand 0-3.0'
B-4 (3.0 feet)	(Area appears to have been recently bull-dozed, brick, blacktop and wood fragments observed on surface) fill A/A 0-2.5', sandy clay 2.5-3.0'
B-5 (3.0 feet)	Top soil 0.1.0', wet sand, tr. clay 1.0-2.5' sandy clay 2.5-3.0'
B-6 (3.0 feet	Sand, tr. silt, some clay 0-3.0'
B-7 (3.0 feet)	(Slightly elevated area) Red clay w/tr. wood fragments 0-2.0', dark brown loamy soil 2.0-2.5', clay 2.5-3.0'
B-8 (3.5 feet)	Wet sand predom., tr. to some clay 0-3.5'
B-9 (3.5 feet)	Wet sand and clay 0-3.0' Dense, stiff clay 3.0-3.5'
B-10 (3.0 feet)	Sandy loam/clayey sand to 2.5', hard clay at 2.5-3.0'

Sample Identification (Boring Depth)	Description
C-1 (3.0 feet)	Top soil 0.1.5', wet sand 1.5-2.0', sand and clay 2.0-3.0'
C-2 (3.5 feet)	Slag cinders, metal frag. (fill) 0-2.5', auger blocked at 2.5'
C-3 (3.0 feet)	Clay predom., tr. sand and silt 0-3.0'
C-4 (3.0 feet)	Slag, cinders, foundry sand (fill) 0-2.5' hard clay at 2.5-3.0' (fill at surface is localized over a small area approx. 15' square)
C-5 (3.0 feet)	Sand and silt to 2.5' Dense, stiff clay 2.5-3.0'
C-6 (3.0 feet)	Intermixed sand, silt and clay 0-3.0'
C-7 (3.0 feet)	Wet clayey sand 0-2.5' Dense, stiff clay 2.5-3.0'
C-8 (3.0 feet)	Dark, loamy top soil 0-1.5' Sand and clayey sand 1.5-3.0'
C-9 (3.5 feet)	Wet clayey sand 0-3.0' Dense, hard clay 3.0-3.5'
C-10 (3.5 feet)	Clayey sand 0-2.0' Clay lens 2.0-2.5' Wet sandy clay 2.5-3.5'

Sample Identification (Boring Depth)	Description
D-1 (3.0 feet)	Top soil, tr. sand and silt 0-1.0' Sand and clay 1.0-3.0'
D-2 (3.0 feet)	Slag, cinders, brick and concrete fragments (fill) 0-3.0' Auger blocked at 3.0'
D-3 (3.0 feet)	Predom. sandy clay and clay 0-3.0'
D-4 (3.0 feet)	Intermixed sand and clay 0-3.0'
D-5 (3.0 feet)	Wet sand and silt 0-2.5' Dense, stiff clay 2.5-3.0'
D-6 (3.0 feet)	Intermixed sand and clay 0-2.5' Hard clay 2.5-3.0'
D-7 (3.0 feet)	Predom. wet sand and clay 0-3.0'
D-8 (3.5 feet)	Top soil 0-0.5' Wet sand and clayey sand 0.5'-3.5'
D-9 (3.5 feet)	Top soil 0-0.5' Intermixed wet sand and clay 0.5-3.5'
D-10 (3.0 feet)	Wet sand and silt, tr. clay 0-2.5' Clay 2.5-3.0'

Exhibit IV

Trace Chemical Element Content of Natural Soils

TRACE CHEMICAL ELEMENT CONTENT OF NATURAL SOILS

Element	Common Range (ppm)	Average (ppm)	Element	Common Range (ppm)	Average (ppm)
Aluminum	10,000 - 300,000	71,000	Lithium	5 - 200	20
Antimony	2 - 10		Magnesium	600 - 6,000	5,000
Arsenic	1 - 50	5	Manganese	20 - 3,000	600
Barium	100 - 3,000	430	Mercury	0.01 - 0.3	.03
Beryllium	0.1 - 50	6	Molybdenum	0.2 - 5	2
Boron	2 - 100	10	Nickel	3 - 500	40
Bromine	1 - 10	5	Radium	8×10^{-5}	
Cadmium	0.01 - 0.7	.06	Rubidium	50 - 500	10
Cesium	0.3 - 25	6	Selenium	0.1 - 2	.3
Chlorine	20 - 900	100	Silver	0.01 - 5	.05
Chromium	1 - 1,000	100	Strontium	50 - 1,000	200
Cobalt	1 - 40	8	Tin	2 - 200	10
Copper	2 - 100	30	Tungsten		1
Fluorine	10 - 4,000	200	Uranium	0.9 - 9	1
Gallium	0.4 - 300	30	Vanadium	20 - 500	100
Gold		<1	Yttrium	25 - 250	50
Iodine	0.1 - 40	5	Zinc	10 - 300	50
Iron	1000 - 2000		Zirconium	60 - 2,000	300
Lanthanum	1 - 5,000	30			
Lead	2 - 200	10			

REF: USEPA Office of Solid Waste and Emergency Response. HAZARDOUS WASTE LAND TREATMENT SW 874 (April 1983) Page 273, Table 6.46

Exhibit V

X-Ray Fluorescence (XRF) Screening Results

MODEL-2 (LEAD,MERCURY)

sample a-1

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 14-22-27
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-2

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 14-24-07
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 53.72 PB 81.69

sample a-3

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 14-26-41
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-4

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 14-29-49
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-5

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 15-25-30
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-6

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 15-46-27
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-7

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 15-48-02
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-8

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 15-49-41
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-9

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 15-51-13
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample a-10

(MODEL 2: TOPS) DATE: 06.07.94 TIME: 15-53-27
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 1.907 PB 0.000

sample b-1

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 08-31-12
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 37.64

sample b-2

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 08-33-51
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-3

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 08-37-33
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-4

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 08-42-23
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-5

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 08-44-37
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-6

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 08-59-31
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-7

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-01-16
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-8

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-03-28
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-9

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-05-10
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample b-10

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-06-52
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-1

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-18-42
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-2

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-20-27
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 340.7

sample c-3

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-22-37
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-4

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-24-24
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-5

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-26-10
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-6

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-33-52
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-7

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-35-26
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-8

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-37-06
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-9

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-39-50
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample c-10

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 09-41-39
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-1

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-01-50
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-2

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-03-40
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 550.0

sample d-3

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-06-22
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-4

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-07-58
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-5

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-20-45
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-6

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-23-12
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-7

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-24-50
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-8

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-26-21
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-9

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-29-02
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

sample d-10

(MODEL 2: TOPS) DATE: 07.07.94 TIME: 10-30-37
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

MODEL-9 (CHROMIUM)

sample a-2

(MODEL 9: CR IN SOIL) DATE: 07.07.94 TIME: 11-32-07
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

sample a-10

(MODEL 9: CR IN SOIL) DATE: 07.07.94 TIME: 11-33-54
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

sample b-1

(MODEL 9: CR IN SOIL) DATE: 07.07.94 TIME: 11-35-40
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

sample c-2

(MODEL 9: CR IN SOIL) DATE: 07.07.94 TIME: 11-37-17
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

sample d-2

(MODEL 9: CR IN SOIL) DATE: 07.07.94 TIME: 11-40-43
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 79.17

Exhibit VI

Final Analytical Testing Results

EXPRESSLAB

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347 Tel: (800) THE LABS Tel: (800) 843-5227 FAX: (716) 554-4114

Work Order Number:

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NY STATE LABORATORY #11369

LABORATORY REPORT - METALS

Customer Name Waste Resource Associates
Address: 2576 Seneca Ave.
Niagra Falls, NY 14305

Attention: Mark Schwippert

PO Number:
Project Number 196C01
Project Cust: Gibralter
Project Site: Johnson
Results Sent: FAX Date: 6/16/94
Lab Director:

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results shown in bold type:
Detection Limits shown in (mg/kg)
Results expressed in mg/kg = ppm

Extraction Method: Acid Extraction
Analysis Method: 6010 ICP and Atomic Absorption/Cold Vapor Extraction

