CRA

SITE EVALUATION REPORT

Former Buffalo Forge Plant No. 1
Howden Buffalo, Inc.

Prepared By:

Conestoga-Rovers & Associates
2055 Niagara Falls Boulevard
Niagara Falls, New York 14304

APRIL 2000
REF. NO. 14791 (1)

TABLE OF CONTENTS

LIST OF FIGURES
(Following Report)

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) has completed a preliminary environmental evaluation of the Howden Buffalo, Inc. (former Buffalo Forge) facility located at 490 Broadway in Buffalo, New York ("Site"). The evaluation was performed at the request of Mr. Jerrold Brown of Hodgson, Russ, Andrews, Woods & Goodyear.

Prior to beginning the field activities associated with the evaluation, a Scope of Work was developed in cooperation with Mr. Dennis Sutton of the City of Buffalo Department of Community Development. Mr. Sutton also observed the performance of select field activities.

This report presents summaries of the Site background data obtained for this evaluation, field activities performed, field observations, analytical results, and comparisons of the analytical results to New York standards. The report is organized as follows:

- Section 1 Introduction: The introduction presents an overview of the development of the project;
- Section 2 Background Information: The background information collected and used in the planning of the project is presented in Section 2:
- Section 3 Summary of Field Activities: A summary of the field activities performed is presented in Section 3;
- Section 4 Observations and Findings: The observations and analytical data collected from this investigation are presented in Section 4; and
- Section 5 Summary and Conclusions: A summary of the evaluation is presented in Section 5.

2.0 BACKGROUND INFORMATION

The background information collected prior to the commencement of the field activities consisted primarily of Site maps and interviews with former Howden Fan employees to gain knowledge of the locations of Site features and historic activities. This information was used in the planning of sample locations and analytical parameters.

Aerial photographs of the area in which the Site is located dated 1959, 1966, 1978, 1983, and 1995 were obtained and reviewed to determine the locations and development sequence of the on-Site structures. Copies of these photographs are presented in Appendix A.

Sanborn fire insurance maps for the period of 1889 through 1986 were also obtained and reviewed. The Sanborn fire map dated 1986 was used as the base for the preparation of the Site plan shown on Figure 2.1. Reduced copies of the Sanborn maps are contained in Appendix B.

The Scope of Work included an inquiry into records of the New York Stated Department of Environmental Conservation (NYSDEC) to determine the locations and status of underground storage tanks at the Site. However, previous work performed by others indicated that records for this Site were not available. During a Site walk-through with an employee of Howden Buffalo who had also worked at Buffalo Forge, the locations of three of the four reported underground tanks were identified.

Based on the above, the following areas of potential environmental concern were identified and selected for further investigation:

i) Underground Storage Tanks (UST);
ii) Aboveground Storage Tanks (AST);
iii) Machine Pits;
iv) Assembly Area and Machine Shop Floor;
v) Lubricant Storage Area;
vi) Paint Storage Area;
vii) Press Pit;
viii) Paint Booth Grate(s);
ix) Hazardous Waste Storage Area;
x) Capacitor Room; and

xi) Interior Manholes.

The City requested that analyses of samples of water from the basement of the manufacturing building and of soil in the Mortimer Street Parking Lots also be performed.

3.0 SUMMARY OF FIELD ACTIVITIES

The field activities were performed between February 7 and 10, 2000.

3.1 SAMPLE COLLECTION AND ANALYSES

Both soil and water samples were collected and analyzed to obtain data for use in the Site evaluation. The Scope of Work also called for the collection of sediment samples from the basement of the manufacturing building. The basement is currently filled with water; therefore, access for sediment sampling was not available. It was agreed with Mr. Sutton of the City that this activity would be delayed until after the analytical data from the basement water samples were received and reviewed.

The following subsections present brief overviews of the soil and water sample collection procedures and sample analyses.

3.1.1 SOIL

Soil borings were advanced using a stainless steel sampling spoon, 2 inches in diameter and 42 inches long. The sampling spoon was lined with acetate and was driven using a hydraulic hammer. Upon completion, each boring was backfilled with the soil cuttings and bentonite clay. Where needed, concrete or asphalt was patched at the surface.

Following collection, the acetate liner containing the soil sample was opened and the soil within was logged and screened for organic vapors using a photoionization detector (PID). Thirty-six (36) soil borings were advanced in the areas of potential environmental concern and analytical soil samples were collected from 15 of these borings for subsequent analyses. The locations of all boreholes and sample locations are presented on Figure 1.

Samples were selected for analyses based upon physical observations (i.e., color, odor, etc.) and organic vapor readings. Stratigraphic logs for the boreholes are contained in Appendix C. The soil descriptions and organic vapor readings are shown on the stratigraphic logs. A summary of the samples collected and analyses performed is presented in Table 3.1.

Soil samples selected for laboratory analyses were placed into labeled laboratory-supplied glass jars and immediately placed on ice in a cooler. Samples were

shipped to the analytical laboratory via overnight courier using proper Chain of Custody procedures.

Field conditions necessitated the modification of the following sample collection locations:

i) it was not possible to penetrate the bottoms of the machine pits or Paint Booth Grate. Therefore, boreholes at these locations were advanced immediately adjacent to the pit or grate; and

ii) the area of the UST in the basement along the Spring Street side of the facility could not be accessed. Consideration was given to installing boreholes outside the building along Spring Street but, because the exact location of the tank was unknown, such borings could not be properly located.

3.1.2 WATER

The basement of the manufacturing building is currently filled with water of unknown origin. During the Site walk-through, CRA was informed that the basement was divided into three separate areas; therefore, samples of water were collected from each of these areas.

The water samples were collected from open stairwells in each section of the basement using disposable bailers. Water from the bailer was transferred directly to labeled laboratory-supplied sample containers and immediately placed on ice in a cooler. Samples were shipped to the analytical laboratory via overnight courier using appropriate Chain of Custody procedures.

A sample collection and analysis summary for the water samples is presented in Table 3.2.

4.0 OBSERVATIONS AND FINDINGS

The following subsections discuss the results of the field and analytical activities for each of the areas which were identified as potential environmental concerns. Tables 4.1 through 4.3 present summaries of the compounds detected in soil and water samples. The concentrations of compounds detected in the soil samples are compared to New York State (NYS) standards in Tables 4.1 and 4.2. The standards used for soils under the manufacturing building and in the parking lots are the "Recommended Soil Cleanup Objectives" and "Eastern USA Background" presented in the Technical and Administrative Guidance Memorandum, "Determination of Soil Cleanup Objectives and Cleanup Levels" dated April 1995 (TAGM 4046). The TAGM standards for some metals in soil are the Site background concentrations. The scope of this project did not include a determination of Site-specific background concentrations of metals in soil; therefore, the review of the concentrations of the metals is relative to both the Recommended Cleanup Objective and Eastern USA Background Concentrations presented in TAGM 4046.

For soils associated with the aboveground gasoline storage tank, the standards are the "Guidance Values for Gasoline Contaminated Soil" of the NYSDEC Spill Technology and Remediation Series (STARS) Memo #1. Since there was only one sample analyzed and only one analyte detected in that sample, neither the data or standards are tabulated separately. The results are described in subsection 4.3 and are included in the analytical data validation report contained in Appendix D.

4.1 GENERAL

Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Aroclor 1254, and metals were detected in various soil samples submitted for analyses; however, exceedances of the standards occurred for only SVOC compounds and metals. The SVOC compounds which were detected at concentrations which exceeded their respective standards (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene) are all polynuclear aromatic hydrocarbons (PAHs). Due to the historic use of the property and presence of mixed fill, the presence of PAHs in soils was expected.

The concentrations of zinc detected in all but two of the analytical samples (surface soil adjacent to the Press Pit and soil adjacent to the Paint Booth Grate) exceeded both the TAGM Recommended Cleanup Objective and range of typical background concentrations. The concentrations of zinc detected in seven of the samples which

exhibited exceedances were less than 100 milligrams per kilogram (mg/kg) (versus the typical background concentration ranging from 9 to 50 mg/kg). It is believed that these concentrations are representative of Site background. Therefore, zinc in these samples will not be discussed in detail in the descriptions of the conditions in the individual areas of potential concern presented below.

Calcium and magnesium were also detected at concentrations which exceeded both the TAGM Recommended Cleanup Objective and range of typical background concentrations in the majority of samples. Calcium and magnesium are innocuous compounds with no associated risk and, therefore, will not be discussed further. The other metals which were detected at concentrations which exceeded both the standards were mercury, arsenic, and nickel. The exceedances for these metals are discussed below.

4.2 UNDERGROUND STORAGE TANKS

Earlier Site-related reports identified four USTs; however, the location of only one tank, a 20,000 gallon tank in the Broadway Yard, was shown in those reports. During the Site walk-through, the locations of two other USTs were identified: a second UST in the Broadway Yard (9,000 gallon capacity) and a UST in the basement along the Spring Street side of the facility.

4.2.1 20,000 GALLON UST

Number 2 fuel oil was stored in a 20,000 gallon UST located along the north side of the Broadway Yard. Four borings, SB-15 through SB-18, were installed around the area of this tank. Discrete samples from borings SB-15 and SB-18 located on the north and south sides of the tank area, respectively, were selected for laboratory analyses.

The compounds detected in the samples from the area of the 20,000 gallon UST were limited to SVOCs and metals. The concentrations of four of the SVOCs detected, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene, exceed the NYSDEC soil cleanup objectives. No metals other than calcium, magnesium, and zinc were detected at concentrations which exceeded both the TAGM Recommended Cleanup Objective and range of typical background concentrations in the samples analyzed from the area of the 20,000 gallon UST.

4.2.2 9,000 GALLON UST

Number 2 fuel oil was stored in a 9,000 gallon UST located in the northeast corner of the Broadway Yard. Three borings, SB-19 through SB-21, were installed around the area of this tank. There was no visual or olfactory evidence of chemical presence in any of the soil samples nor were organic vapors detected. Therefore, no analytical samples were submitted from the area of the 9,000 gallon UST.

4.3 ABOVEGROUND GASOLINE STORAGE TANK

An AST was formerly located in the northeast corner of the Sycamore Yard. The AST was used for the storage of gasoline; therefore, samples from this area were analyzed for the compounds listed in Table 1 ("Guidance Values for Gasoline Contaminated Soil") of the STARS Memo.

Three borings, SB-22 through SB-24, were installed in the area of the AST located in the northeast corner of the Sycamore Yard. Stained soils were encountered at approximately 4.7 feet below ground surface (BGS) in each of the borings. A discrete sample of the stained soils from boring SB-22, located on the west side of the AST, was selected for laboratory analysis.

The only compound detected in the sample from the area of the AST was toluene at an estimated concentration of 1 micrograms per kilogram (µg/kg). This concentration is well below the STARS human health guidance value of 20,000,000 µg/kg.

4.4 MACHINE PITS

Machine pits are located throughout the Pipe Shop, Fan Shop, Sheet Metal Area, and Machine Shop/Assembly Area. Three borings, SB-11 through SB-13, were advanced immediately adjacent to three separate machine pits. Borings SB-11 and SB-12 were advanced in Department 271 and SB-13 was advanced in Department 220. (The Department locations are shown on Figure 1.) There was no visual or olfactory evidence of chemical presence in the soil samples from SB-11 or SB-12 nor were organic vapors detected. Therefore, no analytical samples were submitted from these borings. At SB-13 an organic vapor reading of 3 to 4 parts per million (ppm) was reported in the sample collected from a depth of approximately 6 feet BGS; therefore, a discrete sample from this depth of boring SB-13 was selected for laboratory analysis.

The compounds detected in the sample from the machine pit included xylenes, fluoranthene, phenanthrene, pyrene, and Aroclor 1254. None of the concentrations detected exceeded the TAGM standards.

No metals other than calcium, magnesium, and zinc were detected at concentrations which exceeded both the TAGM Recommended Cleanup Objective and range of typical background concentrations in the sample from SB-13.

4.5 ASSEMBLY AREA AND MACHINE SHOP FLOOR

The Machine Shop and Assembly Area of the facility encompasses an area of approximately 40,000 square feet. The floor of the Assembly Area and Machine Shop is constructed primarily of wood blocks underlain by sand and clay.

Three borings (SB-3 through SB-5) were installed in the Assembly Area/Machine Shop to evaluate the soils beneath the wood block floor. The borings were installed where the wooden blocks had heaved. There was olfactory evidence of chemical presence and organic vapors were detected at SB-4; therefore, a sample from this location was submitted for analysis. Samples from SB-3 and SB-5 were submitted to confirm that no chemical compounds were present since no visual, olfactory, or PID evidence of chemical presence was noted in either of these borings.

The compounds detected in the samples from beneath the Assembly Area and Machine Shop floor were ethylbenzene, toluene, xylenes, several SVOC compounds, and Aroclor 1254. Exceedances of the TAGM standards were limited to benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and dibenzofuran in SB-3.

In addition to zinc and magnesium which were detected at concentrations which exceeded the TAGM Recommended Cleanup Objective and range of typical background concentrations in all three analytical samples from beneath the Assembly Area and Machine Shop floor and calcium which was detected at a concentration which exceeded these standards in one of the samples, nickel was detected in one sample at a concentration (27 mg/kg) which is generally consistent with the upper limit of typical background concentration (25 mg/kg).

4.6 PAINT STORAGE ROOM

A Paint Storage Room was located along the east wall of the facility approximately midway along the north-south wall. A floor drain reportedly connected to the City sewer is located in the center of the room. One boring, SB-2, was installed next to the floor drain to determine whether spills which may have occurred in the room had impacted the underlying materials.

No organic chemical compounds were detected in the sample from beneath the Paint Storage Room. In addition to calcium, magnesium, and zinc, mercury was detected in the analytical sample from beneath the Paint Storage Room at a concentration (0.24 mg/kg) which is generally consistent with the upper limit of typical background concentration (0.2 mg/kg).

4.7 LUBRICANT STORAGE AREA

The Lubricant Storage Area was located along the east wall of the facility in the former steel storage area. The area has a wood block floor underlain by concrete. One boring, SB-10, was advanced in the Lubricant Storage Area. There was no visual or olfactory evidence of chemical presence in the soil samples nor were organic vapors detected at boring SB-10. Therefore, no analytical samples were submitted from the Lubricant Storage Area.

4.8 PRESS PIT

A Press Pit approximately 5 feet deep is located in the foundry area of the facility. The pit is constructed of poured concrete and is currently filled with debris and liquid. Four borings, SB-6 through SB-9, were installed on the north and south sides of the Press Pit. The bottom of the Press Pit is believed to be at or slightly below the top of the native clay. The borings advanced adjacent to the Press Pit extended past the estimated elevation of the bottom of the pit and no evidence of chemical presence was observed at that depth in any boring. The sample collected for analysis consisted of stained soil present at 0.5 to 1.5 feet BGS in SB-9. These soils may have been impacted by materials which were spilled in the area rather than by liquids leaking from the Press Pit.

The compounds detected in the soil sample from the Press Pit area included carbon disulfide and several SVOCs. The concentrations of benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene,

dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene in this sample exceeded their respective TAGM standards.

No metals were detected at concentrations which exceeded both the TAGM Recommended Cleanup Objective and range of Background Concentrations in the analytical sample collected near the Press Pit.

4.9 PAINT BOOTH GRATE

Paint booths were located in the Fan Shop approximately in the center of the facility. Lined pits covered with grates ("Paint Booth Grates"), were associated with these booths. One boring, SB-14, was advanced immediately adjacent to the Paint Booth Grate. There was no visual or olfactory evidence of chemical presence in the soil nor were organic vapors detected at boring SB-14. A discrete sample from boring SB-14 was selected for laboratory analysis to confirm the absence of chemicals at this location.

No organic chemical compounds were detected in the soil sample collected adjacent to the Paint Booth Grate. Calcium and magnesium were the only metals detected at concentrations which exceeded both the TAGM Recommended Cleanup Objective and range of Background Concentrations in the analytical sample collected near the Paint Booth Grate.

