# Phase II - Site Investigation
# Subsurface Soil Boring Investigation

## Location:

Consolidated Freightways
877 Niagara Street
Tonawanda, New York

## Prepared for:

Blymyer Engineers, Inc.
for Consolidated Freightways
1829 Clement Avenue
Alameda, California 94501-1395

LaBella Project No. 93201

May, 1994

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# Table of Contents

# I. Introduction

The site is located at 877 Niagara Street in the Town of Tonawanda, Erie County, New York. This site is located in a mostly industrial area of the town, adjacent to a tributary of Two Mile Creek (See FIGURE 1). The nearest residential area is approximately 1000 feet to the southeast of the site.

Since the early 1970s, Consolidated Freightways has operated a truck terminal at this site. The facility is RCRA regulated. All residences within a one mile radius of the site are served by a public water supply.

Chevrolet Metal Casting dumped foundry sand at this site, which is currently classified as a "Class 2A" site in the New York State Department of Environmental Conservation (NYSDEC) Inactive Hazardous Waste Disposal Site (IHWDS) List (Registry #915083). This means that there is insufficient data available to properly classify the site (landfill) under New York's IHWDS classifications Codes, Rules and Regulation of the State of New York, Title 6-NYSDEC, Chapter IV, Subchapter B, Part 375-1.

Soil samples were collected by the USGS in April 1982 by excavating four test borings (See FIGURE 2). Samples collected from each borehole were analyzed for volatile and semi-volatile organic compounds. The soil analysis showed the presence of low level contamination for volatile and semi-volatile compounds. Although the foundry sands were suspected of containing phenolic compounds, no phenol was detected in the samples.

Under a State Pollutant Discharge Elimination System (SPDES) Permit for an oil-water separator discharge, quarterly monitoring done during 1982 and 1983 indicated the presence of benzene at up to 370 parts per billion (ppb). The levels of benzene have since been reduced to less than 1 ppb in the discharge.

# II. Objective

The objective of this project was to collect additional data to determine the recommendation for re-classification of the site for the NYSDEC, as requested in correspondence dated July 2, 1993 from the NYSDEC to Consolidated Freightways, and LaBella Associates, P.C.'s workplan, dated August 9, 1993.

# III. Scope of Work Procedures

## 3.1 Work and Health and Safety Plan

LaBella Associates, P.C. prepared and submitted a workplan and a Health & Safety Plan to the NYSDEC for the agency's approval. All work was performed in accordance with these plans, NYSDEC protocols, LaBella Associates, P.C.'s Quality Control Plan, and our contract dated August 27, 1993.

## 3.2. Subsurface Investigation

### 3.2.1. Identify/Stakeout Utility Network

Prior to performing actual Site work, the Underground Facilities Protection Organization was notified of the work to be performed at the Site (Case #108-57-76). The utilities notified responded, and New York Telephone and private services limited the space available to perform the Subsurface Soil Boring Investigation. The main obstructions were determined to be the New York Telephone service in the main body of the fill area and water and storm water drainage services in the "pan-handle" of the same area.

### 3.2.2. Subsurface Soil Borings

Seven soil borings were performed with five borings advanced to eight feet below ground surface and two advanced to virgin soils, 16 feet below ground surface. Boring locations are shown on FIGURE 2.

During drilling, signs of groundwater were encountered at varying depths for BW #2 and BW #5, ranging from 2 to 16 feet (see ATTACHMENT #1). Boring logs for BW #1 through BW #7 are included as ATTACHMENT 2.

Air monitoring was conducted using a Micro-Tip/Photo-Vac./Photo-Ionization Detector (PID). Positive air monitoring results were observed at all boring locations, ranging from 1 ppm to 8 ppm over background levels. Community air monitoring results recorded no elevated levels in breathing zone and perimeter. Detailed air monitoring data for each boring are included in TABLE #1.

## 3.3. Soil/Water Sampling and Laboratory Analysis

Two soil samples were collected from each of the seven soil bores. The first samples collected for each boring were taken from depths of 0" to 6" inches, and the second samples from the locations with the highest headspace reading. Soil sample identification numbers shown on the boring logs differ from identification numbers designated by the laboratory. Locations and depths for the second sample are designated (with S.S. numbers) in boring logs and ATTACHMENT 1.

Two duplicate soil samples were collected. One soil sample was collected from boring BW #2 at the 8 to 10 foot interval and one soil sample from boring BW #5 at the 10 to 12 foot interval.