Sample ID (LAB)	3304		3305		3306		3307	
Sample ID(CUST)	A-1		B-1		C-1		D-1	
Matrix	Soil		Soil		Soil		Soil	
Date Sampled	6/9/94		6/9/94		6/9/94		6/9/94	
Date Received	6/9/94		6/9/94		6/9/94		6/9/94	
Date Analyzed	6/14/94		6/14/94		6/14/94		6/14/94	
Date Reported								
Arsenic	5.9	(0.05)	49.3	(0.05)	<0.05	(0.05)	4.6	(0.05)
Barium	91	(0.05)	131	(0.05)	17.4	(0.05)	34.1	(0.05)
Cadmium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Chromium	436.8	(0.05)	40.4	(0.05)	9.3	(0.05)	18.3	(0.05)
Lead	92	(0.05)	82	(0.05)	6.1	(0.05)	32	(0.05)
Mercury	7.6	(0.02)	<0.02	(0.02)	<0.02	(0.02)	<0.02	(0.02)
Selenium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Silver	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)

Sample ID (LAB)	3308		3309		3310		3311	
Sample ID(CUST)	A-2		B-2		C-2		D-2	
Matrix	Soil		Soil		Soil		Soil	
Date Sampled	6/9/94		6/9/94		6/9/94		6/9/94	
Date Received	6/9/94		6/9/94		6/9/94		6/9/94	
Date Analyzed	6/14/94		6/14/94		6/14/94		6/14/94	
Date Reported								
Arsenic	3.3	(0.05)	3.7	(0.05)	5.2	(0.05)	5.8	(0.05)
Barium	125	(0.05)	114.7	(0.05)	287.3	(0.05)	104.3	(0.05)
Cadmium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Chromium	43.3	(0.05)	31.1	(0.05)	56.9	(0.05)	42.8	(0.05)
Lead	167	(0.05)	46.8	(0.05)	432	(0.05)	320	(0.05)
Mercury	13	(0.02)	0.24	(0.02)	0.37	(0.02)	0.53	(0.02)
Selenium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Silver	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)

EXPRESSLAB

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347 Tel: (800) TITE LABS Tel: (800) 843-5227 FAX: (716) 554-4114

Work Order Number:

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NY STATE LABORATORY #11369

LABORATORY REPORT - METALS

Customer Name: Waste Resource Associates
Address: 2576 Seneca Ave.
Niagra Falls, NY 14305

Attention: Mark Schwippert

PO Number:
Project Number: 196C01
Project Cust: Gibralter
Project Site: Johnson
Results Sent: ~~FAX~~ Date: 6/16/94
Lab Director:

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results shown in bold type:
Detection Limits shown in (mg/kg)
Results expressed in mg/kg = ppm

Extraction Method: Acid Extraction
Analysis Method: 6010 ICP and Atomic Absorption/Cold Vapor Extraction

Sample ID (LAB)	3312		3313		3314		3315	
Sample ID(CUST)	A-3		B-3		C-3		D-3	
Matrix	Soil		Soil		Soil		Soil	
Date Sampled	6/9/94		6/9/94		6/9/94		6/9/94	
Date Received	6/9/94		6/9/94		6/9/94		6/9/94	
Date Analyzed	6/14/94		6/14/94		6/14/94		6/14/94	
Date Reported	6/16/94		6/16/94		6/16/94		6/16/94	
Arsenic	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Barium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Cadmium	48.1	(0.05)	28.8	(0.05)	28.6	(0.05)	27.9	(0.05)
Chromium	19.8	(0.05)	13.32	(0.05)	13.5	(0.05)	13.8	(0.05)
Lead	29.2	(0.05)	8.3	(0.05)	10.3	(0.05)	14.1	(0.05)
Mercury	0.12	(0.02)	<0.02	(0.02)	<0.02	(0.02)	<0.02	(0.02)
Selenium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Silver	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)

Sample ID (LAB)	3316		3317		3318		3319	
Sample ID(CUST)	B-6		C-6		B-7		C-7	
Matrix	Soil		Soil		Soil		Soil	
Date Sampled	6/9/94		6/9/94		6/9/94		6/9/94	
Date Received	6/9/94		6/9/94		6/9/94		6/9/94	
Date Analyzed	6/14/94		6/14/94		6/14/94		6/14/94	
Date Reported	6/16/94		6/16/94		6/16/94		6/16/94	
Arsenic	4.06	(0.05)	2.42	(0.05)	<0.05	(0.05)	2.5	(0.05)
Barium	29.4	(0.05)	22.8	(0.05)	62.2	(0.05)	23.6	(0.05)
Cadmium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Chromium	11.5	(0.05)	9	(0.05)	18.7	(0.05)	8.8	(0.05)
Lead	7.7	(0.05)	7.35	(0.05)	31	(0.05)	6.3	(0.05)
Mercury	0.08	(0.02)	<0.02	(0.02)	<0.02	(0.02)	<0.02	(0.02)
Selenium	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)
Silver	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)

EXPRESSLAB

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347 Tel: (800) THE LABS Tel: (800) 843-5227 FAX: (716) 554-4114

Work Order Number:

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NY STATE LABORATORY #11369

LABORATORY REPORT - METALS

Customer Name Waste Resource Associates
Address: 2576 Seneca Ave.
Niagra Falls, NY 14305

Attention: Mark Schwippert

PO Number:
Project Number 196C01
Project Cust: Gibralter
Project Site: Johnson
Results Sent: FAX Date: 6/16/94
Lab Director:

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results shown in bold type:
Detection Limits shown in (mg/kg)
Results expressed in mg/kg = ppm

Extraction Method: Acid Extraction
Analysis Method: 6010 ICP and Atomic Absorption/Cold Vapor Extraction

Sample ID (LAB)	3320		3321		3322		3323	
Sample ID(CUST)	A-9		B-9		A-10		B-10	
Matrix	Soil		Soil		Soil		Soil	
Date Sampled	6/9/94		6/9/94		6/9/94		6/9/94	
Date Received	6/9/94		6/9/94		6/9/94		6/9/94	
Date Analyzed	6/14/94		6/14/94		6/14/94		6/14/94	
Date Reported	6/16/94		6/16/94		6/16/94		6/16/94	
Arsenic	**3.2**	(0.05)	**3.1**	(0.05)	**<0.05**	(0.05)	**12.1**	(0.05)
Barium	**63.7**	(0.05)	**30.5**	(0.05)	**41.8**	(0.05)	**28.4**	(0.05)
Cadmium	**<0.05**	(0.05)	**<0.05**	(0.05)	**<0.05**	(0.05)	**<0.05**	(0.05)
Chromium	**31.8**	(0.05)	**11.2**	(0.05)	**326.8**	(0.05)	**11.7**	(0.05)
Lead	**41.9**	(0.05)	**6.9**	(0.05)	**136.1**	(0.05)	**8.9**	(0.05)
Mercury	**<0.02**	(0.02)	**<0.02**	(0.02)	**0.7**	(0.02)	**<0.02**	(0.02)
Selenium	**<0.05**	(0.05)	**<0.05**	(0.05)	**<0.05**	(0.05)	**<0.05**	(0.05)
Silver	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)	<0.05	(0.05)

EXPRESSLAB

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: 1-716-554-5347 Tel: 1-800-THE LABS Tel: 1-800-843-5227 FAX 1-716-554-4114

WORKORDER NYS

SPECIALIZING IN ENVIRONMENTAL SOILS TESTS
NY STATE CERTIFIED LAB #11369

CUSTOMER: WASTE RESOURCE ASSOCIATES
ADDRESS: 2576 SENECA AVE.
CITY: NIAGARA FALLS NY 14305
STATE/ZIP:
PHONE: 716 297 4205
FAX: 716 297 3767
CONTACT: MARK SCHWIPPERT

PO NUMBER:
PROJECT NO: 196C01
PROJECT CUST: GIBRALTAR
PROJECT SITE: JOHNSON
(5-10 DAY TAT)
SEND RESULTS: ☑ FAX ☐ EXPR MAIL
PHONE RESULTS: ☐ YES ☐ NO

SAMPLE DEMOGRAPHICS AND TESTS REQUIRED

8020 BTEX + MTBE	8270 (Stars)	8 RECRA METALS (TCLP)
8021 + MTBE	625	8 RECRA METALS (DIRECT)
503.1	PCB'S	TCLP VOLATILES
TPH	602	TCLP SEMI-VOLATILES
8240	624	HERBICIDES
8260 (Stars)	TOX	PESTICIDES
8260	LEAD ONLY	REACTIVITY
FULL TCLP		CORROSIVITY
TCLP LESS HERBS & PESTS		FLASH POINT

LIST ANALYSIS REQUIRED

SPECIAL INSTRUCTIONS:
ALL SAMPLES FOR RCRA METALS DIRECT
As, Ba, Cd, Cr, Pb, Hg, Se, Ag.