4.10 HAZARDOUS WASTE STORAGE AREA

A Hazardous Waste Storage Area was reportedly located at the south end of the Sycamore Yard. The storage area consisted of a curbed concrete pad with a covered, three-sided shed. Three borings, SB-25 through SB-27, were advanced in the vicinity of the Hazardous Waste Storage Area located in the Sycamore Yard. There was no visual or olfactory evidence of chemical presence in the soil nor were organic vapors detected in these borings. A discrete sample from boring SB-27 was selected for laboratory analysis to confirm the absence of chemical presence in this area.

The compounds detected in the sample from the Hazardous Waste Storage Area were limited to SVOCs. Exceedances of the TAGM standards were detected for only three compounds, benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene. The concentrations of benzo(a)anthracene, 250 µg/kg, and benzo(b)fluoranthene, 230 µg/kg, were estimated and were generally consistent with the TAGM standard of 224 µg/kg for each compound.

In addition to calcium, magnesium, and zinc, mercury, was detected in the sample from the Hazardous Waste Storage Area at a concentration (1.3 mg/kg) which exceeded both the TAGM Recommended Cleanup Objective and range of typical background concentrations.

4.11 CAPACITOR ROOM

A polychlorinated biphenyls (PCB) capacitor was located in a room in the southeast corner of the facility. The capacitor has been removed from the facility; however, oil staining is visible on the floor of the room. One boring, SB-1, was installed within a stained area in the Capacitor Room. There was no visual or olfactory evidence of chemical presence in the soil nor were organic vapors detected at boring SB-1. A discrete sample from boring SB-1 was submitted for laboratory analysis to determine whether PCBs were present.

The soil sample collected from the Capacitor Room was analyzed for PCBs only. No PCBs were detected in this sample.

4.12 BASEMENT

As stated in the Scope of Work, analytical data were collected from the basement water for use in future disposal. The compounds detected in the basement water and their concentrations are presented in Table 4.2. These data are not considered to be representative of in situ groundwater quality since they may have been influenced by residues in the basement.

The Buffalo Sewer Authority was contacted and an inquiry was made as to pretreatment standards for discharge of water to the combined sewer. CRA was informed by the representative of the Buffalo Sewer Authority that they do not have pretreatment standards and that acceptance of water is made on a case-by-case basis.

4.13 INTERIOR MANHOLES

Three manholes were located along the craneway in the center of the manufacturing building. Each of these manholes was inspected to determine whether there was

evidence of chemical presence such as a sheen on standing water. All manholes were found to be in good condition and no evidence of chemical presence was observed.

4.14 MORTIMER STREET PARKING LOTS

Employee parking lots were located across the street from the facility along Mortimer Street. Nine borings, SB-28 through SB-36, were installed in these parking lots. The locations of the borings were selected with the concurrence of Mr. Sutton of the City. Soil samples were submitted for analysis from two of the parking lot borings: SB-29 where 2 ppm organic vapors were detected; and SB-30 where stained soils were observed.

The compounds detected in the soil samples from the parking lots included chlorobenzene, toluene, and SVOCs. The only exceedances of the TAGM standards were for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and dibenz(a,h)anthracene in SB-30.

In addition to zinc which was detected at concentrations which exceeded the TAGM Recommended Cleanup Objective and range of Background Concentrations in both of the analytical samples collected from the Mortimer Street Parking Lots and magnesium which was detected at a concentration which exceeded these standards in one of the samples, mercury and arsenic were detected at concentrations (0.22 mg/kg and 18.0 mg/kg, respectively) which slightly exceeded the upper ranges of background, 0.2 mg/kg for mercury and 12 mg/kg for arsenic.

5.0 SUMMARY AND CONCLUSIONS

The areas of potential concern for environmental impact from historic Site operations included:

i) Underground Storage Tanks;

ii) Aboveground Storage Tanks;

iii) Machine Pits;

iv) Assembly Area and Machine Shop Floor;

v) Lubricant Storage Area;

vi) Paint Storage Area;

vii) Press Pit;

viii) Paint Booth Grate(s);

ix) Hazardous Waste Storage Area;

x) Capacitor Room; and

xi) Interior Manholes.

In addition, at the request of the City, analyses of samples of water from the basement of the manufacturing building and of soil in the Mortimer Street Parking Lots were performed.

Due to the nature of the materials historically handled at the Site (i.e., oils and greases, gasoline, paint, etc.), any releases of such materials to the subsurface would be easily identified by visual or olfactory evidence or elevated organic vapor readings. Although some limited soil staining was observed and low level organic vapor readings were obtained, no evidence of gross chemical presence in soils underlying the facility was observed. In fact, in 8 of the 11 areas of potential concern investigated, no evidence of organic chemical presence was observed or no organic chemical compounds were detected. Those areas were the:

i) 9,000 gallon UST;

ii) AST;

iii) Machine Pits;

iv) Lubricant Storage Area;

v) Paint Storage Area

vi) Paint Booth Grate;

vii) Capacitor Room; and

viii) Interior Manholes.

In the remaining areas (the 20,000 gallon UST, Assembly Area/Machine Shop Floor, Press Pit, and Hazardous Waste Storage Area) PAH compounds were present at concentrations which exceed the NYS standards. The compounds and concentrations detected in the soil samples are consistent with what would be expected in an historic manufacturing/foundry facility.

Exceedances of the NYSDEC standards for metals in soil occurred in all but one of the analytical samples. While some slightly elevated concentrations may be present, it is believed that the concentrations detected are generally indicative of Site background.

* SOURCE MAP(S)

1.)THE SANBORN LIBRARY, LLC 1889

2.)THE SANBORN LIBRARY, LLC 1986

LEGEND

△ - WATER SAMPLE COLLECTION POINT

▣ - SOILBORING AND ANALYTICAL SAMPLE

◇ - SOILBORING, NO SAMPLE

AST - ABOVEGROUND STORAGE TANK

UST - UNDERGROUND STORAGE TANK

SPRING ST.

BROADWAY

SYCAMORE ST.

MORTIMER ST.

REY ST.

GEORGE ST.

MATHEWS ST.

BROADWAY YARD

FOUNDRY DEPT-100

FACTORY/ ERECTING

SYCAMORE YARD

HAZARDOUS WASTE STORAGE AREA

20,000 GALLON UST

8,000 GALLON UST

CRANEWAY

MH

PRESS PIT

TESTING AREA DEPT-272

PAINT SPRAY BOOTH GRATE

MACHINE PIT DEPT. 220

ASSEMBLY AREA/ MACHINE SHOP

OFFICES

SHIPPING AND CRATING

PIPE SHOP

DEPT. 271

MACHINE PIT

FAN SHOP

CAPACITOR ROOM

PAINT STORAGE ROOM

LUBRICANT STORAGE AREA/ GRINDING AREA

GARAGE

DRS-001

DRS-002

DRS-003

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19 SB-20 SB-21 SB-22 SB-23 SB-24 SB-25 SB-26 SB-27 SB-28 SB-29 SB-30 SB-31 SB-32 SB-33 SB-34 SB-35 SB-36

AST

0 50 100ft

figure 1

LOCATION OF BORINGS AND WATER SAMPLE COLLECTION BUFFALO HOWDEN INC.

Buffalo, New York

CRA

14791-00(001)GN-NF001 MAR 31/2000

TABLE 3.1

SUMMARY OF SOIL SAMPLE COLLECTION AND ANALYSES
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.

Borehole Number	*Depth (Ft. BGS)*	*Location*	*Sampled Interval (Feet)*	*Sample Number*	*Sample Analyses*	*Comments*
SB-1	2.0	Capacitor Room	0.5 to 1.0	S-14791-DRS-001	PCBs	Confirmatory sample
SB-2	4.5	Paint Storage Room	4.0 to 4.5	S-14791-DRS-003	(1)	Confirmatory sample
SB-3	5.0	Dept. 230 Assembly Area/Machine Shop Floor	4.0 to 5.0	S-14791-DRS-004	(1)	Confirmatory sample
SB-4	5.0	Dept. 220 Assembly Area/Machine Shop Floor	4.0 to 5.0	S-14791-DRS-005	(1)	Motor oil odor
SB-5	5.0	Dept. 212 Assembly Area/Machine Shop Floor	4.0 to 5.0	S-14791-DRS-006	(1)	Confirmatory sample
SB-6	9.0	North Side of Press Pit	-	-	-	No evidence for sample collection
SB-7	9.0	North Side of Press Pit	-	-	-	No evidence for sample collection
SB-8	9.0	South Side of Press Pit	-	-	-	No evidence for sample collection
SB-9	9.0	South Side of Press Pit	0.5 to 1.5	S-14791-DRS-007	(1)	Stained fill soil
SB-10	1.5	Lubricant Storage Area	-	-	-	No evidence for sample collection
SB-11	8.0	West Machine Pit in Dept. 271	-	-	-	No evidence for sample collection
SB-12	8.0	East Machine Pit in Dept. 271	-	-	-	No evidence for sample collection
SB-13	4.0	Machine Pit Dept. 220	3.0 to 4.0	S-14791-DRS-008	(1)	3 to 4 ppm organic vapor
SB-14	9.0	Paint Spray Booth	8.0 to 9.0	S-14791-DRS-009	(1)	Confirmatory sample
SB-15	11.5	20,000 Gallon UST	7.0 to 8.0	S-14791-DRS-010	(1)	Confirmatory sample
SB-16	8.0	20,000 Gallon UST	-	-	-	No evidence for sample collection
SB-17	11.5	20,000 Gallon UST	-	-	-	No evidence for sample collection
SB-18	8.0	20,000 Gallon UST	6.0 to 6.5	S-14791-DRS-011	(1)	1.2 ppm organic vapor and chemical odor
SB-19	8.0	9,000 Gallon UST	-	-	-	No evidence for sample collection

TABLE 3.1

SUMMARY OF SOIL SAMPLE COLLECTION AND ANALYSES
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.

Borehole Number	*Depth (Ft. BGS)*	*Location*	*Sampled Interval (Feet)*	*Sample Number*	*Sample Analyses*	*Comments*
SB-20	8.0	9,000 Gallon UST	-	-	-	No evidence for sample collection
SB-21	8.0	9,000 Gallon UST	-	-	-	No evidence for sample collection
SB-22	5.0	AGST	4.5 to 5.0	S-14791DRS-012	STARS Gasoline	Stained soil
SB-23	5.0	AGST	-	-	-	No evidence for sample collection
SB-24	5.0	AGST	-	-	-	No evidence for sample collection
SB-25	5.0	Hazardous Waste Storage Area	-	-	-	No evidence for sample collection
SB-26	5.0	Hazardous Waste Storage Area	-	-	-	No evidence for sample collection
SB-27	5.0	Hazardous Waste Storage Area	4.5 to 5.0	S-14791-DRS-013	(1)	Slightly stained soils
SB-28	8.0	Parking Area Between Broadway and Rey St.	-	-	-	No evidence for sample collection
SB-29	5.0	Parking Area Between Broadway and Rey St.	0 to 1.0	S-14791-DRS-014	(1)	2 ppm organic vapors
SB-30	8.0	Parking Area Between Rey St. and George St.	0.3 to 1.0	S-14791-DRS-015 MS/MSD	(1)	Slightly stained soils
SB-31	8.0	Parking Area Between Rey St. and George St.	-	-	-	No evidence for sample collection
SB-32	8.0	Parking Area Between Rey St. and George St.	-	-	-	No evidence for sample collection
SB-33	6.0	Parking Area Between George St. and Mathews St.	-	-	-	No evidence for sample collection
SB-34	5.0	Parking Area Between George St. and Mathews St.	-	-	-	No evidence for sample collection
SB-35	1.5	Northernmost Parking Area East of Mortimer Str.	-	-	-	No evidence for sample collection

TABLE 3.1

SUMMARY OF SOIL SAMPLE COLLECTION AND ANALYSES
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.

Borehole Number	*Depth (Ft. BGS)*	*Location*	*Sampled Interval (Feet)*	*Sample Number*	*Sample Analyses*	*Comments*
SB-36	1.5	Northernmost Parking Area East of Mortimer St.	-	-	-	No evidence for sample collection

Notes:

- Not applicable.
* No sample S-14791-DRS-002.
(1) Samples analyzed for TCL VOCs, SVOCs, TAL metals, PCBs, and cyanide.
AGST Aboveground Storage Tank.
BGS Below Ground Surface.
MS Matrix Spike.
MSD Matrix Spike Duplicate.
PCBs Polychlorinated Biphenyls.
ppm Parts Per Million.
SVOC Semi-Volatile Organic Compounds.
TAL Target Analyte List.
TCL Target Compound List.
UST Underground Storage Tank.
VOCs Volatile Organic Compounds.

TABLE 3.2

SUMMARY OF WATER SAMPLE COLLECTION AND ANALYSES
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.

Sample Location Number	*Description*	*Analyses*
DRS-001	Water Sample #1 - Department 370	(1)
DRS-002	Water Sample #2 - Mortimer Street Entrance	(1)
DRS-003	Water Sample #3 - Department 100	(2)

Note:
(1) Samples analyzed for TCL VOCs, SVOCs, TAL metals, PCBs, and cyanide.
PCBs Polychlorinated Biphenyls.
SVOCs Semi-Volatile Organic Compounds.
TAL Target Analyte List.
TCL Target Compound List.
VOCs Volatile Organic Compounds.

TABLE 4.1

ORGANIC COMPOUNDS DETECTED IN SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.

Boring Location:			SB-1	SB-2	SB-3	SB-4	SB-5
Area:			Capacitor Room	Paint Storage	Assembly Area	Assembly Area	Assembly Area
			--	--	Machine Shop Floor	Machine Shop Floor	Machine Shop Floor
Sample Date:			02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000
Parameters	Units	Rec.Clean. 1					
Volatile Organics							
Carbon disulfide	ug/kg	2700	--	6.3 U	6.0 U	6.2 U	6.7 U
Chlorobenzene	ug/kg	1700	--	6.3 U	6.0 U	6.2 U	6.7 U
Ethylbenzene	ug/kg	5500	--	6.3 U	6.0 U	6.2 U	3.5 J
Toluene	ug/kg	1500	--	6.3 U	6.0 U	6.2 U	2.5 J
Xylenes (total)	ug/kg	1200	--	6.3 U	6.0 U	5.0 J	18
Acetone	ug/kg	200	--	25 U	24 U	35 U	27 U
Semi-volatile Organics							
Acenaphthene	ug/kg	50000	--	410 U	610	220 J	560
Acenaphthylene	ug/kg	41000	--	410 U	320 J	410 U	38 J
Anthracene	ug/kg	50000	--	410 U	1100	410 U	250 J
Benzo(a)anthracene	ug/kg	224	--	410 U	1900	4100 U	200 J
Benzo(a)pyrene	ug/kg	61	--	410 U	1500	410 U	440 U
Benzo(b)fluoranthene	ug/kg	224	--	410 U	1300	4100 U	440 U
Benzo(k)fluoranthene	ug/kg	224	--	410 U	1200	4100 U	440 U
Benzo(g,h,i)perylene	ug/kg	50000	--	410 U	890	4100 U	440 U
Carbazole	ug/kg	--	--	410 U	560	410 U	440 U
Chrysene	ug/kg	400	--	410 U	1900	4100 U	190 J
Dibenz(a,h)anthracene	ug/kg	14	--	410 U	280 J	4100 U	440 U
Dibenzofuran	ug/kg	6200	--	410 U	500	180 J	540
Fluoranthene	ug/kg	50000	--	410 U	3300	410 U	850
Fluorene	ug/kg	50000	--	410 U	670	340 J	370 J
Indeno(1,2,3-cd)pyrene	ug/kg	3200	--	410 U	870	4100 U	440 U
2-Methylnaphthalene	ug/kg	36400	--	410 U	290 J	130 J	34 J
Naphthalene	ug/kg	13000	--	410 U	900	93 J	440 U
Phenanthrene	ug/kg	50000	--	410 U	3300	1100	470
Pyrene	ug/kg	50000	--	410 U	2600	4100 U	470
PCBs							
Aroclor 1254	ug/kg	10000	38 U	41 U	40 U	1300	57
General Chemistry							
Percent solids	%	--	86.1	79.5	83.4	81.2	74.6
Cyanide, total	mg/kg	--	--	0.63 U	0.60 U	0.62 U	0.67 U

TABLE 4.1

ORGANIC COMPOUNDS DETECTED IN SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.