A surface water sample was taken from the tributary to Two Mile Creek as requested by Abul Barkat, P.E., Environmental Engineer for the NYSDEC, Region 9.

A total of 16 soil samples and one surface water sample were collected.

Seven surface soil samples ("first sample") and one duplicate soil sample were analyzed for volatiles (EPA Method #8240), semi-volatiles (EPA Method #8270), and eight RCRA metals (EPA Method #6010/7000). Seven subsurface soil samples ("second sample"), one duplicate soil sample, and one surface water sample were analyzed for the Full Target Compound List of parameters, including Organochlorine Pesticides, Chlorinated Herbicides, Polychlorinated Biphenyls (PCBs), Metals, Cyanide, Volatile Organics, and Semi-volatile Organics. All soil samples were analyzed under the New York Analytical Services Protocol (ASP-91-1, 91-2, 91-3, and CLP-M), which included Quality Assurance/Quality Control (QA/QC) sample analysis.

Analytical results can be found in ATTACHMENTS 3 and 4. TABLES #1 and #2 provide a summary of the analytical results.

Sample procedures were performed in accordance with NYSDEC Guidelines and LaBella Associates, P.C.'s Quality Control Plan. Sample analysis was performed by a New York State approved analytical laboratory.

## 3.4. Data Validation

Third party validation results are included as ATTACHMENT 5.

The results have been determined to be useful by the data validator.

# IV. Findings

Based on the Scope of Work, the information detailed herein, and the information gathered in the field, the samples collected from the first split-spoon (top 6") of the borehole indicated detectable levels of semi-volatiles in samples collected from borings BW #1, BW #3, and BW #6. Levels of metals exhibited in the first split spoon sample from all borings appear to be fairly consistent with background soil levels.

Soil Samples

First spilt-spoon samples were analyzed using EPA Method #s 8270, 8240 and the Total RCRA Metals (8) using EPA Method #6010/7000. Analytical results can be found in ATTACHMENT 3. TABLE #1 provides a summary of first split-spoon sample results.

The second split-spoon samples were analyzed for the Full Target Compound list of parameters. Analytical results for samples collected after the first split-spoon sample (second sample results) indicated levels of semi-volatiles in all samples taken. Levels of metals present in second samples appear to be fairly consistent with background soil levels. TABLE #2 provides a summary of analytical results for second samples.

Analytical results do not indicate the presence of a hazardous waste pursuant to state regulations (Title 6 Part 371). The Semi-Volatiles noted in the analytical results are petroleum hydrocarbons and are commonly found at transportation-related facilities.

Sediment Sample

One sediment sample (designated S1) was taken at the request of the NYSDEC and analyzed for Target Analyte List metals, and VOCs using EPA method 8240. Analytical results for S1 did not show detectable levels of metals or VOCs

Community Air Monitoring

Real time air monitoring for VOCs was performed at the perimeter of the work area. VOCs were monitored for at the downwind perimeter of the work area at 2 hour intervals. No VOCs above background levels were observed during the project under this program.

# V. Recommendations

Based on a review of analytical results from samples taken during the project, and the NYSDEC's Technical Administrative Guidance Memorandum (TAGM), Determination of Soil Cleanup Objectives and Cleanup levels, it is recommended that the site be delisted from NYSDEC's IHWDS listings.

The recommendation for delisting is based on the following:

1. It does not appear that hazardous waste disposal has been documented at the Site by the NYSDEC. Additionally, none of the analytical information obtained during the project indicates that hazardous waste is present pursuant to Title 6 NYCRR Part 371.

2. Analytical results from samples taken during the project indicate that soil concentrations for Target Compound List parameters fall below acceptable soil cleanup objectives as identified in the above referenced TAGM with the exception of several semi-volatile compounds. The semi-volatiles noted below were detected above soil cleanup objectives established by the NYSDEC, but are petroleum related compounds and should not fall under the jurisdiction of Title 6 of the NYCRR Part 375.

   Benzo (A) Anthracene
   Benzo (B) Fluoranthene
   Benzo (K) Fluoranthene
   Benzo (a) Pyrene
   Chrysene

   The levels observed for all of these compounds from the first split-spoon sample were slightly above the cleanup levels established in the NYSDEC TAGM. However, concentrations for all of the compounds observed in the second samples taken below the surface decreased and in some instances (Benzo (B)) Fluoranthene, and Benzo (K) Fluoranthene) dropped below the recommended cleanup levels.