DATE	TIME	SAMPLE DESCRIPTION / LOCATION	8 RCRA METALS DIRECT					
6/1/94		A-1, B-1, C-1, D-1, A-2, B-2, C-2	✓					
		D-2, A-3, B-3, C-3, D-3, B-6, C-6	✓					
		B-7, C-7, A-9, B-9, A-10, B-10	✓					

CHAIN OF CUSTODY RECORD

of SAMPLES 20 # of CONTAINERS 20
SAMPLED BY: MTS
SIGNATURE: MSchwippert
NAME:
DATED: 6/9/94 TIME: :
HOW SENT: ☐ EXP MAIL ☒ HAND CARRY
SIGNATURE 2:
NAME 2:
DATED 2: / / TIME: :
HOW SENT 2: ☐ EXP MAIL ☐ HAND CARRY

SAMPLES RECEIVED BY: Express LAB
SIGNATURE:
NAME: Rob Senska
DATE: 6/9/94 TIME: 2:30 pm
HOW RECD: ☐ EXP MAIL ☒ HAND CARRY
FREIGHT IN: $
LOGGED IN: / / TIME: :
SAMPLE COND: SAMPLE TEMP:
LAB NOTES:

White-Lab, Yellow-Customer, Hard-Lab

RESULTS WHEN YOU WANT THEM

expwo20doc

APPENDIX C

"Preliminary Site Assessment:
Santino Corp. Property
7414 Niagara Falls Boulevard
City of Niagara Falls, NY

October 26, 1994

196-0010

"Preliminary Site Assessment:
Santino Corp. Property"
7414 Niagara Falls Boulevard
City of Niagara Falls, New York

prepared for:

RD Management Corp.
810 Seventh Avenue - 28th Floor
New York, New York

and

Gibraltar Development Corporation
1280 Court Street
Clearwater, FL 34616

prepared by:

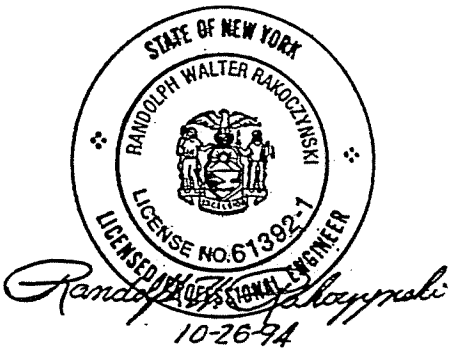
Waste Resource Associates, Inc.
2576 Seneca Avenue
Niagara Falls, New York 14305

October 26, 1994

196-0008

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Randolph W. Rakoczynski
Randolph W. Rakoczynski, P.E.
NYS P.E. License No. 61392

COPY

Table of Contents

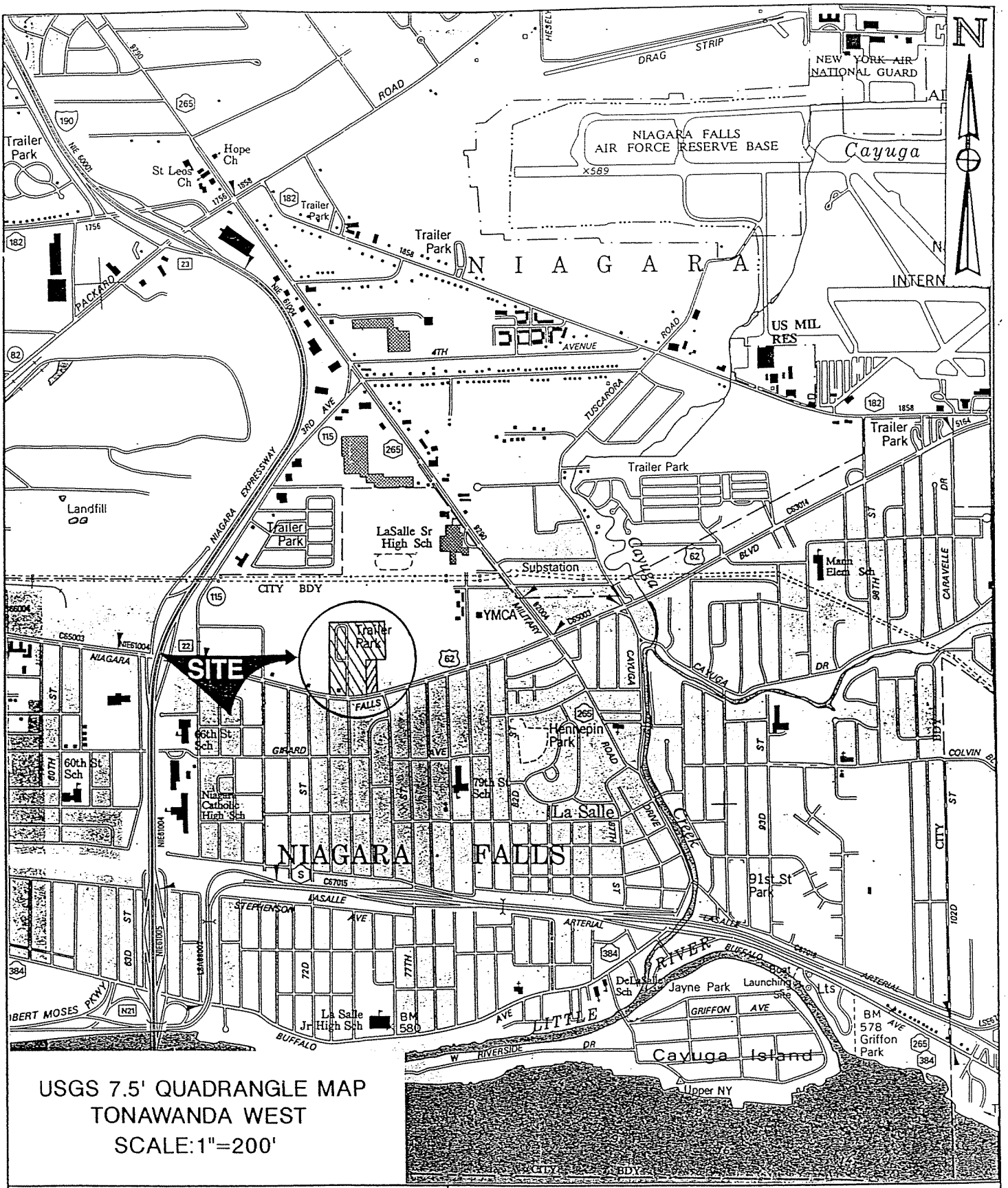
PAGE

EXHIBITS

Introduction

As part of a proposed development project involving construction of a retail facility, RD Management Corporation along with Gibraltar Development Corporation are seeking to acquire an approximate 18.02 acre parcel of land located north of Niagara Falls Boulevard between 73rd Street and 76th Street in the City of Niagara Falls, New York. The location of the overall project site is shown on Figure 1.

The identified acreage to be developed encompasses several individual parcels and involves different landowners. This report summarizes the results of a preliminary site assessment conducted on an approximate 1.82 acre parcel of land (the subject property) located in the southeast corner of the overall project site (see Figure 2 - Location of Subject Property). The subject property is located at 7414 Niagara Falls Boulevard, City of Niagara Falls, NY.