Boring Location:			SB-9	SB-13	SB-14	SB-15	SB-18
Area:			Press Pit	Machine Pit	Paint Booth	20,000 Gal. UST	20,000 Gal. UST
			--	--	Grate	--	--
Sample Date:			02/07/2000	02/08/2000	02/08/2000	02/09/2000	02/09/2000
Parameters	Units	Rec.Clean. 1					
Volatile Organics							
Carbon disulfide	ug/kg	2700	7.2	6.0 U	5.8 U	5.8 U	7.4 U
Chlorobenzene	ug/kg	1700	5.7 U	6.0 U	5.8 U	5.8 U	7.4 U
Ethylbenzene	ug/kg	5500	5.7 U	6.0 U	5.8 U	5.8 U	7.4 U
Toluene	ug/kg	1500	5.7 U	6.0 U	5.8 U	5.8 U	7.4 U
Xylenes (total)	ug/kg	1200	5.7 U	9.4	5.8 U	5.8 U	7.4 U
Acetone	ug/kg	200	23 U	24 U	23 U	23 U	67
Semi-volatile Organics							
Acenaphthene	ug/kg	50000	3700 U	3900 U	380 U	270 J	490 U
Acenaphthylene	ug/kg	41000	3700 U	3900 U	380 U	820 U	190 J
Anthracene	ug/kg	50000	3700 U	3900 U	380 U	580 J	180 J
Benzo(a)anthracene	ug/kg	224	11000	3900 U	380 U	1100 J	870 J
Benzo(a)pyrene	ug/kg	61	7500	3900 U	380 U	760 J	990 J
Benzo(b)fluoranthene	ug/kg	224	15000	3900 U	380 U	840 J	1000 J
Benzo(k)fluoranthene	ug/kg	224	7700	3900 U	380 U	850 J	770 J
Benzo(g,h,i)perylene	ug/kg	50000	9300	3900 U	380 U	820 U	270 J
Carbazole	ug/kg	--	3700 U	3900 U	380 U	290 J	490 U
Chrysene	ug/kg	400	14000	3900 U	380 U	1200 J	900 J
Dibenz(a,h)anthracene	ug/kg	14	2700 J	3900 U	380 U	820 U	490 U
Dibenzofuran	ug/kg	6200	3700 U	3900 U	380 U	300 J	490 U
Fluoranthene	ug/kg	50000	14000	2100 J	380 U	2500 J	2000 J
Fluorene	ug/kg	50000	3700 U	3900 U	380 U	420 J	490 U
Indeno(1,2,3-cd)pyrene	ug/kg	3200	7900	3900 U	380 U	820 U	350 J
2-Methylnaphthalene	ug/kg	36400	3700 U	3900 U	380 U	310 J	490 U
Naphthalene	ug/kg	13000	3700 U	3900 U	380 U	820 U	490 U
Phenanthrene	ug/kg	50000	1500 J	3000 J	380 U	2800 J	580 J
Pyrene	ug/kg	50000	15000	1800 J	380 U	1500 J	1200 J
PCBs							
Aroclor 1254	ug/kg	10000	37 U	400	38 U	41 U	49 U
General Chemistry							
Percent solids	%	--	88.3	83.8	86.8	85.5	67.1
Cyanide, total	mg/kg	--	0.57 U	0.60 U	0.58 U	0.62 U	0.74 U

TABLE 4.1

ORGANIC COMPOUNDS DETECTED IN SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.

Boring Location:			SB-27	SB-29	SB-30
Area:			Haz. Waste Storage	Parking Lots --	Parking Lots --
Sample Date:			02/09/2000	02/10/2000	02/10/2000
Parameters	Units	Rec.Clean. 1			
Volatile Organics					
Carbon disulfide	ug/kg	2700	6.4 U	5.7 U	5.9 U
Chlorobenzene	ug/kg	1700	6.4 U	3.9 J	2.8 J
Ethylbenzene	ug/kg	5500	6.4 U	5.7 U	5.9 U
Toluene	ug/kg	1500	6.4 U	3.6 J	5.9 U
Xylenes (total)	ug/kg	1200	6.4 U	5.7 U	5.9 U
Acetone	ug/kg	200	26 U	23 U	24 U
Semi-volatile Organics					
Acenaphthene	ug/kg	50000	430 U	380 U	780 U
Acenaphthylene	ug/kg	41000	430 U	380 U	780 U
Anthracene	ug/kg	50000	430 U	380 U	290 J
Benzo(a)anthracene	ug/kg	224	250 J	380 U	1000
Benzo(a)pyrene	ug/kg	61	230 J	380 U	870
Benzo(b)fluoranthene	ug/kg	224	230 J	380 U	830
Benzo(k)fluoranthene	ug/kg	224	200 J	380 U	710 J
Benzo(g,h,i)perylene	ug/kg	50000	430 U	380 U	330 J
Carbazole	ug/kg	--	430 U	380 U	780 U
Chrysene	ug/kg	400	260 J	380 U	1100
Dibenz(a,h)anthracene	ug/kg	14	430 U	380 U	780 U
Dibenzofuran	ug/kg	6200	430 U	380 U	780 U
Fluoranthene	ug/kg	50000	650 J	380 U	2000
Fluorene	ug/kg	50000	430 U	380 U	780 U
Indeno(1,2,3-cd)pyrene	ug/kg	3200	430 U	380 U	360 J
2-Methylnaphthalene	ug/kg	36400	430 U	380 U	500 J
Naphthalene	ug/kg	13000	430 U	380 U	340 J
Phenanthrene	ug/kg	50000	360 J	380 U	1400
Pyrene	ug/kg	50000	360 J	380 U	1400
PCBs					
Aroclor 1254	ug/kg	10000	43 U	38 U	39 U
General Chemistry					
Percent solids	%	--	77.7	87.0	85.1
Cyanide, total	mg/kg	--	2.6 J	0.57 U	0.59 U

TABLE 4.1

ORGANIC COMPOUNDS DETECTED IN SOIL
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.

Notes

U - Not detected at or above the associated value.

J - Estimated.

-- - Not applicable.

1 - New York State Dept. of Environmental Conservation, "Determination of Soil Cleanup Objectives and Cleanup Levels" (TAGM 4046), April 1995.

TABLE 4.2

INORGANIC COMPOUNDS DETECTED IN SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.

			Boring Location:	SB-2	SB-3	SB-4	SB-5	SB-9	SB-13
			Area:	Paint Storage	Assembly Area	Assembly Area	Assembly Area	Press Pit	Machine Pit
Metals	*Units*	*Rec.Clean.* [1]	*Background* [1]						
Mercury	mg/kg	0.1	0.001-0.2	0.24 J	0.18 J	0.025 J	0.036 J	0.038 J	0.019 J
Antimony	mg/kg	--	--	2.9 J	2.5 J	0.32 J	0.31 J	0.72 J	7.2 UJ
Silver	mg/kg	--	--	1.3 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
Aluminum	mg/kg	--	33000	7200	10100	11300	13300	9770	7770
Arsenic	mg/kg	7.5	3-12	8.1	6.6	5.3	4.9	5.6	5
Barium	mg/kg	300	15-600	125	78.5	87	83.7	27.4	67.7
Beryllium	mg/kg	0.16	0-1.75	0.47	0.58	0.57	0.69	0.4	0.42
Calcium	mg/kg	--	130-35000	48200 J	56400 J	89400 J	23300 J	13500 J	78800 J
Cadmium	mg/kg	1	0.1-1	0.36	0.8	0.51	0.16	0.14	0.31
Zinc	mg/kg	20	9-50	96.9	85.6	69.5	73.2	35.9	55.7
Cobalt	mg/kg	30	2.5-60	8.2	14.2	10	10.9	5.6	7.2
Chromium	mg/kg	10	1.5-40	16.5	23	16.4	18.2	11.3	13.5
Copper	mg/kg	--	--	39.7 J	57 J	17.5 J	24 J	15.5 J	15.5 J
Iron	mg/kg	2000	2000-550000	22700	30400	21200	22600	21200	15200
Potassium	mg/kg	--	8500-43000	1130	1270	2420	2390	831	1660
Magnesium	mg/kg	--	100-5000	14600 J	16600 J	29100 J	15800 J	2640 J	26200 J
Manganese	mg/kg	--	50-5000	313 J	594 J	839 J	372 J	219 J	330 J
Sodium	mg/kg	--	6000-8000	142 U	172 U	238	190 U	199 U	226
Nickel	mg/kg	13	0.5-25	13.6	27	16.4	19.9	11.4	15.1
Lead	mg/kg	--	200-504	284	95.6	20.9	15.7	42.8	10.2
Selenium	mg/kg	2	0.1-3.7	0.63 U	1.2 U	1.2 U	0.67 U	0.24	1.2 U
Thallium	mg/kg	--	--	0.49	1.2 U	1.2 U	1.3 U	0.55	1.2 U
Vanadium	mg/kg	150	1-300	21.7	23.8	24.4	29.6	17.7	20

TABLE 4.2

INORGANIC COMPOUNDS DETECTED IN SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.

			Boring Location:	SB-14	SB-15	SB-18	SB-27	SB-29	SB-30
			Area:	Paint Booth	20,000 Gal. UST	20,000 Gal. UST	Haz. Waste	Parking Lots	Parking Lots
Metals	*Units*	*Rec.Clean. 1*	*Background 1*						
Mercury	mg/kg	0.1	0.001-0.2	0.12 U	0.12 U	0.35	1.3	0.014 J	0.22 J
Antimony	mg/kg	--	--	6.9 UJ	0.34	1.3	0.83	0.41 J	29.5 J
Silver	mg/kg	--	--	1.2 U	1.2 U	1.5 U	0.22	1.1 U	0.1
Aluminum	mg/kg	--	33000	4800	4450	2950	8820	19400	3580
Arsenic	mg/kg	7.5	3-12	0.98	4.4	9.8	9.5	6	18
Barium	mg/kg	300	15-600	35.5	33.3	115	269	199	114
Beryllium	mg/kg	0.16	0-1.75	0.26	0.42	0.46	0.53	1.3	0.54
Calcium	mg/kg	--	130-35000	113000 J	60100	12000	43100	21700 J	11700 J
Cadmium	mg/kg	1	0.1-1	0.24	0.5	0.37	0.65	0.52	0.54
Zinc	mg/kg	20	9-50	38.8	55.8	199	246	95	194
Cobalt	mg/kg	30	2.5-60	4	4.4	4.7	8.5	49.7	7.9
Chromium	mg/kg	10	1.5-40	8.3	20.6	6.4	16.4	22.2	11.6
Copper	mg/kg	--	--	9.2 J	28.8 J	41.7 J	49.4 J	20.3 J	255 J
Iron	mg/kg	2000	2000-550000	9980	11500	11100	17700	37500	25800
Potassium	mg/kg	--	8500-43000	1040	649	594	2830	1640	466
Magnesium	mg/kg	--	100-5000	38400 J	8970 J	2480 J	10600 J	5540 J	2610 J
Manganese	mg/kg	--	50-5000	239 J	702 J	112 J	677 J	1680 J	159 J
Sodium	mg/kg	--	6000-8000	168 U	121 U	296	406	914	150 U
Nickel	mg/kg	13	0.5-25	7.1	14	8.4	16.4	17	16.5
Lead	mg/kg	--	200-504	5.8	19.6	301	419	93.1	764
Selenium	mg/kg	2	0.1-3.7	0.58 U	0.62 U	1.5	0.65 U	0.45	1.2
Thallium	mg/kg	--	--	1.2 U	0.59	0.82	0.52	0.43	1.2 U
Vanadium	mg/kg	150	1-300	13.4	13.1	14	21.1	32.9	12.7

Notes:

(1) "Determination of Soil Cleanup Objectives and Cleanup Levels", NYSDEC Technical and Administrative Guidance Memorandum 4046, April 1995.

J Associated value is estimated.

U Non-detect at associated value.

UST Underground Storage Tank.

Haz. Hazardous.

Rec. Clean. Recommended Soil Cleanup Objective.

[ ] Sample concentration exceeding recommended cleanup objective and background concentrations.

TABLE 4.3

COMPOUNDS DETECTED IN WATER
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.

Location:		DRS-001	DRS-002	DRS-003
Sample ID:		W-14791-DRS-001	W-14791-DRS-002	W-14791-DRS-003
Sample Date:		02/09/2000	02/09/2000	02/09/2000
Parameters	Units			
Volatile Organics				
Trichloroethene	ug/L	7.0	5.0 U	5.0 U
Semi-volatile Organics				
Benzo(b)fluoranthene	ug/L	10 U	10 U	0.96 J
Chrysene	ug/L	10 U	10 U	1.1 J
Di-n-butyl phthalate	ug/L	10 U	2.0 J	10 U
Fluoranthene	ug/L	10 U	10 U	0.95 J
Pyrene	ug/L	10 U	10 U	0.75 J
Metals				
Mercury	ug/L	0.70	0.21	2.7
Antimony	ug/L	3.2	5.4	7.4
Silver	ug/L	10.0 U	10.0 U	0.76
Aluminum	ug/L	397	883	11800
Arsenic	ug/L	7.0	3.3	18.3
Barium	ug/L	322	97.5	326
Beryllium	ug/L	0.19 U	0.22 U	0.89
Calcium	ug/L	50400	100000	108000
Cadmium	ug/L	6.2	10.2	23.8
Zinc	ug/L	2680	1230	1290
Cobalt	ug/L	15.2	6.7	17.2
Chromium	ug/L	9.7 U	13.1 U	90.2
Copper	ug/L	54.5	61.8	307
Iron	ug/L	69600	8460	105000
Potassium	ug/L	20100	20000	17500
Magnesium	ug/L	28000	22300	39700
Manganese	ug/L	280	117	1850
Sodium	ug/L	81700	333000	105000
Nickel	ug/L	40.0 U	40.0 U	53.0
Lead	ug/L	224	198	1320
Selenium	ug/L	3.2 J	2.5 J	4.4 J
Thallium	ug/L	10.0 U	5.3	10.0 U
Vanadium	ug/L	3.7	3.7	63.4

TABLE 4.3

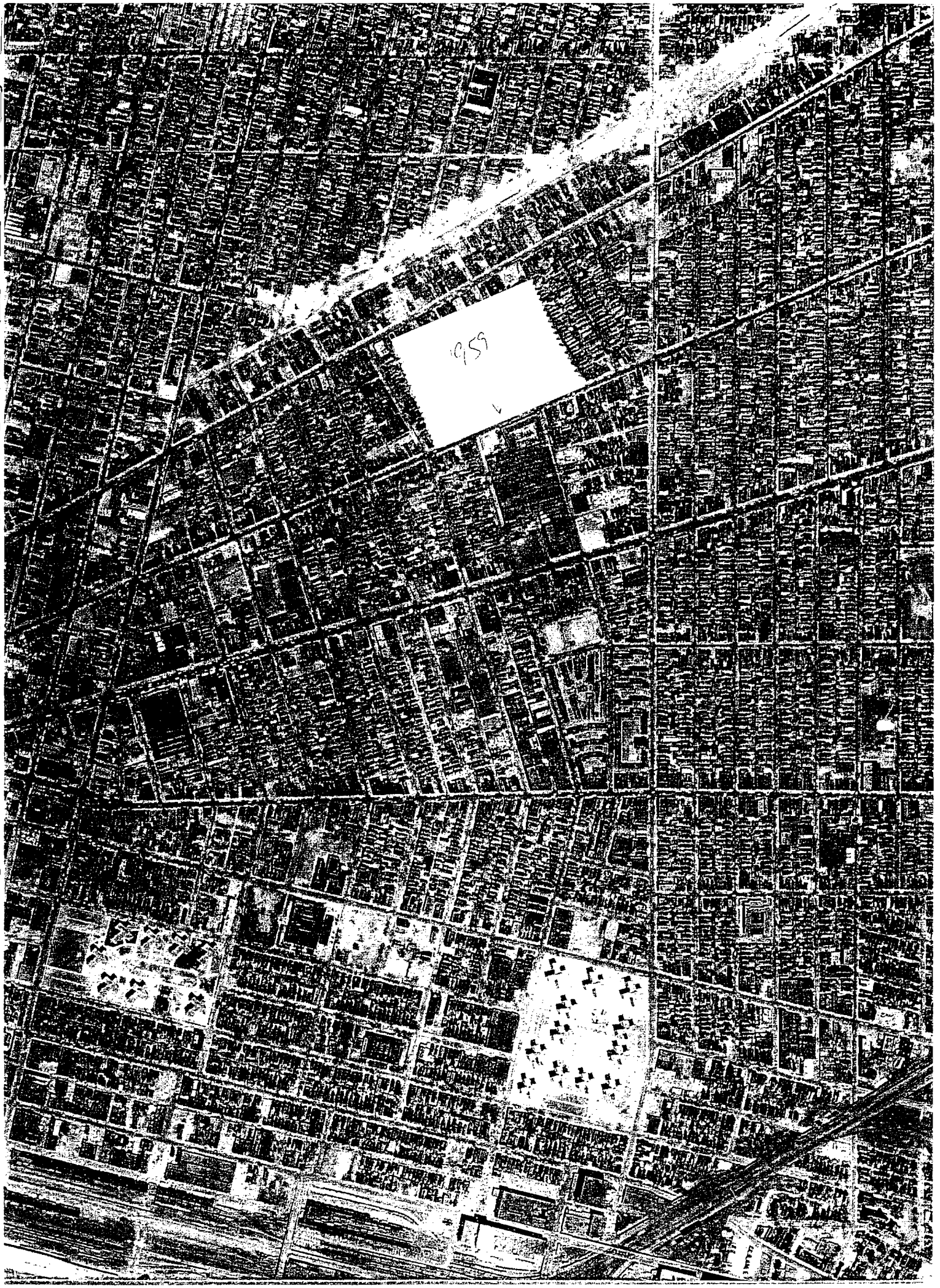
COMPOUNDS DETECTED IN WATER
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.