   Based on the constituents present, and their concentrations, it is likely that these materials are from day to day trucking operations. This does not appear to represent a remediation concern.

3. Pursuant to the criteria in Title 6 of the NYCRR Section 375-1.4 (a), it does not appear that a "significant threat" to the environment exists at the Site. This is based on:

   - the concentrations observed in analytical data from the Site;
   - the fact that the area is served by public water supply;
   - the surface water sample taken indicates that there does not appear to impact the tributary to Two Mile Creek; and
   - air monitoring performed during the project did not indicate the presence of volatile organic emissions.

Our evaluation of the Site and Site recommendations are based on the engagement stated, the level of Scope of Work requested, current statutes, and information submitted to us. The evaluation and Site recommendation were performed for Consolidated Freightways' ("Consolidated") benefit, and may be relied upon only by Consolidated , Consolidated's counsel, and the prospective purchaser of this property. Furthermore, this document is intended exclusively for Consolidated's use. No copies of this document are to be produced or distributed without the prior written permission of LaBella Associates, P.C. It constitutes a reasonable effort on our part to determine potential environmental concerns at the Site.

# VI. Certification

LaBella Associates, P.C. certifies the accuracy of this report, to the best of our knowledge, based on the information collected as described in the Scope of Work.

A copy of all information collected during this assessment, including photographs, maps, notes, and other material will be kept on file at the offices of LaBella Associates, P.C. This information is available at Consolidated's request.

John P. Osterberg, P.E.
Vice President

March 25 1994
Date

R4C22SC1

Table 1
First Sample Analytical Summary

**Table 1**
**Consolidated Freightways Subsurface Soil Boring Investigation**
**Analytical Summary**
**First Sample**

| Boring No.<br>Sample No.<br>Sample Type<br>Collection Date | | Recommended<br>Clean-up Objective<br>NYSDEC TAGM<br>1/24/94 | BW #1<br>Soil<br>11/5/93 | BW #2<br>Soil<br>1/4/94 | BW #3<br>Soil<br>1/4/94 | BW #4<br>Soil<br>1/10/94 | BW #5<br>Soil<br>1/10/94 | BW #6<br>Soil<br>1/3/94 | BW #7<br>Soil<br>1/6/94 |
|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Method** | | | | | | | | |
| **Total Metals** | | | | | | | | | |
| Arsenic | 7060 | 7.5 or SB | 1 | 1.0 | 2.3 | 2.1 | 1.7 | 3.5 | 3.1 |
| Barium | 6010 | 300 or SB | 62.6 | 120.0 | 95.8 | 132.0 | 101.0 | 107.0 | 102.0 |
| Cadmium | 6010 | 1 or SB | 1.1 | 1.4 | 4.8 | 4.4 | 5.9 | 4.2 | 4.4 |
| Chromium | 6010 | 10 or SB | 3.3 | 6.6 | 15.1 | 17.7 | 20.7 | 13.1 | 14.7 |
| Lead | 6010 | Variable | 36.5 | 17.7 | 11.0 | 14.5 | 26.0 | 120.0 | 13.1 |
| Mercury | 7471 | 0.1 | 0.10 u | 0.10 u | 0.10 u | 0.11 u | 0.098 u | 0.10 u | 0.11 u |
| Selenium | 7740 | 2 or SB | 0.34 u | 0.33 u | 0.34 u | 0.36 u | 0.32 u | 0.38 u | 0.36 u |
| Silver | 7761 | SB | 0.023 u | 0.22 u | 0.034 | 0.035 | 0.021 | 0.051 | 0.036 |
| **Volatiles** | | | | | | | | | |
| Acetone | 8240 | 0.2 | | 0.09 | | | | | |
| **Base Neutrals** | | | | | | | | | |
| Pyrene | 8270 | 50 | | | | | | 6.6 | |
| Phenanthrene | 8270 | 50 | | | | | | 8.6 | |
| Napthalene | 8270 | 13 | | | | | | 0.99 | |
| Bis(2-ethylhexyl)phthalate | 8270 | 50 | 2 | | 4.4 | | | 0.5 | |
| Acenapthene | 8270 | 50 | | | | | | 1.4 | |
| Benzo(A)Anthracene | 8270 | 0.224 | | | | | | 4.5 | |
| Benzo(B)Fluoranthene | 8270 | 1.1 | | | | | | 6.2 | |
| Benzo(K)Fluoranthene | 8270 | 1.1 | | | | | | 2.1 | |
| Benzo(ghi)perylene | 8270 | 50 | | | | | | 1.2 | |
| Benzo(A)Pyrene | 8270 | 0.06 | | | | | | 3.4 | |
| Chrysene | 8270 | 0.4 | | | | | | 4.1 | |
| Dibenzo Furan | 8270 | 6.2 | | | | | | 1 | |
| Fluoroanthene | 8270 | 50 | | | | | | 13 | |
| Fluorene | 8270 | 50 | | | | | | 1.3 | |
| Indeno(1,2,3-cl)pyrene | 8270 | 3.2 | | | | | | 1.6 | |
| 2-Methylnapthalene | 8270 | 36.4 | | | | | | 0.5 | |