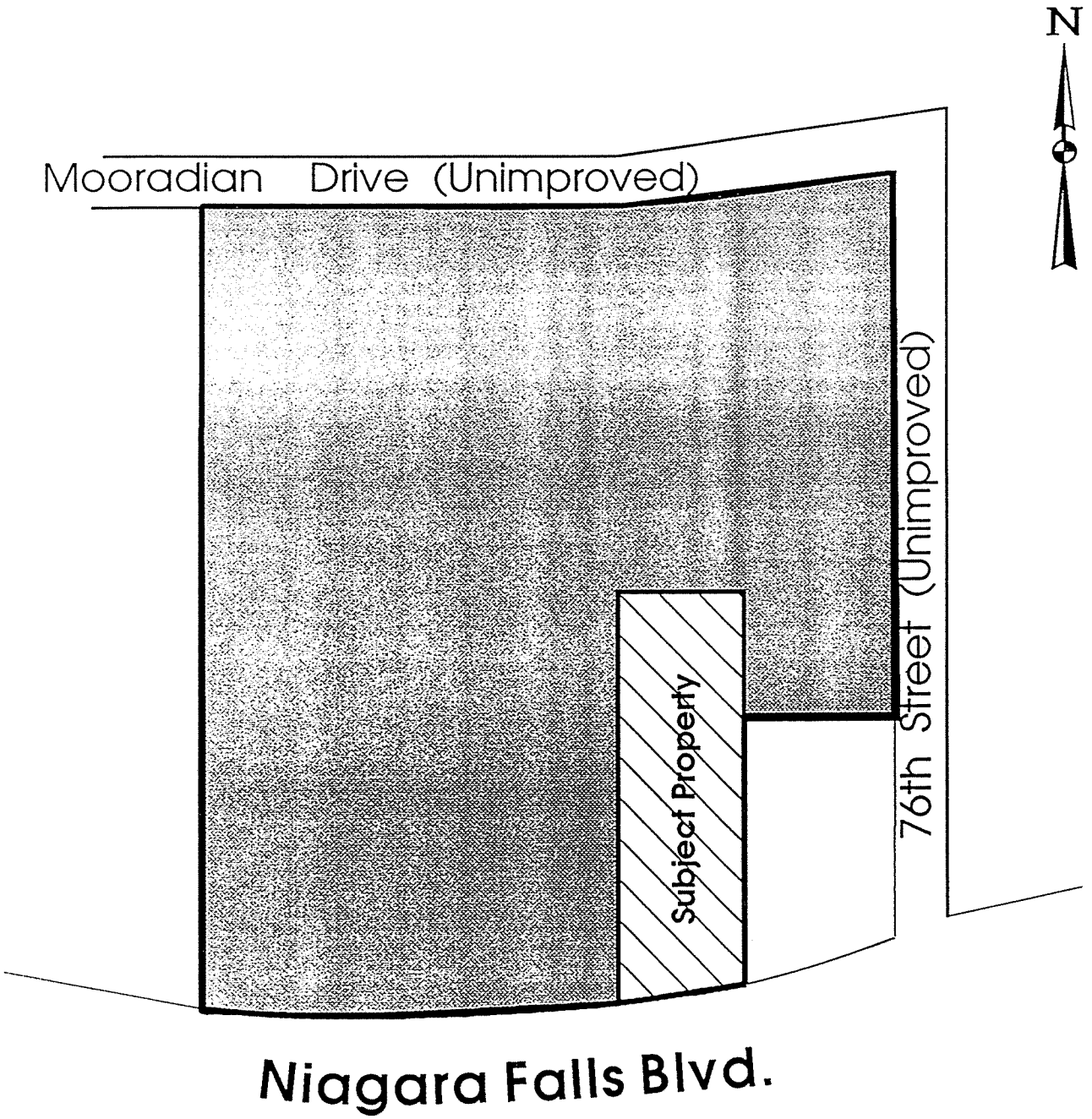


USGS 7.5' QUADRANGLE MAP
TONAWANDA WEST
SCALE:1"=200'

WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

FIGURE 1

PROJECT LOCATION MAP



Scale: 1" = 200'

WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

Figure 2

Location of Subject Property

Preliminary Site Assessment

Representatives of Waste Resource Associates, Inc. (Mark T. Schwippert, Environmental Geologist and Joseph P. McGowan, Senior Engineering Technician) conducted a preliminary site assessment at the subject property on Friday, October 14, 1994. The purpose of the site assessment was to inspect the subject property for potential environmental conditions that would adversely impact the proposed future development of the parcel.

Site Reconnaissance

A general site reconnaissance was conducted as the initial component of the preliminary site assessment. Photographic documentation of the site reconnaissance is presented in Exhibit I of this report.

The subject property can generally be divided into two (2) distinct areas. The southernmost portion of the property (approximately 3/4 acres in size and closest to Niagara Falls Boulevard) is occupied by several former motel units and two 2-story frame dwellings (see Exhibit I - Photo Nos. 1-5 and 7). The former motel units are currently being rented as efficiency apartments with the frame dwellings also serving as residences. Most of this portion of the property is covered by asphalt driveways and parking areas.

The northernmost portion of the property (approximately one (1) acre in size) is vacant with the exception of a small log cabin located along the eastern property boundary (see Exhibit I - Photo Nos. 6, 8, 9 and 11). This area of the property has been backfilled with various types of debris including fragments of concrete and asphalt, wood, gravel, non-indigenous clay, tree stumps, limbs and branches (see Exhibit I - Photo Nos. 10, 12, and 13). A small wetland area was observed in the northwest corner of the property. This area represents the southernmost portion of a larger wetland that extends northward onto adjacent properties.

During the site reconnaissance, an abandoned 275-gallon heating oil tank was identified in the northeast corner of the property (see Exhibit I - Photo No. 11). The tank was examined and found to be empty. The inside of the tank was scanned for the presence of volatile hydrocarbon compounds using an HNu Photoionization Detector (PID). No volatile

constituents were detected by the PID. No evidence of tank leakage or spills were observed in the area. Soils in the immediate vicinity of the tank were not stained and did not exhibit the presence of volatile hydrocarbons when scanned with the PID.

Soil Sampling

In order to evaluate the nature and extent of non-indigenous "fill" material present on-site, a total of nine (9) soil samples were collected from across the property. The locations of the soil sampling points are shown on Figure 3 of this report.

A single soil sample was collected at each sampling location. Samples were obtained using an AMS soil auger and generally consisted of materials from the ground surface to approximately three (3) feet below grade. All sample material collected was examined and described in the field by a geologist. A summary of field descriptions for all sample points is included in Exhibit II of this report.

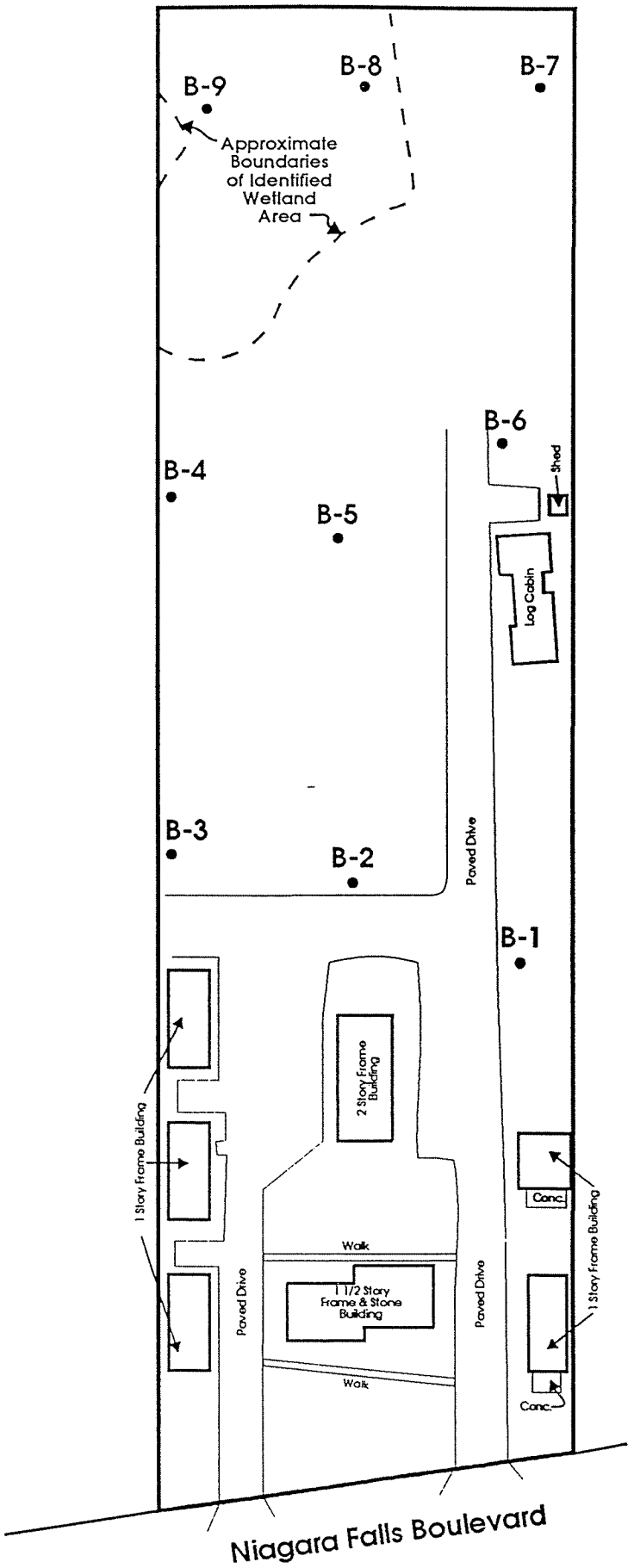
A representative soil sample from each sampling point was retained for further in-house screening and laboratory analysis. In-house screening consisted of the following evaluations;

- Headspace testing for emissions of volatile hydrocarbon compounds using an HNu photoionization detector, and,

- Determination of metallic contaminant content (Lead, Mercury and Chromium) using an Outokumpu X-MET X-ray Fluorescence (XRF) analyzer.