Notes

U - Not detected at or above the associated value.
J - Estimated.
-- - Not applicable.

APPENDIX A

AERIAL PHOTOGRAPHS


1959


1966


1978


1983


1995

APPENDIX B

SANBORN FIRE INSURANCE MAPS

Environmental Data Resources, Inc.
an edr company

"Linking Technology with Tradition"

Sanborn™ Map Report

Ship to: John Monell
CRA Services
2055 Niagara Falls Blvd.
Niagara Falls, NY 14304

Order Date: 1/10/2000 **Completion Date:** 01/11/2000
Inquiry #: 450757.2S
P.O. #: 14791
Site Name: Buffalo Forge
Address: 490 Broadway
City/State: Buffalo, NY 14204
Cross Streets: Sycamore

1093659AAK 716-297-6150

Based on client-supplied information, fire insurance maps for the following years were identified

1889 - 1 - map
1899 - 1 - map
1926 - 1 - map
1950 - 1 - map
1986 - 1 - map

Total Maps: 5

Limited Permission to Photocopy

CRA Services (the client) is permitted to make up to THREE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Electronic Sanborn Map Images
USER'S GUIDE

Thank you for your interest in electronic Sanborn Map images. The following are guidelines for accessing the images and for transferring them to your system. If you have any questions about the use of electronic Sanborn Map images, contact your EDR Account Executive at 1-800-352-0050.

Organization of Electronic Sanborn Image File

- First Page — Sanborn Map Report, listing years of coverage
- Second Page — Electronic Sanborn Map Images USER'S GUIDE
- Third Page — Oldest Sanborn Map Image
- Last Page — Most recent Sanborn Map Image

Navigating the Electronic Sanborn Image File

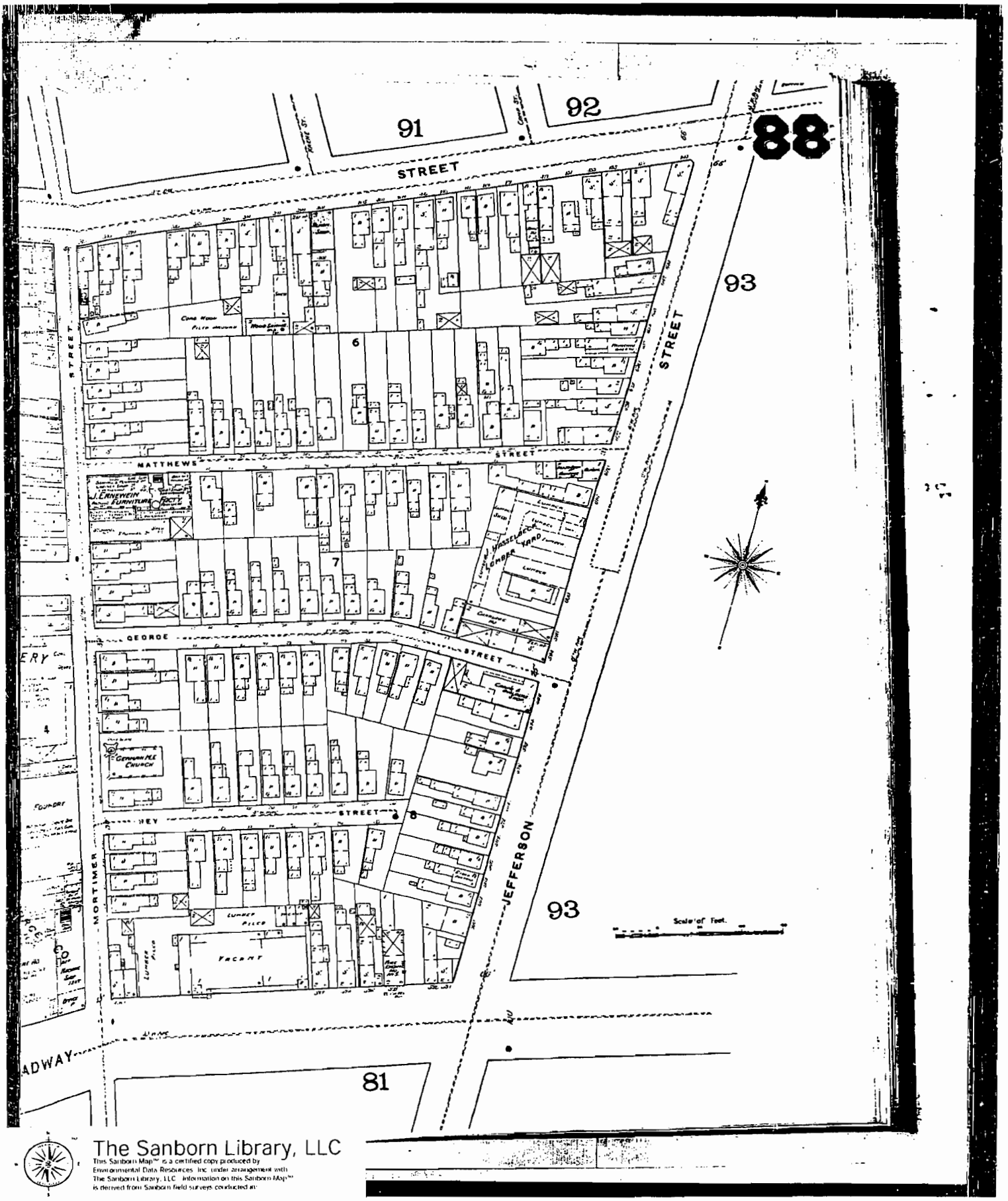
- Open file on screen.
- Identify TP (Target Property) on the most recent map.
- Find TP on older printed images.
- To view the image more clearly, zoom to 250%.
  - 200-250% is the approximate equivalent scale of hardcopy Sanborn Maps.
  - Viewing above 400% will tend to pixelate the display.
- Zooming in on an image:
  - Click on the % in the lower left hand corner and type in ____%.
  - Use the magnifying tool and drag a box around the TP area.

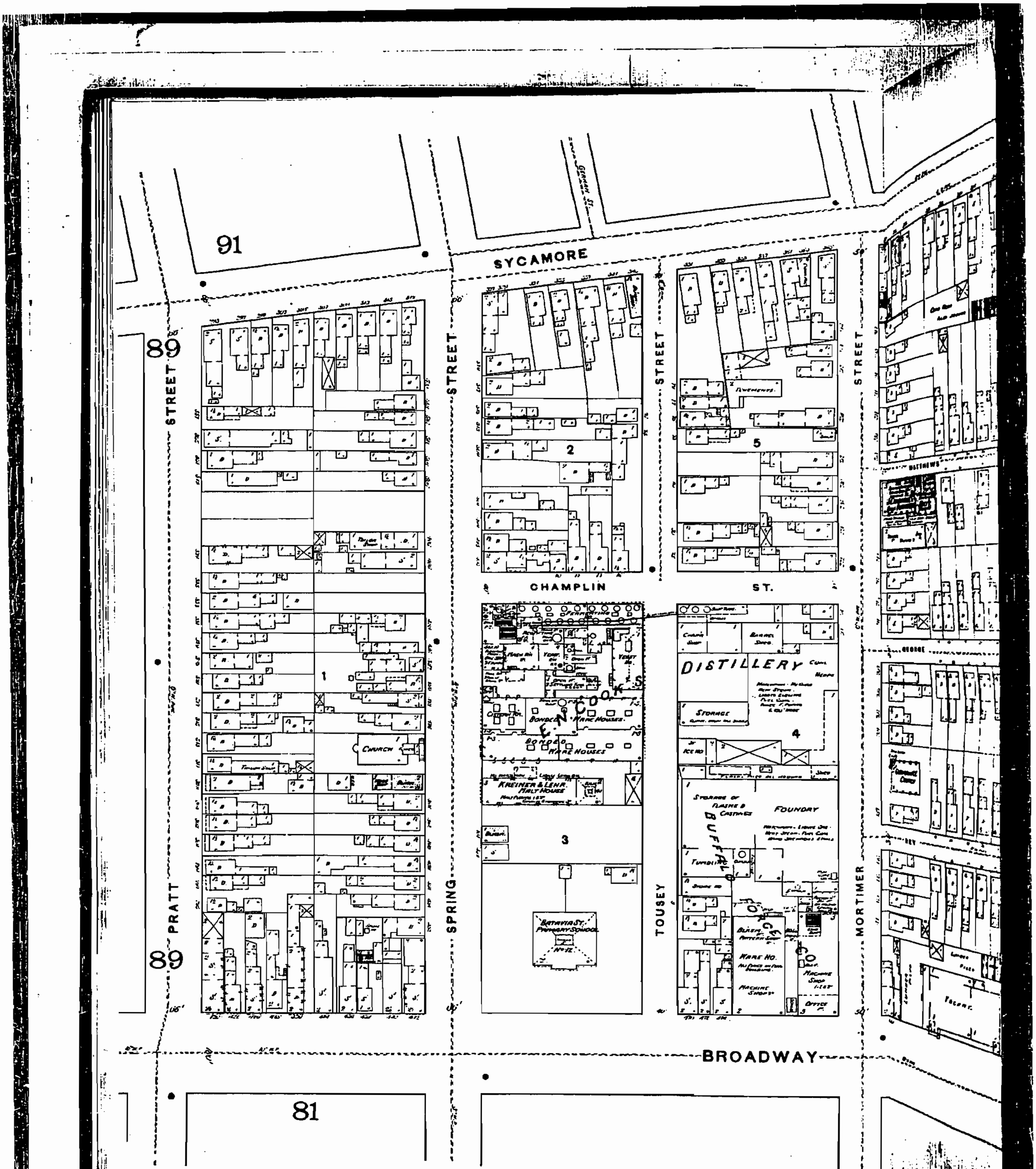
Printing a Sanborn Map from the Electronic File

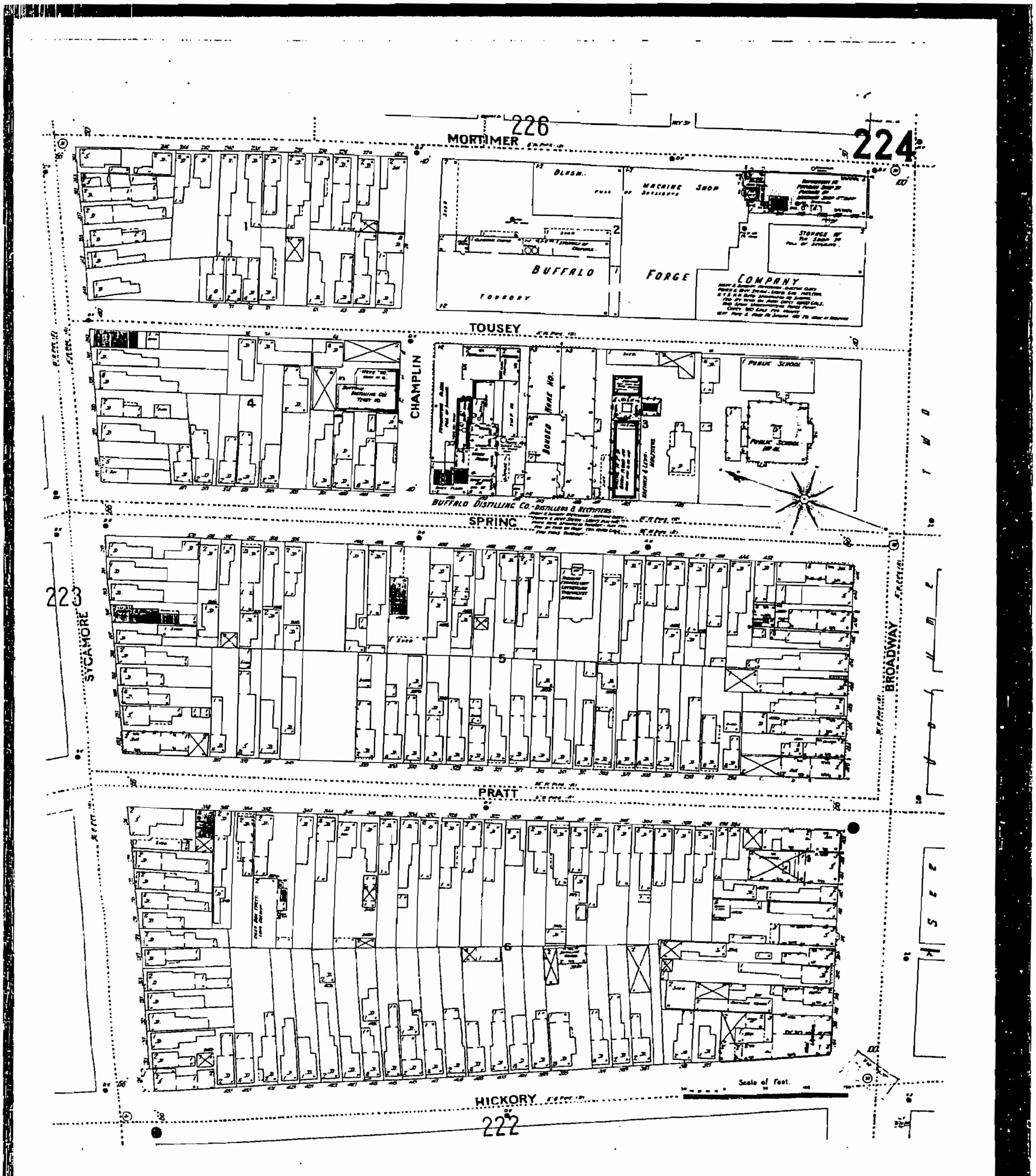
- EDR recommends printing all images at 300 dpi (300 dpi prints faster than 600 dpi).
- To print only the TP area, cut and paste the area from Adobe Acrobat to Microsoft Word, or other word processor
  - Go to the Menu Bar.
  - Highlight 'Tools'.
  - Highlight 'Select Graphics'.
  - Draw a box around the area of interest.
  - Go to the Menu Bar.
  - Highlight 'Edit'.
  - Highlight 'Copy'.
  - You can paste directly into a report, if necessary. Go to a word processor such as Microsoft Word and paste. Print from the word processor.