u = detection limit
SB = Site Background
N/A = not available
All results are in mg/kg or ppm.

Only detectable results are shown.



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Table 2
Second Sample Analytical Summary

**Table 2**
**Consolidated Freightways Subsurface Soil Boring Investigation**
**Analytical Summary**
**Second Sample**

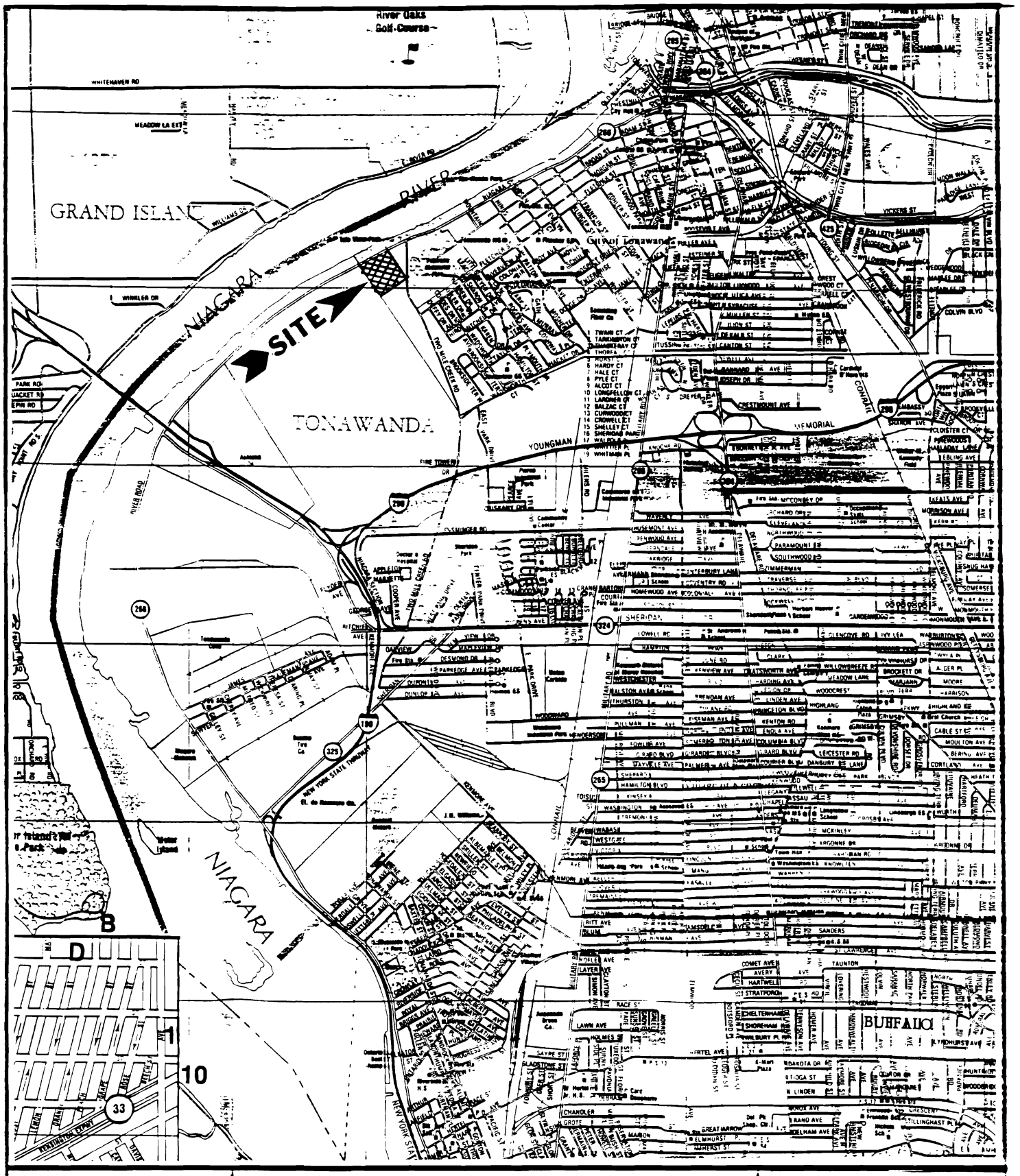
| Boring No.<br>Sample No.<br>Sample Type<br>Collection Date | | Recommended<br>Clean-up Objective<br>NYSDEC TAGM<br>1/24/94 | BW #1<br>Soil<br>11/5/93 | BW #2<br>Soil<br>1/4/94 | BW #3<br>Soil<br>1/4/94 | BW #4<br>Soil<br>1/10/94 | BW #5<br>Soil<br>1/10/94 | BW #6<br>Soil<br>1/3/94 | BW #7<br>Soil<br>1/6/94 |
|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Method** | | | | | | | | |
| **Total Metals** | | | | | | | | | |
| Arsenic | ASP91 | 7.5 or SB | 0.94 | 2.7 | 3.5 | 5.5 | 4.5 | 4.0 | 3.6 |
| Barium | ASP91 | 300 or SB | 19.7 | 86.5 | 92.9 | 50.8 | 64.9 | 123.0 | 99.1 |
| Cadmium | ASP91 | 1 or SB | 0.35 | 0.20 | 0.2 | 0.18 | 0.6 | 0.43 | 0.17 |
| Chromium | ASP91 | 10 or SB | 2.2 u | 14.5 | 15.5 | 10.8 | 12.4 | 16.4 | 19.7 |
| Lead | ASP91 | Variable | 18.8 | 14.7 | 13.6 | 26.0 | 54.6 | 95.6 | 14.0 |
| Mercury | ASP91 | 0.1 | 0.11 u | 0.11 u | 0.11 u | 0.10 u | 0.12 u | 0.11 u | 0.10 u |