Headspace Testing Results

All soil samples collected were placed in plastic sample bags which were labeled, sealed and transported to the offices of Waste Resource Associates, Inc. The samples were allowed to reach ambient room temperature and were subjected to headspace testing for volatile hydrocarbon content using an HNu photoionization detector. The results of headspace testing (as shown on Table 1) did not detect the presence of volatile hydrocarbons in any of the samples collected. Field examination of samples did not indicate that any soils would be suspect for volatile organic contaminants. Based on these findings, no further analytical testing for petroleum hydrocarbons was performed.



Scale: 1" = 60'

FIGURE 3

Soil Sampling

WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

Table 1

Headspace Testing Results
Santino Corp. Property
(results shown in parts per million - ppm)

Sample Identification	HNu Meter Results
B-1	0.0
B-2	0.0
B-3	0.0
B-4	0.0
B-5	0.0
B-6	0.0
B-7	0.0
B-8	0.0
B-9	0.0

Sample Evaluation by XRF

After headspace testing had been completed, the samples were prepared for screening for metals content by XRF analysis. Each sample was prepared and analyzed according to EPA recommended protocol of discrete sample x-ray fluorescence analysis*. The procedure involved the following sequence of steps:

- air dry samples,
- remove non-representative organic debris,
- sieve through a 20-mesh stainless sieve,
- homogenize sample by thoroughly mixing,
- prepare a 31 mm x-ray fluorescence sample cup with an aliquot of the homogenized sample,
- analyze on X-MET unit for 60 seconds,
- record concentration values,
- agitate material in sample cup and reanalyze,
- repeat procedure for a total of three (3) readings on each sample,
- report average of three (3) readings.

In-house XRF screening focused on evaluating samples for mercury, lead and chromium content. Of the nine (9) samples that were analyzed, only one (1) sample reported a detectable level of any of the three (3) constituents of concern (Sample B-4 reported average lead concentration at 1.601 ppm). Table 2 summarizes the results of XRF sample evaluation. Exhibit III of this report includes a direct XRF readout of sample evaluation.

Confirmatory Analytical Testing

Of the nine (9) samples collected, a total of three (3) samples (B-1, B-4 and B-7) were submitted for confirmatory analytical testing. All samples submitted were analyzed for eight (8) RCRA metals by EPA Method 6010 (ICP) and EPA Method 7000 (Atomic Absorption/Cold Vapor Extraction).

* Ref: "Field-Portable X-ray Fluorescence" EPA/ERT Quality Assurance Technical Information Bulletin, Vol. 1, No. 4, May 1991

Table 2

Summary of In-House XRF Screening
Santino Corp. Property Samples
(results shown in parts per million - ppm)

	Screening Parameters Average of Three (3) Readings		
Sample Identification	Mercury (Hg)	Lead (Pb)	Chromium (Cr)
B-1	ND*	ND	ND
B-2	ND	ND	ND
B-3	ND	ND	ND
B-4	ND	1.601	ND
B-5	ND	ND	ND
B-6	ND	ND	ND
B-7	ND	ND	ND
B-8	ND	ND	ND
B-9	ND	ND	ND

* ND - Not Detected

Samples analyzed using an Outokumpu X-MET 880 X-ray Fluorescence (XRF) spectrum analyzer. Sixty (60) second measurement time.

The results of the sample analysis reported the "total" concentration of the following metallic constituents;

- Arsenic (As),
- Barium (Ba),
- Cadmium (Cd),
- Chromium (Cr),
- Lead (Pb),
- Mercury (Hg),
- Selenium (Se), and,
- Silver (Ag).

Table 3 contains a summary of analytical testing results for all samples submitted. Exhibit IV of this report contains final laboratory testing results along with chain-of-custody documentation.

In evaluating the data contained in Table 3, it is useful to compare the reported concentrations with established regulatory levels for the listed analytical parameters. Table 4 of this document presents a summary of various soil concentration levels for metallic contaminants as reported by the USEPA, NYSDEC and Niagara County Health Department.

Based on the concentrations listed on Table 4, only Sample B-4 exhibited an elevated level of a single test parameter (mercury reported at 18.0 ppm). No other constituent for any of the three (3) samples was reported at an elevated level. It should be noted that based on NYSDEC Soil Clean-up Levels, the level of mercury detected in Sample B-4 would not require that a site clean-up be performed (ie. the reported concentration did not exceed the regulatory limit).

Table 3

Summary of Analytical Testing Results
Santino Corp. Property Samples
(results shown in parts per million - ppm)

Analytical Parameters
(Total Metals Concentration)

Sample Identification	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
B-1	BQL*	59.87	BQL	BQL	18.05	BQL	BQL	BQL
B-4	BQL	153.24	BQL	66.37	99.46	18.00	BQL	BQL
B-7	BQL	18.64	BQL	BQL	2.6	BQL	BQL	10.67

BQL* - Below Quantifiable Limit of Test Method

Table 4

SUMMARY OF REGULATORY GUIDELINES
METALS CONTENT IN SOILS

(concentrations shown in parts per million - ppm)

	Niagara County [1] Health Dept.		USEPA[2]		NYSDEC [3] Soil Clean-Up Level
	Ave.	Max.	Ave.	Max. of Common Range	Level
Arsenic	11	37	5	50	80
Barium	*	*	430	3000	4000
Cadmium	4	10	0.06	0.6	80
Chromium	37	124	100	1000	Hexa 400 Tri 80,000
Copper	59	203	30	100	*
Lead	103	428	10	200	250
Mercury	0.53	2.1	0.03	0.3	20
Nickel	41	132	40	500	2000
Selenium	*	*	0.3	2	*
Silver	*	*	0.05	5	200
Zinc	238	856	50	300	20,000

(1) Niagara County Health Department in letter to Benderson Development Company, Inc., July 6, 1994, Background Concentrations for Metals in Soils in the Niagara Falls Area.

(2) USEPA Office of Solid Waste and Emergency Response. Hazardous Waste Land Treatment SW 874 (April, 1983) Page 273, Table 6.46, "Trace Chemical Element Content of Natural Soils".

(3) NYSDEC Draft Cleanup Policy and Guidelines, Appendix C, Sub Appendix 1-A, October, 1991.

* - Not Listed

Conclusions/Recommendations

Based on the findings of the Preliminary Site Assessment, the following conclusions/recommendations are offered.