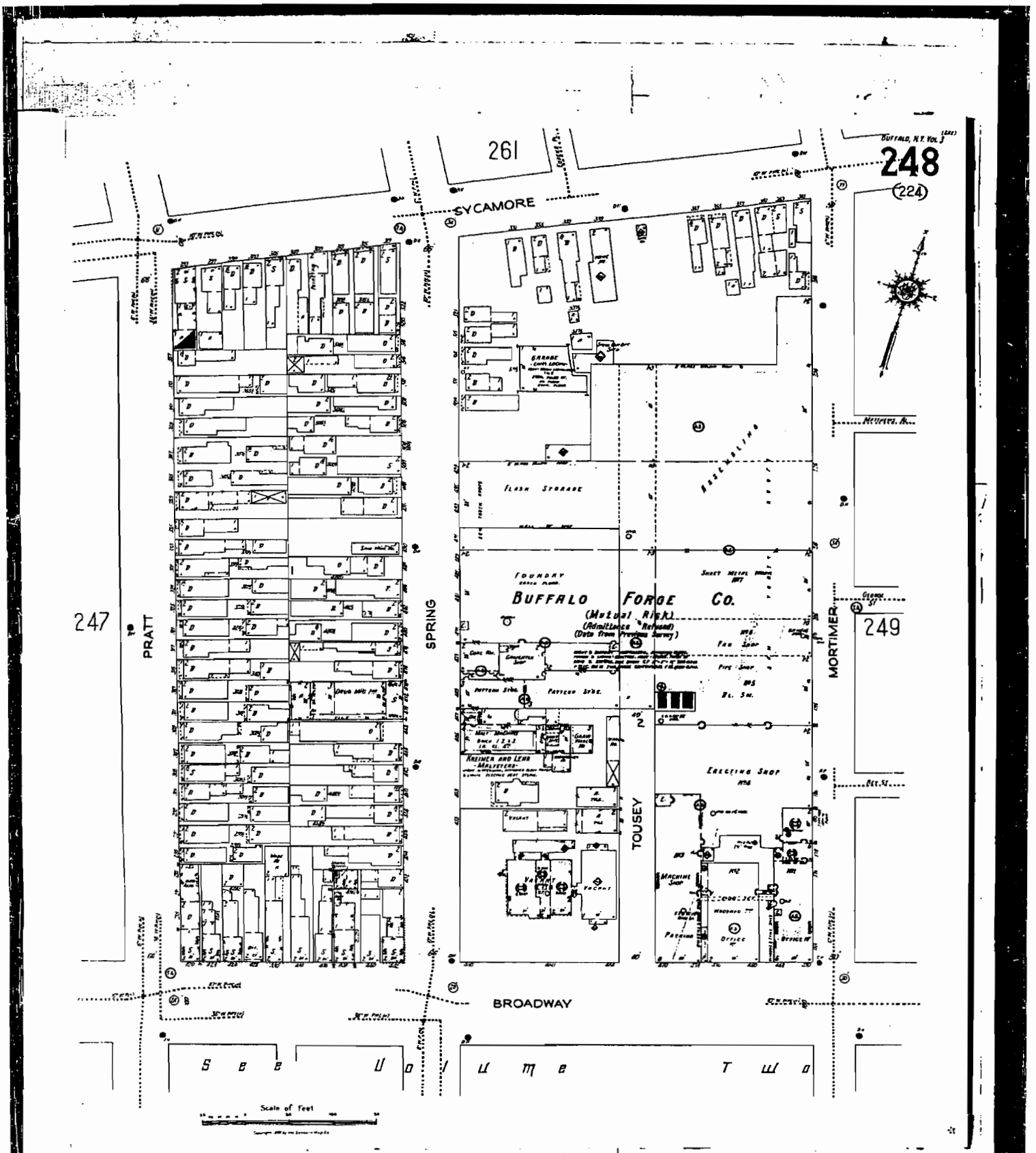
Important Information about Email Delivery of Electronic Sanborn Map Images

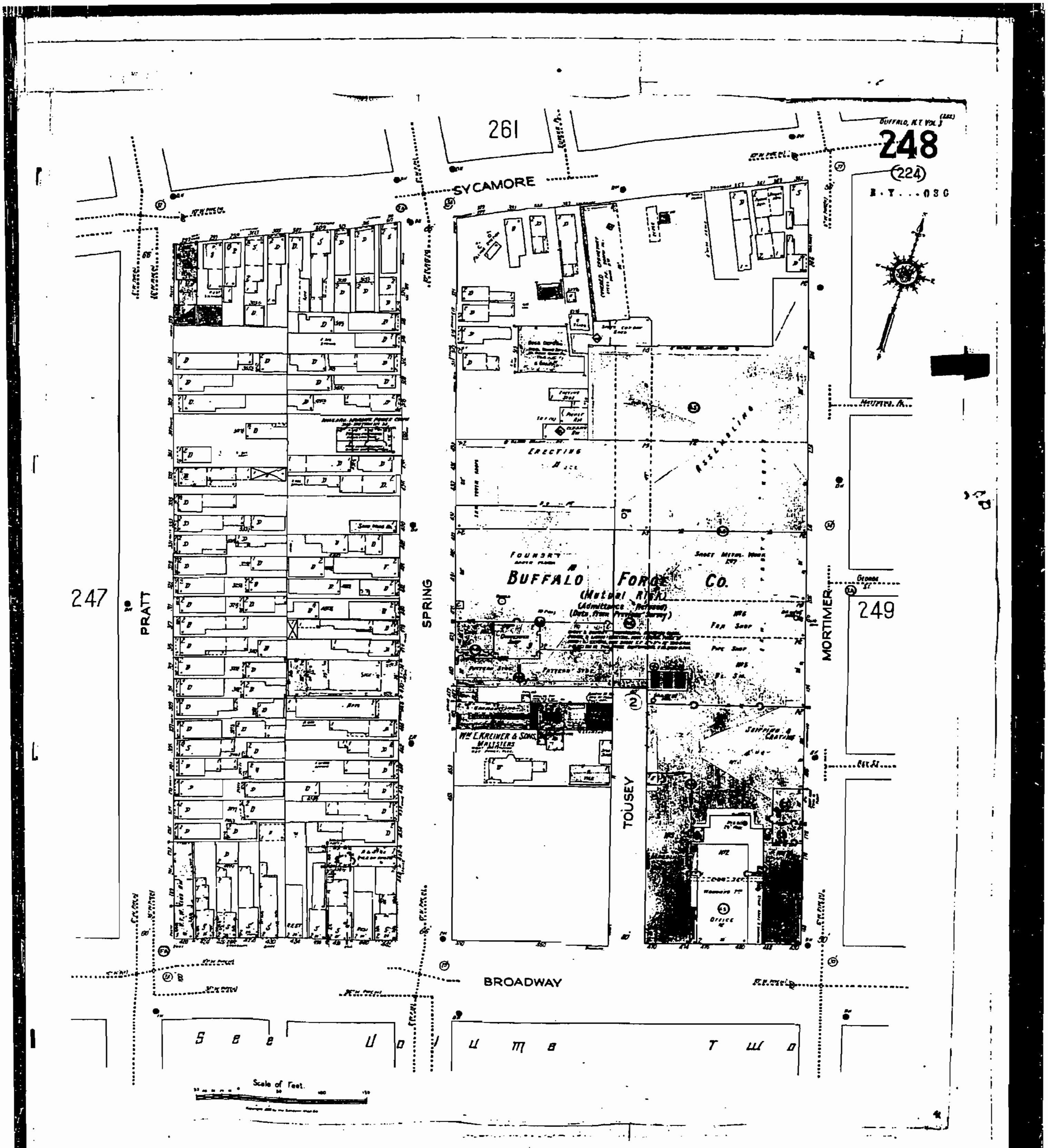
- Images are grouped into one file, up to 2MB.
- In cases where in excess of 6-7 map years are available, the file size typically exceeds 2MB. In these cases, you will receive multiple files, labeled as 1 of 3, 2 of 3, etc. including all available map years.
- Due to file size limitations, certain ISPs, including AOL, may occasionally delay or decline to deliver files. Please contact your ISP to identify their specific file size limitations.

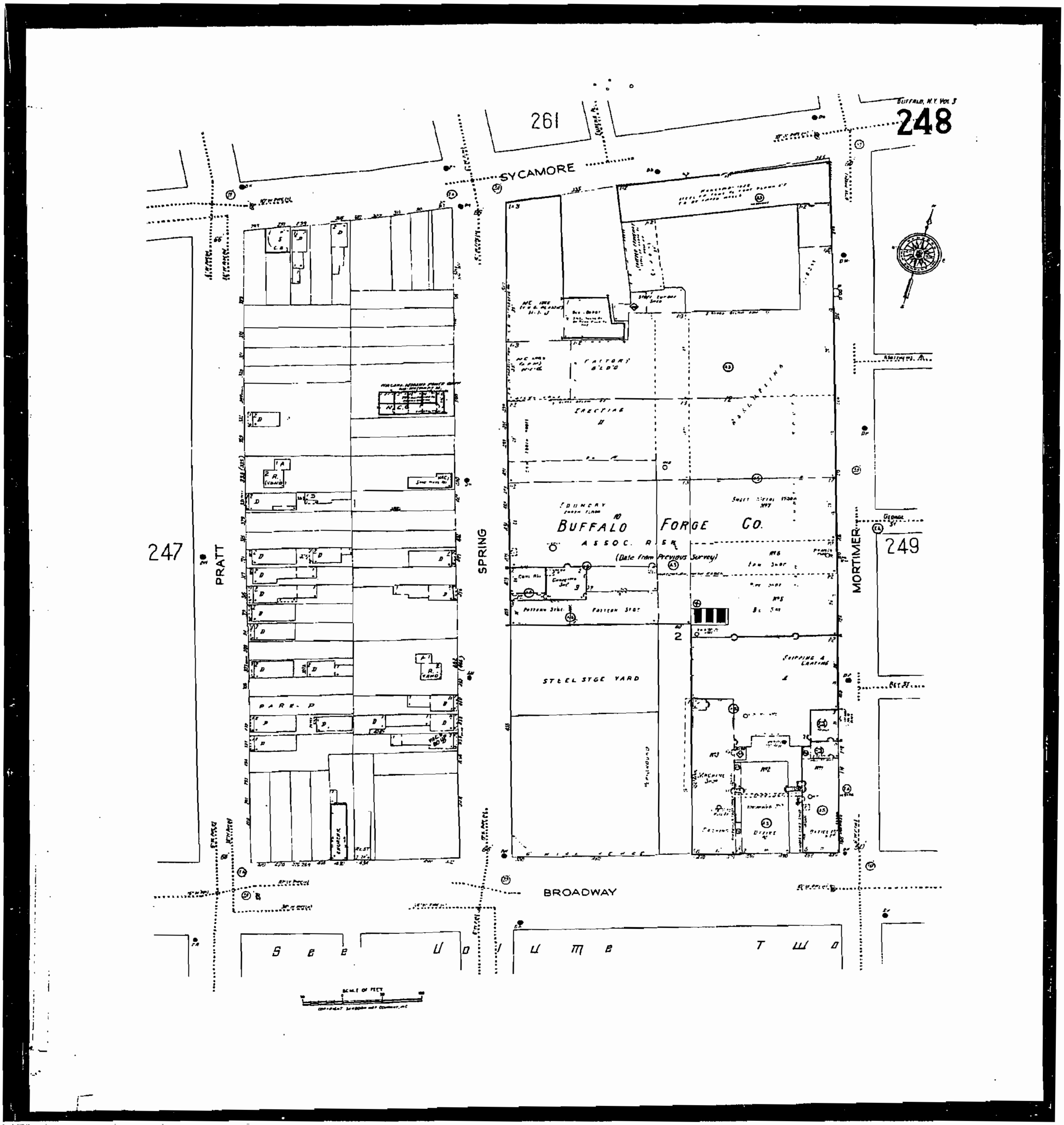












APPENDIX C

STRATIGRAPHIC AND INSTRUMENTATION LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-1
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.5	CONCRETE	001	⊠		0
	CL-SILTY CLAY (NATIVE), trace fine sand, red brown, dry, no odor, some concrete debris @ 0.5ft BGS (on top of clay)	-2.0	BENTONITE AND SOIL CUTTINGS				
2.5	END OF HOLE @ 2.0ft BGS		2" Ø BOREHOLE				
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-02)
Page 1 of 1

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-2
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.4	CONCRETE	003			0
	CL-GRAVELLY SILTY CLAY (NATIVE), red/brown, dry to moist		BENTONITE AND SOIL CUTTINGS				
-2.5							
	- wet, shaley partings, refusal (@ 4.5ft BGS)	-4.5	2" Ø BOREHOLE				
-5.0	END OF HOLE @ 4.5ft BGS						
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-3
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
-2.5	CL-SILTY CLAY (NATIVE), some fine gray and white sands, red/brown, dry, no odor		BENTONITE AND SOIL CUTTINGS				
-5.0	- refusal (@ 5.0ft BGS)	-5.0	2" Ø BOREHOLE	004			0
	END OF HOLE @ 5.0ft BGS						
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-04)
Page 1 of 1

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-4
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CL-SILTY CLAY (NATIVE), some to trace fine gravel, brown/olive, moist, no odor		BENTONITE AND SOIL CUTTINGS				
-2.5							
-5.0	- motor oil odor (4.5 to 5.0ft BGS) - refusal (@ 5.0ft BGS)	-5.0	2" Ø BOREHOLE	005	X		0
	END OF HOLE @ 5.0ft BGS						
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-5
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
2.5	CL-SILTY CLAY (NATIVE), with some to trace fine gravel, olive/brown, moist to wet, no odor		BENTONITE AND SOIL CUTTINGS				
5.0	- refusal (@ 5.0ft BGS)	-5.0	2" Ø BOREHOLE	006			0
	END OF HOLE @ 5.0ft BGS						
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE: REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-6
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.5	CONCRETE				0
	FILL-SAND, trace silt, fine grained sand, brown						
2.5	CL-SILTY CLAY (NATIVE), red/brown, dry to moist, no odor	-2.5	BENTONITE AND SOIL CUTTINGS				
5.0							
7.5			2" Ø BOREHOLE				0
	END OF HOLE @ 9.0ft BGS	-9.0					
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-07)
Page 1 of 1

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-7
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.5	CONCRETE				
	FILL-SAND, trace silt, fine grained sand, brown						
-2.5	CL-SILTY CLAY (NATIVE), red/brown, dry to moist, no odor	-2.5	BENTONITE AND SOIL CUTTINGS				
-5.0							
-7.5			2" Ø BOREHOLE				
	END OF HOLE @ 9.0ft BGS	-9.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-8
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.4	CONCRETE				0
	FILL-SAND and SILT, fine grained sand, dark stained						
-2.5							
	SM-SILTY SAND, with some red/brown clay	-3.3	BENTONITE AND SOIL CUTTINGS				
	CL-SILTY CLAY (NATIVE), red/brown, dry to moist, no odor	-3.3					0
-5.0							
-7.5			2" Ø BOREHOLE				
	END OF HOLE @ 9.0ft BGS	-9.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-9
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.4	CONCRETE				
	FILL-SAND and SILT, fine grained sand, dark stained						
-2.5			BENTONITE AND SOIL CUTTINGS	007	⊠		0
	SM-SILTY SAND, with some red/brown clay	-3.3					
	CL-SILTY CLAY (NATIVE), red/brown, dry to moist, no odor	-3.3					
-5.0							
-7.5			2" Ø BOREHOLE				
	END OF HOLE @ 9.0ft BGS	-9.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-10
DATE COMPLETED: FEBRUARY 7, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	WOOD BLOCKS	-.4	BENTONITE AND SOIL CUTTINGS				0
	CONCRETE FLOOR SLAB	-.6					
2.5	FILL-SAND, SILT and CLAY, brown, dry to moist, no odor	-1.5	2" Ø BOREHOLE				
	- refusal (@ 1.5ft BGS)						
5.0	END OF HOLE @ 1.5ft BGS						
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-11
DATE COMPLETED: FEBRUARY 8, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.4	BENTONITE AND SOIL CUTTINGS				0
	CL-SILTY CLAY (NATIVE), with some to trace fine gravel, red/brown, dry to moist, no odor						
2.5							
5.0			2" Ø BOREHOLE				0
7.5							
	END OF HOLE @ 8.0ft BGS	-8.0					
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-12)
Page 1 of 1