| Selenium | ASP91 | 2 or SB | 0.7 | 0.67 u | 0.71 u | 0.66 u | 0.74 | 0.76 u | 0.72 u |
| Silver | ASP91 | SB | 2.2 | 2.2 u | 2.4 u | 2.2 u | 2.6 u | 2.5 u | 2.5 u |
| **Pesticides** | | | | | | | | | |
| Various Compounds | ASP91 | | * | * | * | * | * | | |
| 4,4 DDD | ASP91 | | | | | | 0.0054 | | |
| Alpha BHC | ASP91 | | | 0.0036 | | | | | |
| **VOCs** | | | | | | | | | |
| Acetone | ASP91 | 0.2 | 0.05 | 0.036 | | | | | |
| **Base Neutrals** | | | | | | | | | |
| Various Compounds | ASP91 | | * | * | * | * | * | * | * |
| Pyrene | ASP91 | 50 | | | | | | 2.9 | |
| Phenanthrene | ASP91 | 50 | | | | | | 2.4 | |
| Napthalene | ASP91 | 13 | | | | | | 0.47 | |
| Benzo(A)Anthracene | ASP91 | 0.224 | | | | | | 1.3 | |
| Benzo(B)Fluoranthene | ASP91 | 1.1 | | | | | | 1.6 | |
| Benzo(K)Fluoranthene | ASP91 | 1.1 | | | | | | 0.95 | |
| Benzo(A)Pyrene | ASP91 | 0.06 | | | | | | 1.1 | |
| Chrysene | ASP91 | 0.4 | | | | | | 1.2 | |
| Fluoroanthene | ASP91 | 50 | | | | | | 3.0 | |
| Fluorene | ASP91 | 50 | | | | | | 0.41 | |
| Indeno(1,2,3-cl)pyrene | ASP91 | 3.2 | | | | | | 0.49 | |
| **PCBs** | | | | | | | | | |
| Aroclor-1254 | ASP91 | | | | | 0.075 | | 0.014 | |
| **Total CN** | ASP91 | Variable | 1.2 u | 2.1 u | 1.2 u | 1.1 u | 1.3 u | 1.2 u | 1.2 u |

* = Trace below detection
u = detection limit
SB = Site Background
N/A = not available

All results are in mg/kg or ppm .