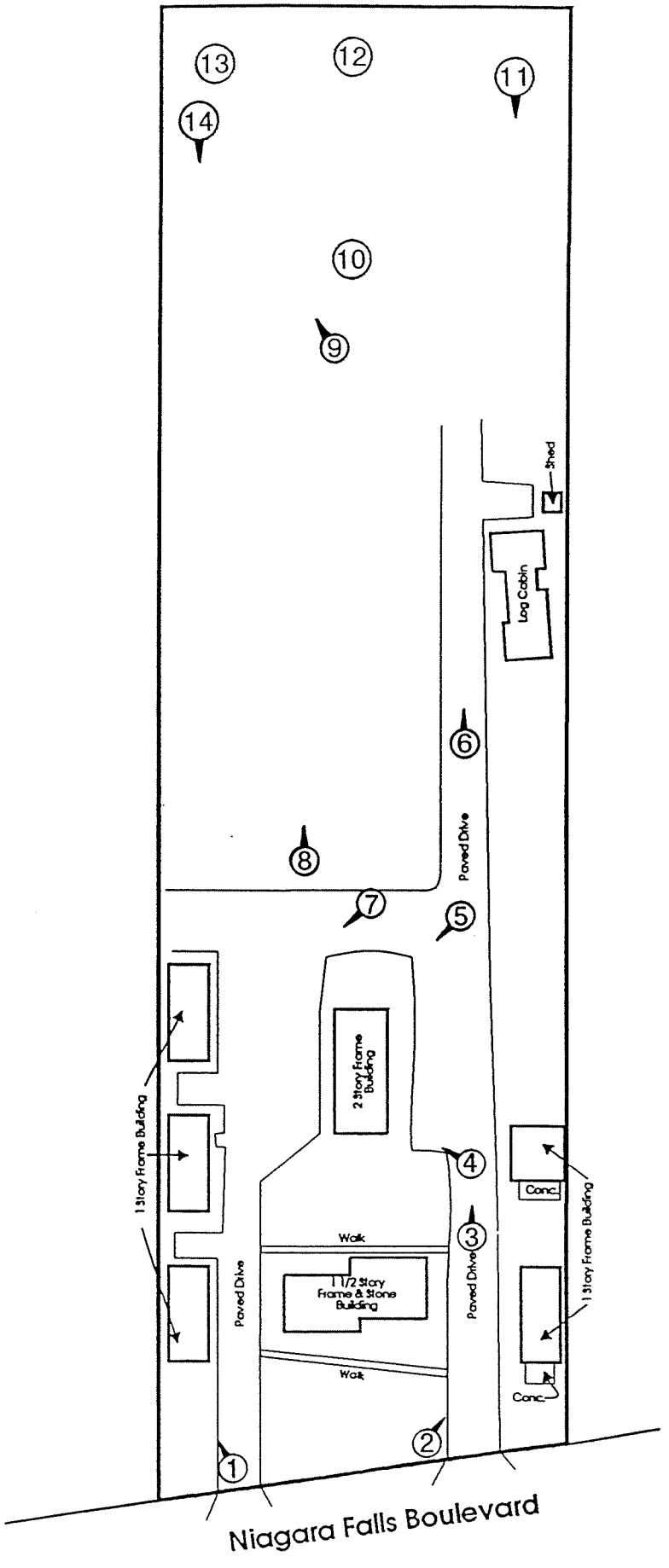
1) The results of confirmatory analytical testing of soil samples identified only one (1) sample as containing an elevated level of a single test parameter (Sample B-4 reported total mercury concentration at 18.00 ppm). However, this concentration does not exceed NYSDEC regulatory guidelines for soil clean-up levels.

2) The presence of construction/demolition (C+D) debris has been identified on-site. This material was apparently utilized as "fill" in low-lying, swampy areas of the subject property (primarily in the northern portion of the parcel). A geotechnical evaluation should be performed in order to determine whether this material possesses suitable load-bearing capacity to support construction activities proposed for this area.

3) It is assumed that the existing buildings on-site will be demolished as part of the proposed development plan. Based on the apparent age of these structures, each building should be inspected prior to demolition for the presence of asbestos containing building materials (ACBMs) and lead-based paint. The inspections would focus on compliance with regulations set forth by OSHA in 29 CFR 1926.62 (Lead Exposure in Construction) and by New York State in 6NYCRR Part 556 (Asbestos).

EXHIBIT I

PHOTOGRAPHIC DOCUMENTATION



Scale: 1" = 60'

LOCATIONS OF PHOTOGRAPHS

WASTE RESOURCE ASSOCIATES, INC.
2576 Seneca Avenue, Niagara Falls, N.Y. 14305
(716) 297-4205

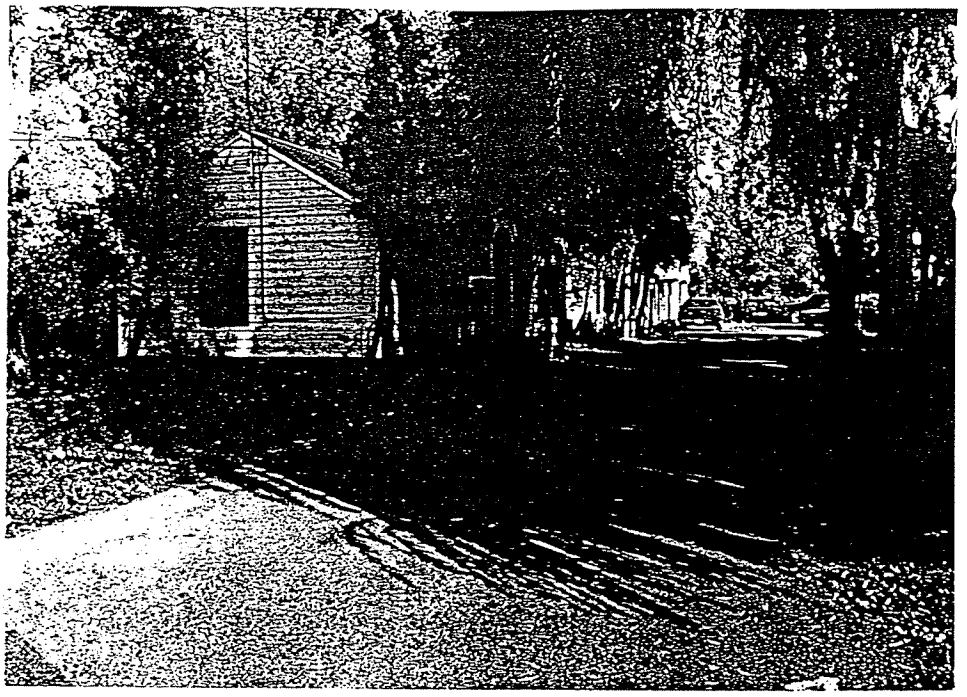


Photo No. 1

Former motel units along west side of property
(facing north)

Photo No. 2

Former motel units along east side of property
(facing northeast)

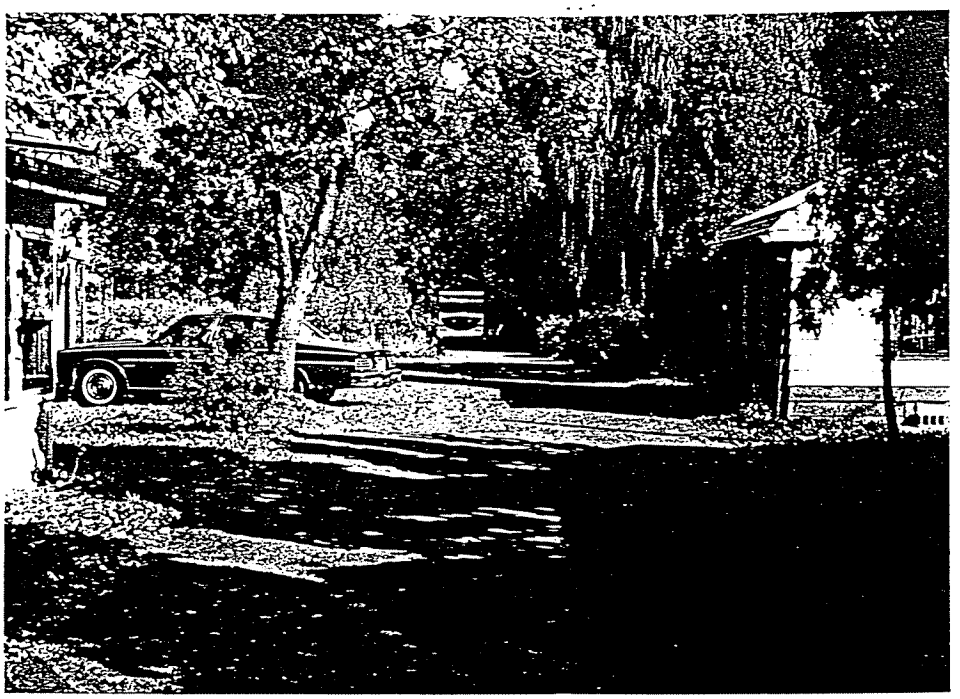


Photo No. 3

Driveway leading to rear of property
along eastern property line (facing north)