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-12
DATE COMPLETED: FEBRUARY 8, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	CONCRETE FLOOR SLAB	-.4	BENTONITE AND SOIL CUTTINGS				0
-2.5	CL-SILTY CLAY (NATIVE), with some to trace fine gravel, red/brown, dry to moist, no odor						
-5.0			2" Ø BOREHOLE				0
-7.5							
	END OF HOLE @ 8.0ft BGS	-8.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-13
DATE COMPLETED: FEBRUARY 8, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ROCKS IN MACHINE PIT		BENTONITE AND SOIL CUTTINGS				
		-1.0					
-2.5	CL-SILTY CLAY (NATIVE), with trace fine gravel, olive, brown, moist						
	- chemical odor (3.0 to 4.0ft BGS)		2" Ø BOREHOLE	008	☒		3-4
	- refusal (@ 4.0ft BGS)	-4.0					
-5.0	END OF HOLE @ 4.0ft BGS						
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-14
DATE COMPLETED: FEBRUARY 8, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-SANDY GRAVEL, medium to fine grained, wet						
		-1.4					
2.5	CL-SILTY CLAY (TILL), with silt seams, with some medium to fine gravel, hard, no odor		BENTONITE AND SOIL CUTTINGS				
5.0							
7.5			2" Ø BOREHOLE				
				009			0
	- refusal (@ 9.0ft BGS)	-9.0					
10.0	END OF HOLE @ 9.0ft BGS						
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-15
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
0	FILL-SANDY GRAVEL, SAND-GRAVEL MIXTURES, with some silt, trace clay, concrete debris, medium to fine grained, no odor		BENTONITE AND SOIL CUTTINGS				
2.5							
5.0							
7.5	- wet (@ 8.0ft BGS)		2" Ø BOREHOLE	010			0
10.0							
	END OF HOLE @ 11.5ft BGS	-11.5					
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-16
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-SANDY GRAVEL MIXTURE, some clay, medium to fine grained, brown, no odor		BENTONITE AND SOIL CUTTINGS				0
-2.5	- wet (@ 3.5ft BGS)						
		-4.0					
-5.0	CL-SILTY CLAY (NATIVE), trace fine sand and gravel, red/brown, wet, no odor		2" Ø BOREHOLE				0
-7.5							
	END OF HOLE @ 8.0ft BGS	-8.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-17
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
0	FILL-SANDY GRAVEL, SAND-GRAVEL MIXTURES, with some silt, trace clay, concrete debris, medium to fine grained, no odor		BENTONITE AND SOIL CUTTINGS				0
2.5							
5.0							
7.5	- wet (@ 8.0ft BGS)		2" Ø BOREHOLE				
10.0							0
	END OF HOLE @ 11.5ft BGS	-11.5					
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-18
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-SANDY SILT, GRAVEL, BRICK, CINDERS, and wood fragments		BENTONITE AND SOIL CUTTINGS				
2.5							
5.0							
	- chemical odor (@ 6.0ft BGS)		2" Ø BOREHOLE	011			1.2
	CL-SILTY CLAY (NATIVE), with trace fine sand and gravel, moist to wet	-6.5					
7.5	END OF HOLE @ 8.0ft BGS	-8.0					
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-19
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
0	FILL-SAND-GRAVEL MIXTURES, with some silt and clay, tan, brown		BENTONITE AND SOIL CUTTINGS				0
2.5							
		-3.0					
	CL-SILTY CLAY (NATIVE), with trace fine sand, red/brown, moist, no odor						
5.0			2" Ø BOREHOLE				0
7.5							
		-8.0					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-20
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-CONCRETE DEBRIS, and medium fine brown sand and gravel		BENTONITE AND SOIL CUTTINGS				0
-2.5	CL-SILTY CLAY (NATIVE), with trace fine sand, red/brown, moist, no odor	-2.5					
-5.0			2" Ø BOREHOLE				
-7.5							0
	END OF HOLE @ 8.0ft BGS	-8.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-21
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-CONCRETE DEBRIS, and medium fine brown sand and gravel		BENTONITE AND SOIL CUTTINGS				0
-2.5	CL-SILTY CLAY (NATIVE), with trace fine sand, red/brown, moist, no odor	-2.5					
-5.0			2" Ø BOREHOLE				0
-7.5		-8.0					
	END OF HOLE @ 8.0ft BGS						
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-22
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-GRAVEL and SAND, concrete debris, brown, gray		BENTONITE AND SOIL CUTTINGS				
2.5	CL-SILTY CLAY (NATIVE), with trace fine sand, hard, dry to moist, no odor	-2.5	2" Ø BOREHOLE				
5.0	- stained layer (@ 4.7ft BGS) - refusal (@ 5.0ft BGS)	-5.0		012	⊠		0
	END OF HOLE @ 5.0ft BGS						
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-23
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-GRAVEL and SAND, concrete debris, brown, gray		BENTONITE AND SOIL CUTTINGS				
-2.5	CL-SILTY CLAY (NATIVE), with trace fine sand, hard, dry to moist, no odor	-2.5	2" Ø BOREHOLE				
-5.0	- refusal (@ 5.0ft BGS)	-5.0					0
	END OF HOLE @ 5.0ft BGS						
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-24
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	FILL-GRAVEL and SAND, concrete debris, brown, gray		BENTONITE AND SOIL CUTTINGS				
-2.5	CL-SILTY CLAY (NATIVE), with trace fine sand, hard, dry to moist, no odor	-2.5	2" Ø BOREHOLE				
-5.0	- refusal (@ 5.0ft BGS)	-5.0					0
	END OF HOLE @ 5.0ft BGS						
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-25
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				0
	GM-SANDY GRAVEL (NATIVE), with silt						
2.5	CL-SILTY CLAY, with trace fine sand, dense, red/brown, dry to moist, no odor	-2.0	BENTONITE AND SOIL CUTTINGS				
5.0	END OF HOLE @ 5.0ft BGS	-5.0	2" Ø BOREHOLE				
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-26
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				0
	GM-SANDY GRAVEL (NATIVE), with silt						
-2.5	CL-SILTY CLAY, with trace fine sand, dense, red/brown, dry to moist, no odor	-2.0	BENTONITE AND SOIL CUTTINGS				
-5.0	END OF HOLE @ 5.0ft BGS	-5.0	2" Ø BOREHOLE				
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-27
DATE COMPLETED: FEBRUARY 9, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				
	GM-SANDY GRAVEL (NATIVE), with silt	-2.0	BENTONITE AND SOIL CUTTINGS				
-2.5	CL-SILTY CLAY, with trace fine sand, dense, red/brown, dry to moist, no odor		2" Ø BOREHOLE				
	- slightly dark stained soils, no odor (@ 4.5ft BGS)			013			0
-5.0	END OF HOLE @ 5.0ft BGS	-5.0					
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-28
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				0
	FILL-CLAY and BRICK DEBRIS, wet, no odor	-1.5					
-2.5	CL-SILTY CLAY (NATIVE), with trace fine sand, dense, red/brown, dry, no odor		BENTONITE AND SOIL CUTTINGS				
-5.0							0
-7.5			2" Ø BOREHOLE				
	END OF HOLE @ 8.0ft BGS	-8.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-29
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.4	ASPHALT PATCH	014	X		2
	FILL-SAND and GRAVEL, with brick debris, black	-1.0					
-2.5	CL-SILTY CLAY (NATIVE), with trace fine sand, dense, red/brown, dry, no odor		BENTONITE AND SOIL CUTTINGS				
		-4.0	2" Ø BOREHOLE				
-5.0	SM/CL-SANDY CLAY, some silt, brown, dry - refusal (@ 5.0ft BGS)	-5.0					
	END OF HOLE @ 5.0ft BGS						
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-30)
Page 1 of 1

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-30
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH	015			0
	FILL-CINDER and BRICK DEBRIS, black stained soils	-1.3					
2.5	CL-SILTY CLAY (NATIVE), with trace sand and gravel, dense, brown, dry, no odor		BENTONITE AND SOIL CUTTINGS				
	- with some sand, red/brown, no odor						
5.0							
			2" Ø BOREHOLE				
7.5	- moist (@ 8.0ft BGS)	-8.0					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▼ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-31
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				0
	FILL-CINDERS and GRAVEL, gray/black	-1.5					
-2.5	SM-SANDY SILT (NATIVE), with some clay and gravel		BENTONITE AND SOIL CUTTINGS				
		-4.0					
-5.0	CL-SILTY CLAY, with some fine sand, trace gravel, red/brown and gray		2" Ø BOREHOLE				0
-7.5	- more gravel, dense, moist, no odor (@ 7.0ft BGS)						
	END OF HOLE @ 8.0ft BGS	-8.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-32
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				
	FILL-GRAVELLY SAND and CINDER	-1.0					0
-2.5	CL-SILTY CLAY (NATIVE), with trace gravel and sand - red/brown		BENTONITE AND SOIL CUTTINGS				
-5.0	SP-GRAVELLY SAND, brown, moist	-5.0					0
	- 4" shale layer and clay (@ 6.5ft BGS)		2" Ø BOREHOLE				
-7.5	- dry, no odor (@ 7.0ft BGS)						
	END OF HOLE @ 8.0ft BGS	-8.0					
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-33
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				
	FILL-CINDERS, SLAG, GRAVEL and SAND, hard, black	-1.0					0
2.5	CL-SILTY CLAY (NATIVE), with trace fine gravel, red/brown		BENTONITE AND SOIL CUTTINGS				
	SM-SILTY SAND, with clay, brown, dry, no odor	-4.0					0
5.0			2" Ø BOREHOLE				
	- refusal (@ 6.0ft BGS)	-6.0					
	END OF HOLE @ 6.0ft BGS						
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

(WL-34)
Page 1 of 1

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-34
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				0
	FILL-CINDERS, SLAG, GRAVEL and SAND, hard, black	-1.0	BENTONITE AND SOIL CUTTINGS				
2.5	CL-SILTY CLAY (NATIVE), with trace fine gravel, red/brown						
	SM-SILTY SAND, with clay, brown, dry, no odor	-4.0	2" Ø BOREHOLE				
5.0	- refusal (@ 5.0ft BGS)	-5.0					
	END OF HOLE @ 5.0ft BGS						
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-35
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				0
	FILL-GRAVELLY SAND, brick debris	-.7	BENTONITE AND SOIL CUTTINGS				
2.5	CL-SILTY CLAY (NATIVE), with rock fragments, dense, brown, dry, no odor	-1.5	2" Ø BOREHOLE				
	- refusal (@ 1.5ft BGS)						
5.0	END OF HOLE @ 1.5ft BGS						
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							
25.0							
27.5							
30.0							
32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: BUFFALO HOWDEN INC.
PROJECT NUMBER: 14791
CLIENT: HODGSON, RUSS, ANDREWS, WOODS & GOODYEAR
LOCATION: 490 BROADWAY, BUFFALO, NEW YORK

HOLE DESIGNATION: SB-36
DATE COMPLETED: FEBRUARY 10, 2000
DRILLING METHOD: DIRECT PUSH
CRA SUPERVISOR: D. STEINER

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	0.0					
	ASPHALT	-.3	ASPHALT PATCH				0
	FILL-GRAVELLY SAND, brick debris	-.7	BENTONITE AND SOIL CUTTINGS				
-2.5	CL-SILTY CLAY (NATIVE), with rock fragments, dense, brown, dry, no odor	-1.5	2" Ø BOREHOLE				
	– refusal (@ 1.5ft BGS)						
	END OF HOLE @ 1.5ft BGS						
-5.0							
-7.5							
-10.0							
-12.5							
-15.0							
-17.5							
-20.0							
-22.5							
-25.0							
-27.5							
-30.0							
-32.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

APPENDIX D

DATA VALIDATION REPORT

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite Three
Niagara Falls, NY 14304

TELEPHONE: (716) 297-6150
FAX: (716) 297-2265

MEMORANDUM

TO: Carol Dunnigan

REF. NO.: 14791

FROM: Susan Scrocchi/tlp/js/1

DATE: March 21, 2000

RE: **Analytical Data Assessment and Validation**
Former Buffalo Forge Plant No. 1
Howden Buffalo, Inc.
Buffalo, New York

1.0 OVERVIEW

The following details the assessment and validation of analytical results reported by Severn Trent Laboratories (STL) (formerly Quanterra, Inc.) for 14 soil samples and 3 water samples collected in February 2000 at Howden Buffalo, Inc., (former Buffalo Forge Plant No. 1) Site located in Buffalo, NY. The samples were analyzed for the following:

Parameters	*Methodology*[1]
Target Compound List (TCL) Volatile Organic Compounds (VOCs)	SW-846 8260
TCL Semi-Volatile Organic Compounds (SVOCs)	SW-846 8270
Polychlorinated Biphenyls (PCBs)	SW-846 8082
Target Analyte List (TAL) Metals	SW-846 6010/7470/7471
Cyanide	SW-846 9012
Site-Specific (SS) VOCs	SW-846 8260

A sample collection and analysis summary if presented in Table 1. The analytical results are summarized in Table 2A-2C. A review of the final sample results and supporting Quality Assurance/Quality Control (QA/QC) results was performed based on information obtained from the Chain of Custody forms, finished report forms, blank data, and recovery data for matrix, blank, and surrogate spikes.

The QA/QC criteria used to assess these data are outlined in the methods and the following:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", February 1994, EPA 540/R-94/012; and

[1] Referenced from "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", USEPA SW-846, 3rd Edit, 1994 (w/rev.).

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", February 1994, EPA 540/R-94-013.

2.0 SAMPLE HOLDING TIMES

The sample holding time criteria for this program were as follows:

Parameter	*Holding Time*	
	Water	*Soil*
TCL VOCs/SS VOCs	14 days from collection to analysis	14 days from collection to analysis
TCL SVOCs	7 days from collection to extraction 40 days from extraction to analysis	14 days from collection to extraction 40 days from extraction to analysis
TCL PCBs	7 days from collection to extraction 40 days from extraction to analysis	14 days from collection to extraction 40 days from extraction to analysis
TAL Metal (except Mercury)	180 days from collection to analysis	180 days from collection to analysis
Mercury	28 days from collection to analysis	28 days from collection to analysis
Cyanide	14 days from collection to analysis	14 days from collection to analysis

All samples were extracted and/or analyzed within the above holding times with the exception of some parameters which were requested past the recommended holding times. The following exceedances were observed:

i) Three soil samples were extracted for SVOCs on the 16th day. All associated positive results were qualified as estimated (see Table 3) and all non-detect results were judged to be acceptable based on the minor extent of the exceedance;

ii) Three soil samples were extracted or PCBs on the 16th day. All associated results were non-detect and judged to be acceptable based on the minor extent of the exceedance; and

iii) Three cyanide analyses were performed on the 19th day after collection. All associated positive results were qualified as estimated (see Table 3) and all non-detect results were judged to be acceptable based on the minor extent of the exceedance.

3.0 SURROGATE SPIKE RECOVERY - VOCs, SVOCs, PCBs

Surrogate compounds were added to all samples prior to preparative extraction and/or analysis to assess the effects of individual sample matrices on analytical efficiency.

The appropriate surrogate compounds were added to all samples and all recoveries were acceptable indicating adequate analytical efficiency with the exception of sample S-14791-DRS-015 exhibiting a high PCB surrogate result. The results for this sample were non-detect and would not have been impacted by the implied high bias.

4.0 BLANK SPIKE (BS) ANALYSES

BSs are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

BSs were prepared and analyzed for all analyses. All recoveries were acceptable indicating adequate analyte accuracy.