Only detectable results are shown.

# Figures




# FIGURE 1
# SITE LOCATION
## CONSOLIDATED FREIGHTWAYS
## 877 NIAGARA ST.

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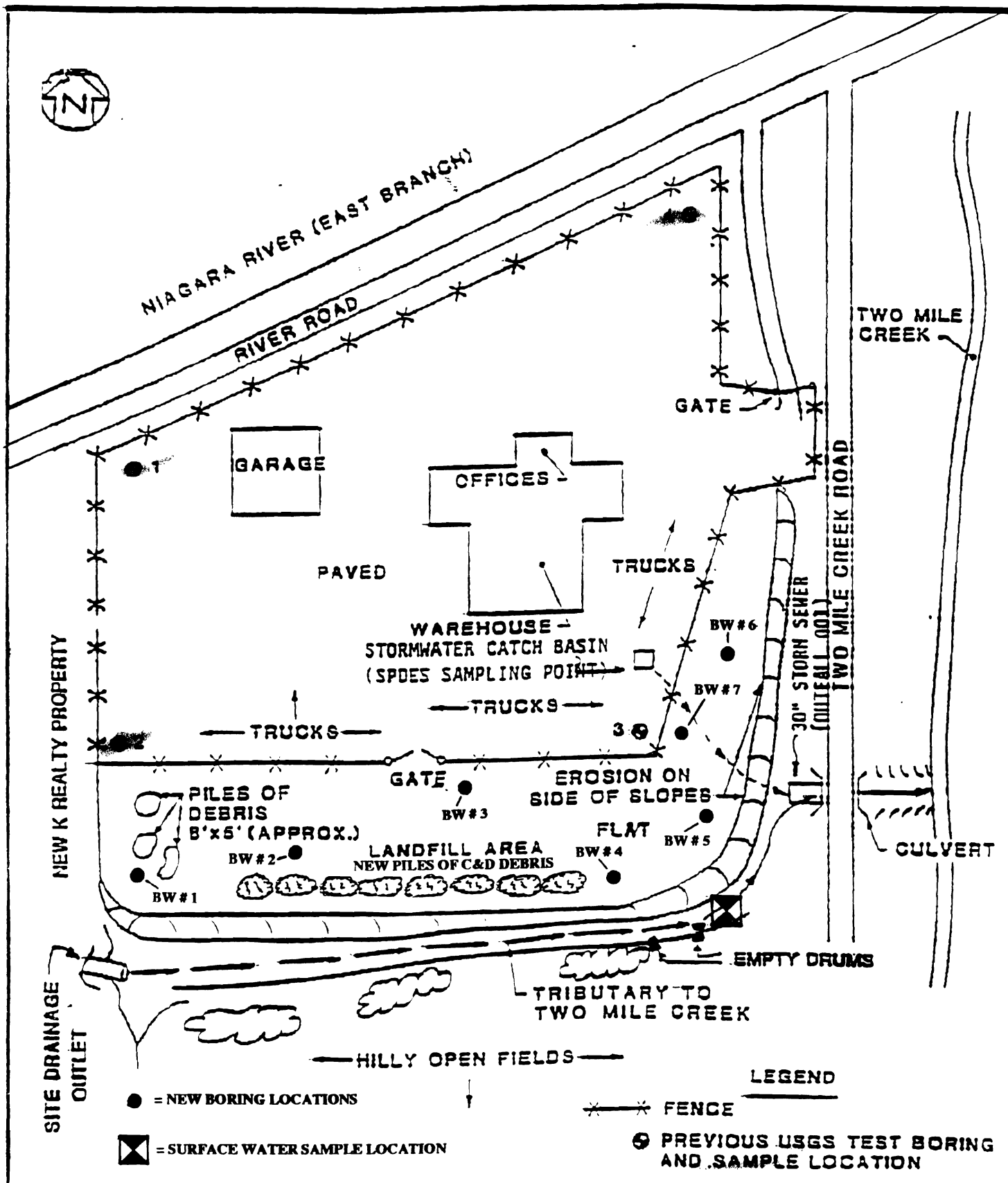
LaBella Associates, P.C.
300 State Street
Rochester, New York 14614
716 454-6110




# FIGURE 2
# BORING LOCATIONS
# CONSOLIDATED FREIGHTWAYS
# 877 NIAGARA ST.

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