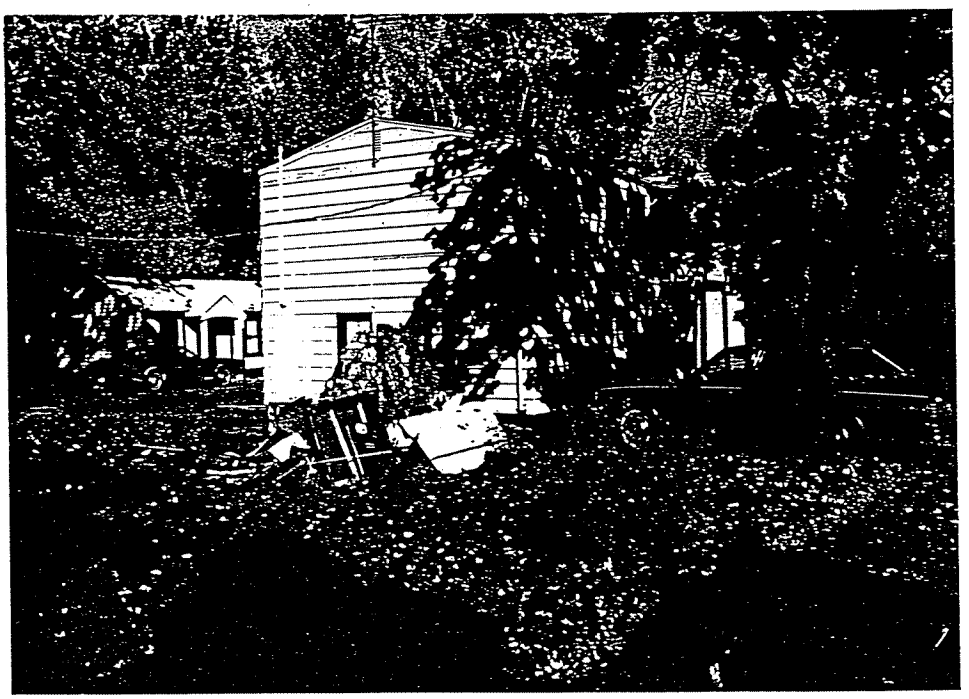


Photo No. 4

Two-story frame structure
(facing northwest)

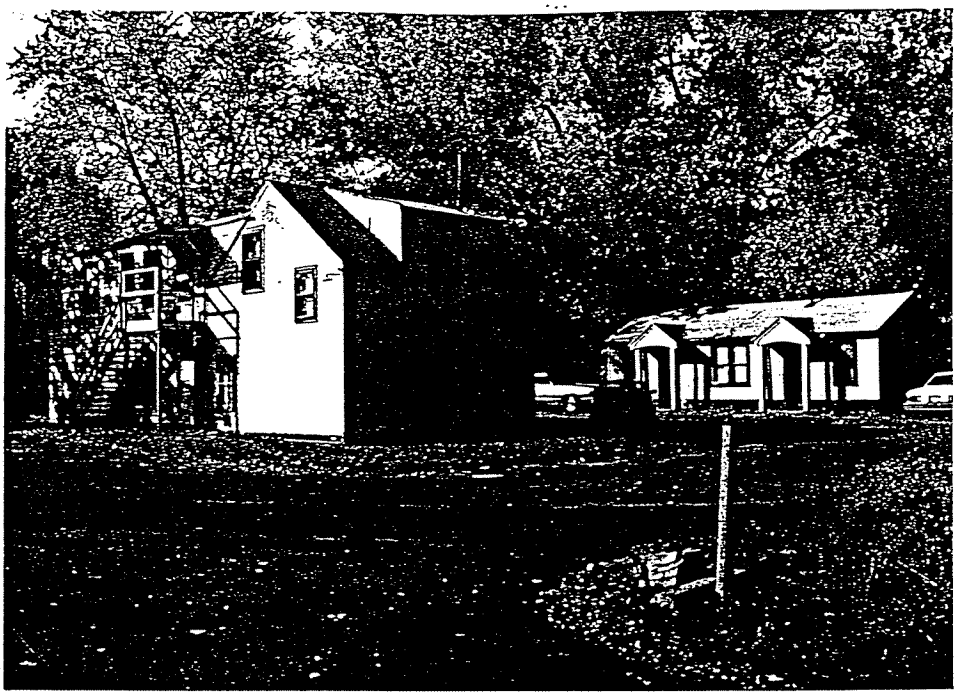


Photo No. 5

Frame structure and former motel unit
(facing southeast)

Photo No. 6

Mobile home and log cabin
Along eastern property boundary
(facing north)

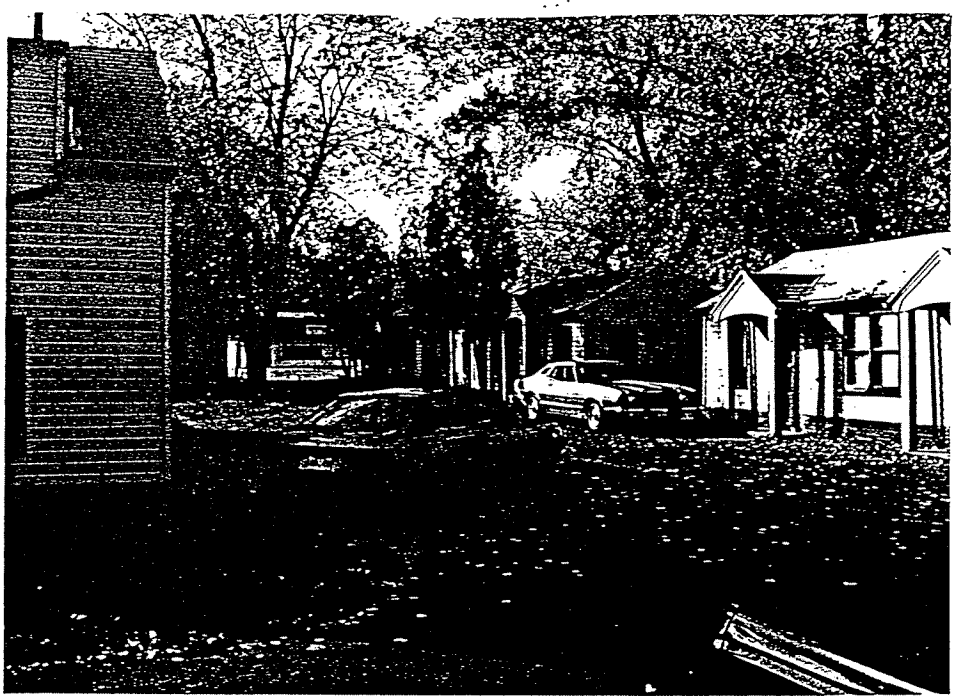


Photo No. 7

Former motel units along western property line
(facing south)

Photo No. 8

Path leading to rear of property
(facing north)

Photo No. 9

Wetland area near northwest corner
(facing northwest)

Photo No. 10

Wood and gravel debris at surface
(north end of property)

Photo No. 11

Mobile home and log cabin along eastern property line
note: discarded heating oil tank
(facing south)

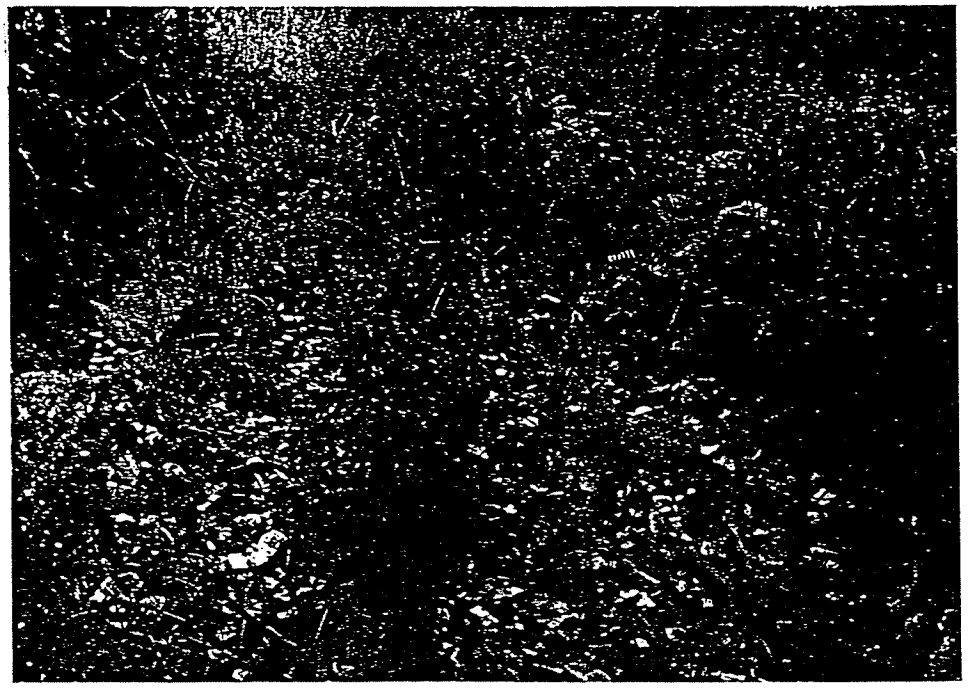


Photo No. 12

Concrete fragments at surface
(northern property line)