5.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

MS/MSD samples were prepared and analyzed for all parameters to assess analytical accuracy and precision. All spike recoveries and Relative Percent Difference (RPD) values were acceptable, indicating adequate analytical precision and accuracy with the exception of several outlying metal recoveries and RPD values. All associated positive metals data were qualified as estimated (see Table 4). Non-detect results with associated low recoveries were qualified as estimated to reflect the implied low bias (see Table 4) and non-detect results with associated high recoveries would not have been impacted by the implied high bias.

6.0 LABORATORY BLANK ANALYSES

Contamination introduced by the laboratory is characterized by the analysis of laboratory blanks. These blanks are prepared from deionized water and are extracted and/or analyzed with each batch of samples.

Laboratory blanks were prepared and analyzed at the required frequency for all parameters. The blank results were generally non-detect for the compounds of interest with the exception of low concentrations of various metals. All associated sample results with concentrations comparable to the concentrations present in the blanks were qualified as non-detect (see Table 5).

7.0 FIELD QA/QC

A rinse blank and a trip blank were submitted to evaluate the possibility of cross-contamination during sample shipment and storage. All results were non-detect for the analytes of interest with the following exceptions:

i) low levels of acetone and 2-butanone were present in the rinse blank and the trip blank. All associated sample results with similar concentrations were qualified as non-detect (see Table 6); and

ii) low levels of various metals were present in the rinse blank. All associated sample results with similar concentrations were qualified as non-detect (see Table 6).

8.0 CONCLUSION

The data produced by STL are acceptable with the qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.
BUFFALO, NEW YORK
FEBRUARY 2000

Sample I.D.	*Soil Boring Number*	*Location*	*Sample Date*	*Analyses*
S-14791-DRS-001	SB-1	Transformer Room	02/07/00	PCBs
S-14791-DRS-003	SB-2	Paint Storage Room	02/07/00	TCL VOCs, TCL SVOCs, PCBs, TAL Metals, Cyanide
S-14791-DRS-004	SB-3	Machine Shop Floor Assembly Area	02/07/00	TCL VOCs, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-005	SB-4	Machine Shop Floor Assembly Area	02/07/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-006	SB-5	Machine Shop Floor Assembly Area	02/07/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-007	SB-9	Press Pit	02/07/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-008	SB-13	Machine Pit in Sept. 220	02/08/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-009	SB-14	Paint Grate	02/08/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-010	SB-15	20,000 UST in Broadway Yard	02/09/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-011	SB-18	20,000 UST in Broadway Yard	02/09/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-012	SB-22	AST in Sycamore Yard	02/09/00	STARS-gasoline
S-14791-DRS-013	SB-27	Hazardous Waste Storage Area in Sycamore Yard	02/09/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-014	SB-29	Parking Area Between Broadway and Rey St.	02/10/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
S-14791-DRS-015	SB-30	Parking Area Between Rey and George St.	02/10/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
W-14791-DRS-001	-	Water Sample #1 - Department 370	02/09/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
W-14791-DRS-002	-	Water Sample #2 - Mortimer Street Entrance	02/09/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
W-14791-DRS-003	-	Water Sample #3 - Department 100	02/09/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
RB-14791-DRS-001	-	-	02/10/00	TCL VOCS, TCL SVOCs, PCBs, TAL METAls, Cyanide
Trip Blank	-	-	02/09/00	TCL VOCs

Notes:

AST Aboveground Storage Unit.
PCBs Polychlorinated Biphenyls.
STARS Spill Technology and Remediation Systems.
SVOCs Semi-Volatile Organic Compounds.
TAL Target Analyte List.
TCL Target Compound List.
UST Underground Storage Unit.
VOCs Volatile Organic Compounds.

TABLE 3

QUALIFIED SAMPLE DATA DUE TO HOLDING TIME EXCEEDANCES
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.
BUFFALO, NEW YORK
FEBRUARY 2000

Parameter	*Sample ID*	*Holding Time (Days)*	*Holding Time Criteria (Days)*	*Analyte*	*Sample Result*	*Units*	*Qualifier*
SVOCs	S-14791-DRS-010	16	14	Acenaphthene	270 J	µg/Kg	*
				Anthracene	580 J	µg/Kg	*
				Benzo(a)anthracene	1100	µg/Kg	J
				Benzo(a)pyrene	760 J	µg/Kg	*
				Benzo(b)fluoranthene	840	µg/Kg	J
				Benzo(k)fluoranthene	850	µg/Kg	J
				Carbazole	290 J	µg/Kg	*
				Chrysene	1200	µg/Kg	J
				Dibenzofuran	300 J	µg/Kg	*
				Fluoranthene	2500	µg/Kg	J
				Fluorene	420 J	µg/Kg	*
				2-Methylnaphthalene	310 J	µg/Kg	*
				Phenanthrene	2800	µg/Kg	J
				Pyrene	1500	µg/Kg	J
SVOCs	S-14791-DRS-011	16	14	Acenaphthylene	190 J	µg/Kg	*
				Anthracene	180 J	µg/Kg	*
				Benzo(a)anthracene	870	µg/Kg	J
				Benzo(a)pyrene	990	µg/Kg	J
				Benzo(b)fluoranthene	1000	µg/Kg	J
				Benzo(k)fluoranthene	770	µg/Kg	J
				Benzo(g,h,l)perylene	270 J	µg/Kg	*
				Chrysene	900	µg/Kg	J
				Fluoranthene	2000	µg/Kg	J
				Indeno(1,2,3-cd)pyrene	350 J	µg/Kg	*
	S-14791-DRS-011	16	14	Phenanthrene	580	µg/Kg	J
				Pyrene	1200	µg/Kg	J

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:			SB-1	SB-2	SB-3	SB-4	SB-5	SB-9	SB-13
Sample ID:			S-14791-DRS-001	S-14791-DRS-003	S-14791-DRS-004	S-14791-DRS-005	S-14791-DRS-006	S-14791-DRS-007	S-14791-DRS-008
Sample Date:			02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/08/2000
Parameters	Units								
Volatile Organics									
Bromomethane	ug/kg	--	13 U	12 U	12 U	13 U	11 U	12 U	
2-Butanone	ug/kg	--	25 U	24 U	25 U	27 U	23 U	24 U	
Carbon disulfide	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	7.2	6.0 U	
Carbon tetrachloride	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Chlorobenzene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Dibromochloromethane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Chloroethane	ug/kg	--	13 U	12 U	12 U	13 U	11 U	12 U	
Chloroform	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Chloromethane	ug/kg	--	13 U	12 U	12 U	13 U	11 U	12 U	
1,1-Dichloroethane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
1,2-Dichloroethane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
1,1-Dichloroethene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
1,2-Dichloropropane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
cis-1,3-Dichloropropene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
trans-1,3-Dichloropropene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Ethylbenzene	ug/kg	--	6.3 U	6.0 U	6.2 U	3.5 J	5.7 U	6.0 U	
2-Hexanone	ug/kg	--	25 U	24 U	25 U	27 U	23 U	24 U	
Methylene chloride	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
4-Methyl-2-pentanone	ug/kg	--	25 U	24 U	25 U	27 U	23 U	24 U	
Styrene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
1,1,2,2-Tetrachloroethane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Tetrachloroethene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Toluene	ug/kg	--	6.3 U	6.0 U	6.2 U	2.5 J	5.7 U	6.0 U	
1,1,1-Trichloroethane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
1,1,2-Trichloroethane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Trichloroethene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Vinyl chloride	ug/kg	--	13 U	12 U	12 U	13 U	11 U	12 U	
Xylenes (total)	ug/kg	--	6.3 U	6.0 U	5.0 J	18	5.7 U	9.4	
cis-1,2-Dichloroethene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
trans-1,2-Dichloroethene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Acetone	ug/kg	--	25 U	24 U	35 U	27 U	23 U	24 U	
Benzene	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Bromodichloromethane	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	
Bromoform	ug/kg	--	6.3 U	6.0 U	6.2 U	6.7 U	5.7 U	6.0 U	

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-1	SB-2	SB-3	SB-4	SB-5	SB-9	SB-13
Sample ID:		S-14791-DRS-001	S-14791-DRS-003	S-14791-DRS-004	S-14791-DRS-005	S-14791-DRS-006	S-14791-DRS-007	S-14791-DRS-008
Sample Date:		02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/08/2000
Parameters	Units							
Semi-volatile Organics								
Acenaphthene	ug/kg	--	410 U	610	220 J	560	3700 U	3900 U
Acenaphthylene	ug/kg	--	410 U	320 J	410 U	38 J	3700 U	3900 U
Anthracene	ug/kg	--	410 U	1100	410 U	250 J	3700 U	3900 U
Benzo(a)anthracene	ug/kg	--	410 U	1900	4100 U	200 J	11000	3900 U
Benzo(a)pyrene	ug/kg	--	410 U	1500	410 U	440 U	7500	3900 U
Benzo(b)fluoranthene	ug/kg	--	410 U	1300	4100 U	440 U	15000	3900 U
Benzo(k)fluoranthene	ug/kg	--	410 U	1200	4100 U	440 U	7700	3900 U
Benzo(g,h,i)perylene	ug/kg	--	410 U	890	4100 U	440 U	9300	3900 U
bis(2-Chloroethoxy)methane	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
bis(2-Chloroethyl)ether	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
bis(2-Ethylhexyl)phthalate	ug/kg	--	410 U	400 U	4100 U	440 U	3700 U	3900 U
4-Bromophenyl phenyl ether	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Butyl benzyl phthalate	ug/kg	--	410 U	400 U	4100 U	440 U	3700 U	3900 U
Carbazole	ug/kg	--	410 U	560	410 U	440 U	3700 U	3900 U
4-Chloroaniline	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
4-Chloro-3-methylphenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2-Chloronaphthalene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2-Chlorophenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
4-Chlorophenyl phenyl ether	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Chrysene	ug/kg	--	410 U	1900	4100 U	190 J	14000	3900 U
Dibenz(a,h)anthracene	ug/kg	--	410 U	280 J	4100 U	440 U	2700 J	3900 U
Dibenzofuran	ug/kg	--	410 U	500	180 J	540	3700 U	3900 U
1,2-Dichlorobenzene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
1,3-Dichlorobenzene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
1,4-Dichlorobenzene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
3,3'-Dichlorobenzidine	ug/kg	--	2000 U	1900 U	20000 U	2200 U	18000 U	19000 U
2,4-Dichlorophenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Diethyl phthalate	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2,4-Dimethylphenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Dimethyl phthalate	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Di-n-butyl phthalate	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Di-n-octyl phthalate	ug/kg	--	410 U	400 U	4100 U	440 U	3700 U	3900 U
2,4-Dinitrophenol	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
4,6-Dinitro-2-methylphenol	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
2,4-Dinitrotoluene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2,6-Dinitrotoluene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Fluoranthene	ug/kg	--	410 U	3300	410 U	850	14000	2100 J

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-1	SB-2	SB-3	SB-4	SB-5	SB-9	SB-13
Sample ID:		S-14791-DRS-001	S-14791-DRS-003	S-14791-DRS-004	S-14791-DRS-005	S-14791-DRS-006	S-14791-DRS-007	S-14791-DRS-008
Sample Date:		02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/08/2000
Parameters	Units							
Semi-volatile Organics (Cont'd)								
Fluorene	ug/kg	--	410 U	670	340 J	370 J	3700 U	3900 U
Hexachlorobenzene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Hexachlorobutadiene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Hexachlorocyclopentadiene	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
Hexachloroethane	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Indeno(1,2,3-cd)pyrene	ug/kg	--	410 U	870	4100 U	440 U	7900	3900 U
Isophorone	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2-Methylnaphthalene	ug/kg	--	410 U	290 J	130 J	34 J	3700 U	3900 U
2-Methylphenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
3&4-Methylphenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Naphthalene	ug/kg	--	410 U	900	93 J	440 U	3700 U	3900 U
2-Nitroaniline	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
3-Nitroaniline	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
4-Nitroaniline	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
Nitrobenzene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2-Nitrophenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
4-Nitrophenol	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
N-nitroso-di-n-propylamine	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
N-nitroso-di-phenylamine	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2,2'-Oxybis(1-chloropropane)	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Pentachlorophenol	ug/kg	--	2000 U	1900 U	2000 U	2200 U	18000 U	19000 U
Phenanthrene	ug/kg	--	410 U	3300	1100	470	1500 J	3000 J
Phenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
Pyrene	ug/kg	--	410 U	2600	4100 U	470	15000	1800 J
1,2,4-Trichlorobenzene	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2,4,5-Trichlorophenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
2,4,6-Trichlorophenol	ug/kg	--	410 U	400 U	410 U	440 U	3700 U	3900 U
PCBs								
Aroclor 1016	ug/kg	38 U	41 U	40 U	81 U	44 U	37 U	39 U
Aroclor 1221	ug/kg	38 U	41 U	40 U	81 U	44 U	37 U	39 U
Aroclor 1232	ug/kg	38 U	41 U	40 U	81 U	44 U	37 U	39 U
Aroclor 1242	ug/kg	38 U	41 U	40 U	81 U	44 U	37 U	39 U
Aroclor 1248	ug/kg	38 U	41 U	40 U	81 U	44 U	37 U	39 U
Aroclor 1254	ug/kg	38 U	41 U	40 U	1300	57	37 U	400
Aroclor 1260	ug/kg	38 U	41 U	40 U	81 U	44 U	37 U	39 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-1	SB-2	SB-3	SB-4	SB-5	SB-9	SB-13
Sample ID:		S-14791-DRS-001	S-14791-DRS-003	S-14791-DRS-004	S-14791-DRS-005	S-14791-DRS-006	S-14791-DRS-007	S-14791-DRS-008
Sample Date:		02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/07/2000	02/08/2000
Parameters	Units							
Metals								
Mercury	mg/kg	--	0.24 J	0.18 J	0.025 J	0.036 J	0.038 J	0.019 J
Antimony	mg/kg	--	2.9 J	2.5 J	0.32 J	0.31 J	0.72 J	7.2 UJ
Silver	mg/kg	--	1.3 U	1.2 U	1.2 U	1.3 U	1.1 U	1.2 U
Aluminum	mg/kg	--	7200	10100	11300	13300	9770	7770
Arsenic	mg/kg	--	8.1	6.6	5.3	4.9	5.6	5.0
Barium	mg/kg	--	125	78.5	87.0	83.7	27.4	67.7
Beryllium	mg/kg	--	0.47	0.58	0.57	0.69	0.40	0.42
Calcium	mg/kg	--	48200 J	56400 J	89400 J	23300 J	13500 J	78800 J
Cadmium	mg/kg	--	0.36	0.80	0.51	0.16	0.14	0.31
Zinc	mg/kg	--	96.9	85.6	69.5	73.2	35.9	55.7
Cobalt	mg/kg	--	8.2	14.2	10	10.9	5.6	7.2
Chromium	mg/kg	--	16.5	23.0	16.4	18.2	11.3	13.5
Copper	mg/kg	--	39.7 J	57.0 J	17.5 J	24.0 J	15.5 J	15.5 J
Iron	mg/kg	--	22700	30400	21200	22600	21200	15200
Potassium	mg/kg	--	1130	1270	2420	2390	831	1660
Magnesium	mg/kg	--	14600 J	16600 J	29100 J	15800 J	2640 J	26200 J
Manganese	mg/kg	--	313 J	594 J	839 J	372 J	219 J	330 J
Sodium	mg/kg	--	142 U	172 U	238	190 U	199 U	226
Nickel	mg/kg	--	13.6	27.0	16.4	19.9	11.4	15.1
Lead	mg/kg	--	284	95.6	20.9	15.7	42.8	10.2
Selenium	mg/kg	--	0.63 U	1.2 U	1.2 U	0.67 U	0.24	1.2 U
Thallium	mg/kg	--	0.49	1.2 U	1.2 U	1.3 U	0.55	1.2 U
Vanadium	mg/kg	--	21.7	23.8	24.4	29.6	17.7	20.0
General Chemistry								
Percent solids	%	86.1	79.5	83.4	81.2	74.6	88.3	83.8
Cyanide, total	mg/kg	--	0.63 U	0.60 U	0.62 U	0.67 U	0.57 U	0.60 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-14	SB-15	SB-18	SB-22	SB-27	SB-29	SB-30
Sample ID:		S-14791-DRS-009	S-14791-DRS-010	S-14791-DRS-011	S-14791-DRS-012	S-14791-DRS-013	S-14791-DRS-014	S-14791-DRS-015
Sample Date:		02/08/2000	02/09/2000	02/09/2000	02/09/2000	02/09/2000	02/10/2000	02/10/2000
Parameters	Units							
Volatile Organics								
Bromomethane	ug/kg	12 U	12 U	15 U	12 U	13 U	11 U	12 U
2-Butanone	ug/kg	23 U	23 U	30 U	24 U	26 U	23 U	24 U
Carbon disulfide	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Carbon tetrachloride	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Chlorobenzene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	3.9 J	2.8 J
Dibromochloromethane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Chloroethane	ug/kg	12 U	12 U	15 U	12 U	13 U	11 U	12 U
Chloroform	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Chloromethane	ug/kg	12 U	12 U	15 U	12 U	13 U	11 U	12 U
1,1-Dichloroethane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
1,2-Dichloroethane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
1,1-Dichloroethene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
1,2-Dichloropropane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
cis-1,3-Dichloropropene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
trans-1,3-Dichloropropene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Ethylbenzene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
2-Hexanone	ug/kg	23 U	23 U	30 U	24 U	26 U	23 U	24 U
Methylene chloride	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
4-Methyl-2-pentanone	ug/kg	23 U	23 U	30 U	24 U	26 U	23 U	24 U
Styrene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
1,1,2,2-Tetrachloroethane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Tetrachloroethene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Toluene	ug/kg	5.8 U	5.8 U	7.4 U	1.9 J	6.4 U	3.6 J	5.9 U
1,1,1-Trichloroethane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
1,1,2-Trichloroethane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Trichloroethene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Vinyl chloride	ug/kg	12 U	12 U	15 U	12 U	13 U	11 U	12 U
Xylenes (total)	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
cis-1,2-Dichloroethene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
trans-1,2-Dichloroethene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Acetone	ug/kg	23 U	23 U	67	24 U	26 U	23 U	24 U
Benzene	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Bromodichloromethane	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U
Bromoform	ug/kg	5.8 U	5.8 U	7.4 U	6.0 U	6.4 U	5.7 U	5.9 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-14	SB-15	SB-18	SB-22	SB-27	SB-29	SB-30
Sample ID:		S-14791-DRS-009	S-14791-DRS-010	S-14791-DRS-011	S-14791-DRS-012	S-14791-DRS-013	S-14791-DRS-014	S-14791-DRS-015
Sample Date:		02/08/2000	02/09/2000	02/09/2000	02/09/2000	02/09/2000	02/10/2000	02/10/2000
Parameters	Units							
Semi-volatile Organics								
Acenaphthene	ug/kg	380 U	270 J	490 U	--	430 U	380 U	780 U
Acenaphthylene	ug/kg	380 U	820 U	190 J	--	430 U	380 U	780 U
Anthracene	ug/kg	380 U	580 J	180 J	--	430 U	380 U	290 J
Benzo(a)anthracene	ug/kg	380 U	1100 J	870 J	--	250 J	380 U	1000
Benzo(a)pyrene	ug/kg	380 U	760 J	990 J	--	230 J	380 U	870
Benzo(b)fluoranthene	ug/kg	380 U	840 J	1000 J	--	230 J	380 U	830
Benzo(k)fluoranthene	ug/kg	380 U	850 J	770 J	--	200 J	380 U	710 J
Benzo(g,h,i)perylene	ug/kg	380 U	820 U	270 J	--	430 U	380 U	330 J
bis(2-Chloroethoxy)methane	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
bis(2-Chloroethyl)ether	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
bis(2-Ethylhexyl)phthalate	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
4-Bromophenyl phenyl ether	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Butyl benzyl phthalate	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Carbazole	ug/kg	380 U	290 J	490 U	--	430 U	380 U	780 U
4-Chloroaniline	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
4-Chloro-3-methylphenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2-Chloronaphthalene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2-Chlorophenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
4-Chlorophenyl phenyl ether	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Chrysene	ug/kg	380 U	1200 J	900 J	--	260 J	380 U	1100
Dibenz(a,h)anthracene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Dibenzofuran	ug/kg	380 U	300 J	490 U	--	430 U	380 U	780 U
1,2-Dichlorobenzene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
1,3-Dichlorobenzene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
1,4-Dichlorobenzene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
3,3'-Dichlorobenzidine	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
2,4-Dichlorophenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Diethyl phthalate	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2,4-Dimethylphenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Dimethyl phthalate	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Di-n-butyl phthalate	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Di-n-octyl phthalate	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2,4-Dinitrophenol	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
4,6-Dinitro-2-methylphenol	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
2,4-Dinitrotoluene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2,6-Dinitrotoluene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Fluoranthene	ug/kg	380 U	2500 J	2000 J	--	650 J	380 U	2000