Photo No. 13

Tree stumps and brush
(northwest corner of property)

Photo No. 14

Western boundary of property
(facing south)

EXHIBIT II

FIELD LOG OF SAMPLE DESCRIPTIONS

Exhibit II

Summary of Field Descriptions

Santino Corp. Property Samples

Sample Identification (Boring Depth)	Description
B-1 (2.0 feet)	Top soil - surface to 1.0' "fill" - 1.0' to 2.0' (abundant gravel, brick, concrete and asphalt fragments) Auger blocked at 2.0-feet
B-2 (3.5 feet)	"Fill" as described above to 2.5' Black cinders and brick fragments 2.5' - 3.5' Red clay at 3.5'
B-3 (3.0 feet)	Clay and gravel mix, "fill", 0.0'-3.0'. Red clay at 3.5'
B-4 (1.0 foot)	"Fill" 0.0' - 1.0', gravel, asphalt and concrete slabs visible at surface, auger blocked at 1.0'.
B-5 (3.0 feet)	Clay, soil and gravel "fill" 0.0' - 2.0'. Light brown clayey silt, tr. sand (indigenous) 2.0' - 3.0'
B-6 (3.0 feet)	Top soil 0.0' - 1.0'. Clayey silt, trace f. sand 1.0' - 2.0'. Clayey sand, wet 2.0' - 3.0' (no "fill" material noted)
B-7 (3.0 feet)	Light brown silt-loam, tr. f. sand 0.0' - 2.5'. Brown clay, stiff 2.5' - 3.0'. (No "fill" material noted)
B-8 (3.0 feet)	"Fill" 0.0' - 2.0' Light brown silt-loam tr. f. sand 2.0' - 3.0'
B-9 (3.0 feet)	"Fill" (concrete, wood, asphalt, brick) 0.0' - 2.0'. Silt loam 2.0' - 3.0'

EXHIBIT III

X-RAY FLUORESCENCE (XRF) SCREENING RESULTS

(MODEL 2:TOPS) DATE:10.17.94 TIME:08-52-02

sample b-1

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

sample b-2

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

sample b-3

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

> sample b-4

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 4.807
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 1.601

sample b-5

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

sample b-6

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

sample b-7

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

sample b-8

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

sample b-9

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:HG 0.000 PB 0.000

AVG.: HG 0.000 PB 0.000

(MODEL 9:CR IN SOIL) DATE:10.17.94 TIME:11-10-51

sample b-1

> AMS
MEASURE
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60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

sample b-2

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

sample b-3

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

sample b-4

> AMS
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ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

sample b-5

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

sample b-6

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

sample b-7

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.0

AVG.: CR 0.000

sample b-8

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

sample b-9

> AMS
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000
MEASURE
MEASURING: PROBE 1 TYPE SAPS
60 SECONDS
ASSAYS:CR 0.000

AVG.: CR 0.000

EXHIBIT IV

FINAL ANALYTICAL TESTING RESULTS

EXPRESSLAB

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347 Tel: (800) THE LABS Tel: (800) 843-5227 FAX: (716) 554-4114

Work Order Number:

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NY STATE LABORATORY #11369

LABORATORY REPORT - METALS

Cust Name:	Waste Resource Asspciates	PO Number:	
Address:	2576 Seneca Ave.	Project Number	196C01
	Niagara Falls, NY 14305	Project Cust:	Rd. Mgnt.
FAX:	716-297-3767	Project Site:	Zito Property
Attention:	Mark Schwippert	Results Sent:	FAX Date: 10/25/94
		Lab Director:	

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results shown in bold type:
Detection Limits shown in mg/L or mg/kg
Results expressed in mg/L or mg/kg = ppm

Extraction Method: EPA 3050 Acid Extraction
Analysis Method: 6010 ICP, AA Cold Vapor

Sample ID (LAB)	**5007**	
Sample ID(CUST)	**Zito Property**	
Sample ID(CUST)	**B-1**	
Matrix	**Soil**	
Sampled By	**Mark Schwippert**	
Date Sampled	**10/14/94**	
Date Received	**10/19/94**	**08:50**
Date Analyzed	**10/21/94**	
Date Reported	**10/24/94**	

	Results	Det. Limit
Arsenic	<DL	0.05
Barium	59.87	0.05
Cadmium	<DL	0.05
Chromium	<DL	0.05
Lead	18.05	0.005
Mercury	<DL	0.05
Selenium	<DL	0.05
Silver	<DL	0.05

EXPRESSLAB

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347 Tel: (800) THE LABS Tel: (800) 843-5227 FAX: (716) 554-4114

Work Order Number:

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NY STATE LABORATORY #11369

LABORATORY REPORT - METALS

Cust Name:	Waste Resource Associates
Address:	2576 Seneca Ave.
	Niagara Falls, NY 14305
FAX:	716-297-3767
Attention:	Mark Schwippert

PO Number:	
Project Number	196C01
Project Cust:	Rd. Mgnt.
Project Site:	Zito Property
Results Sent:	FAX Date: 10/25/94
Lab Director:	

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results shown in bold type:
Detection Limits shown in mg/L or mg/kg
Results expressed in mg/L or mg/kg = ppm

Extraction Method: EPA 3050 Acid Extraction
Analysis Method: 6010 ICP, AA Cold Vapor

Sample ID (LAB)	**5008**	
Sample ID(CUST)	**Zito Property**	
Sample ID(CUST)	**B-4**	
Matrix	**Soil**	
Sampled By	**Mark Schwippert**	
Date Sampled	**10/14/94**	
Date Received	**10/19/94**	**08:50**
Date Analyzed	**10/21/94**	
Date Reported	**10/24/94**	

	Results	Det. Limit
Arsenic	<DL	0.05
Barium	153.24	0.05
Cadmium	<DL	0.05
Chromium	66.37	0.05
Lead	99.46	0.005
Mercury	18.00	0.05
Selenium	<DL	0.05
Silver	<DL	0.05

EXPRESSLAB

PO Box 40 5611 Water Street Middlesex NY 14507

Tel: (716) 554-5347 Tel: (800) THE LABS Tel: (800) 843-5227 FAX: (716) 554-4114

Work Order Number:

SPECIALIZING IN ENVIRONMENTAL SOIL TESTS
NY STATE LABORATORY #11369

LABORATORY REPORT - METALS

Cust Name:	Waste Resource Asspciates	PO Number:	
Address:	2576 Seneca Ave.	Project Number	196C01
	Niagara Falls, NY 14305	Project Cust:	Rd. Mgnt.
FAX:	716-297-3767	Project Site:	Zito Property
Attention:	Mark Schwippert	Results Sent:	FAX Date: 10/25/94
		Lab Director:	

SAMPLE DEMOGRAPHICS AND TEST RESULTS

Results shown in bold type:
Detection Limits shown in mg/L or mg/kg
Results expressed in mg/L or mg/kg = ppm

Extraction Method: EPA 3050 Acid Extraction
Analysis Method: 6010 ICP, AA Cold Vapor

Sample ID (LAB)	5009	
Sample ID(CUST)	Zito Property	
Sample ID(CUST)	B-7	
Matrix	Soil	
Sampled By	Mark Schwippert	
Date Sampled	10/14/94	
Date Received	10/19/94	08:50
Date Analyzed	10/21/94	
Date Reported	10/24/94	

	Results	Det. Limit
Arsenic	<DL	0.05
Barium	18.64	0.05
Cadmium	<DL	0.05
Chromium	<DL	0.05
Lead	2.6	0.005
Mercury	<DL	0.05
Selenium	<DL	0.05
Silver	10.67	0.05