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-14	SB-15	SB-18	SB-22	SB-27	SB-29	SB-30
Sample ID:		S-14791-DRS-009	S-14791-DRS-010	S-14791-DRS-011	S-14791-DRS-012	S-14791-DRS-013	S-14791-DRS-014	S-14791-DRS-015
Sample Date:		02/08/2000	02/09/2000	02/09/2000	02/09/2000	02/09/2000	02/10/2000	02/10/2000
Parameters	Units							
Semi-volatile Organics (Cont'd)								
Fluorene	ug/kg	380 U	420 J	490 U	--	430 U	380 U	780 U
Hexachlorobenzene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Hexachlorobutadiene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Hexachlorocyclopentadiene	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
Hexachloroethane	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Indeno(1,2,3-cd)pyrene	ug/kg	380 U	820 U	350 J	--	430 U	380 U	360 J
Isophorone	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2-Methylnaphthalene	ug/kg	380 U	310 J	490 U	--	430 U	380 U	500 J
2-Methylphenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
3&4-Methylphenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Naphthalene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	340 J
2-Nitroaniline	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
3-Nitroaniline	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
4-Nitroaniline	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
Nitrobenzene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2-Nitrophenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
4-Nitrophenol	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
N-nitroso-di-n-propylamine	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
N-nitroso-di-phenylamine	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2,2'-Oxybis(1-chloropropane)	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Pentachlorophenol	ug/kg	1800 U	4000 U	2400 U	--	2100 U	1800 U	3800 U
Phenanthrene	ug/kg	380 U	2800 J	580 J	--	360 J	380 U	1400
Phenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
Pyrene	ug/kg	380 U	1500 J	1200 J	--	360 J	380 U	1400
1,2,4-Trichlorobenzene	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2,4,5-Trichlorophenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
2,4,6-Trichlorophenol	ug/kg	380 U	820 U	490 U	--	430 U	380 U	780 U
PCBs								
Aroclor 1016	ug/kg	38 U	41 U	49 U	--	43 U	38 U	39 U
Aroclor 1221	ug/kg	38 U	41 U	49 U	--	43 U	38 U	39 U
Aroclor 1232	ug/kg	38 U	41 U	49 U	--	43 U	38 U	39 U
Aroclor 1242	ug/kg	38 U	41 U	49 U	--	43 U	38 U	39 U
Aroclor 1248	ug/kg	38 U	41 U	49 U	--	43 U	38 U	39 U
Aroclor 1254	ug/kg	38 U	41 U	49 U	--	43 U	38 U	39 U
Aroclor 1260	ug/kg	38 U	41 U	49 U	--	43 U	38 U	39 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY - SOIL
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-14	SB-15	SB-18	SB-22	SB-27	SB-29	SB-30
Sample ID:		S-14791-DRS-009	S-14791-DRS-010	S-14791-DRS-011	S-14791-DRS-012	S-14791-DRS-013	S-14791-DRS-014	S-14791-DRS-015
Sample Date:		02/08/2000	02/09/2000	02/09/2000	02/09/2000	02/09/2000	02/10/2000	02/10/2000
Parameters	Units							
Metals								
Mercury	mg/kg	0.12 U	0.12 U	0.35	--	1.3	0.014 J	0.22 J
Antimony	mg/kg	6.9 UJ	0.34	1.3	--	0.83	0.41 J	29.5 J
Silver	mg/kg	1.2 U	1.2 U	1.5 U	--	0.22	1.1 U	0.10
Aluminum	mg/kg	4800	4450	2950	--	8820	19400	3580
Arsenic	mg/kg	0.98	4.4	9.8	--	9.5	6.0	18.0
Barium	mg/kg	35.5	33.3	115	--	269	199	114
Beryllium	mg/kg	0.26	0.42	0.46	--	0.53	1.3	0.54
Calcium	mg/kg	113000 J	60100	12000	--	43100	21700 J	11700 J
Cadmium	mg/kg	0.24	0.50	0.37	--	0.65	0.52	0.54
Zinc	mg/kg	38.8	55.8	199	--	246	95.0	194
Cobalt	mg/kg	4.0	4.4	4.7	--	8.5	49.7	7.9
Chromium	mg/kg	8.3	20.6	6.4	--	16.4	22.2	11.6
Copper	mg/kg	9.2 J	28.8 J	41.7 J	--	49.4 J	20.3 J	255 J
Iron	mg/kg	9980	11500	11100	--	17700	37500	25800
Potassium	mg/kg	1040	649	594	--	2830	1640	466
Magnesium	mg/kg	38400 J	8970 J	2480 J	--	10600 J	5540 J	2610 J
Manganese	mg/kg	239 J	702 J	112 J	--	677 J	1680 J	159 J
Sodium	mg/kg	168 U	121 U	296	--	406	914	150 U
Nickel	mg/kg	7.1	14.0	8.4	--	16.4	17.0	16.5
Lead	mg/kg	5.8	19.6	301	--	419	93.1	764
Selenium	mg/kg	0.58 U	0.62 U	1.5	--	0.65 U	0.45	1.2
Thallium	mg/kg	1.2 U	0.59	0.82	--	0.52	0.43	1.2 U
Vanadium	mg/kg	13.4	13.1	14.0	--	21.1	32.9	12.7
General Chemistry								
Percent solids	%	86.8	85.5	67.1	83.2	77.7	87.0	85.1
Cyanide, total	mg/kg	0.58 U	0.62 U	0.74 U	--	2.6 J	0.57 U	0.59 U

Notes

U - Not detected at or above the associated value.

J - Estimated.

-- - Not applicable.

TABLE 2B

ANALYTICAL RESULTS SUMMARY - WATER
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		Water Sample #1	Water Sample #2	Water Sample #3
Sample ID:		W-14791-DRS-001	W-14791-DRS-002	W-14791-DRS-003
Sample Date:		02/09/2000	02/09/2000	02/09/2000
Parameters	Units			
Volatile Organics				
Bromomethane	ug/L	10 U	10 U	10 U
2-Butanone	ug/L	20 U	20 U	20 U
Carbon disulfide	ug/L	5.0 U	5.0 U	5.0 U
Carbon tetrachloride	ug/L	5.0 U	5.0 U	5.0 U
Chlorobenzene	ug/L	5.0 U	5.0 U	5.0 U
Dibromochloromethane	ug/L	5.0 U	5.0 U	5.0 U
Chloroethane	ug/L	10 U	10 U	10 U
Chloroform	ug/L	5.0 U	5.0 U	5.0 U
Chloromethane	ug/L	10 U	10 U	10 U
1,1-Dichloroethane	ug/L	5.0 U	5.0 U	5.0 U
1,2-Dichloroethane	ug/L	5.0 U	5.0 U	5.0 U
1,1-Dichloroethene	ug/L	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	ug/L	5.0 U	5.0 U	5.0 U
cis-1,3-Dichloropropene	ug/L	5.0 U	5.0 U	5.0 U
trans-1,3-Dichloropropene	ug/L	5.0 U	5.0 U	5.0 U
Ethylbenzene	ug/L	5.0 U	5.0 U	5.0 U
2-Hexanone	ug/L	20 U	20 U	20 U
Methylene chloride	ug/L	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	ug/L	20 U	20 U	20 U
Styrene	ug/L	5.0 U	5.0 U	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	5.0 U	5.0 U	5.0 U
Tetrachloroethene	ug/L	5.0 U	5.0 U	5.0 U
Toluene	ug/L	5.0 U	5.0 U	5.0 U
1,1,1-Trichloroethane	ug/L	5.0 U	5.0 U	5.0 U
1,1,2-Trichloroethane	ug/L	5.0 U	5.0 U	5.0 U
Trichloroethene	ug/L	7.0	5.0 U	5.0 U
Vinyl chloride	ug/L	10 U	10 U	10 U
Xylenes (total)	ug/L	5.0 U	5.0 U	5.0 U
cis-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	5.0 U
trans-1,2-Dichloroethene	ug/L	5.0 U	5.0 U	5.0 U
Acetone	ug/L	20 U	20 U	20 U
Benzene	ug/L	5.0 U	5.0 U	5.0 U
Bromodichloromethane	ug/L	5.0 U	5.0 U	5.0 U
Bromoform	ug/L	5.0 U	5.0 U	5.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY - WATER
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		Water Sample #1	Water Sample #2	Water Sample #3
Sample ID:		W-14791-DRS-001	W-14791-DRS-002	W-14791-DRS-003
Sample Date:		02/09/2000	02/09/2000	02/09/2000
Parameters	Units			
Semi-volatile Organics				
Acenaphthene	ug/L	10 U	10 U	10 U
Acenaphthylene	ug/L	10 U	10 U	10 U
Anthracene	ug/L	10 U	10 U	10 U
Benzo(a)anthracene	ug/L	10 U	10 U	10 U
Benzo(a)pyrene	ug/L	10 U	10 U	10 U
Benzo(b)fluoranthene	ug/L	10 U	10 U	0.96 J
Benzo(k)fluoranthene	ug/L	10 U	10 U	10 U
Benzo(g,h,i)perylene	ug/L	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	ug/L	10 U	10 U	10 U
bis(2-Chloroethyl)ether	ug/L	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	ug/L	10 U	10 U	10 U
4-Bromophenyl phenyl ether	ug/L	10 U	10 U	10 U
Butyl benzyl phthalate	ug/L	10 U	10 U	10 U
Carbazole	ug/L	10 U	10 U	10 U
4-Chloroaniline	ug/L	10 U	10 U	10 U
4-Chloro-3-methylphenol	ug/L	10 U	10 U	10 U
2-Chloronaphthalene	ug/L	10 U	10 U	10 U
2-Chlorophenol	ug/L	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	ug/L	10 U	10 U	10 U
Chrysene	ug/L	10 U	10 U	1.1 J
Dibenz(a,h)anthracene	ug/L	10 U	10 U	10 U
Dibenzofuran	ug/L	10 U	10 U	10 U
1,2-Dichlorobenzene	ug/L	10 U	10 U	10 U
1,3-Dichlorobenzene	ug/L	10 U	10 U	10 U
1,4-Dichlorobenzene	ug/L	10 U	10 U	10 U
3,3'-Dichlorobenzidine	ug/L	50 U	50 U	50 U
2,4-Dichlorophenol	ug/L	10 U	10 U	10 U
Diethyl phthalate	ug/L	10 U	10 U	10 U
2,4-Dimethylphenol	ug/L	10 U	10 U	10 U
Dimethyl phthalate	ug/L	10 U	10 U	10 U
Di-n-butyl phthalate	ug/L	10 U	2.0 J	10 U
Di-n-octyl phthalate	ug/L	10 U	10 U	10 U
2,4-Dinitrophenol	ug/L	50 U	50 U	50 U
4,6-Dinitro-2-methylphenol	ug/L	50 U	50 U	50 U
2,4-Dinitrotoluene	ug/L	10 U	10 U	10 U
2,6-Dinitrotoluene	ug/L	10 U	10 U	10 U
Fluoranthene	ug/L	10 U	10 U	0.95 J

TABLE 2B

ANALYTICAL RESULTS SUMMARY - WATER
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		Water Sample #1	Water Sample #2	Water Sample #3
Sample ID:		W-14791-DRS-001	W-14791-DRS-002	W-14791-DRS-003
Sample Date:		02/09/2000	02/09/2000	02/09/2000
Parameters	Units			
Semi-volatile Organics (Cont'd)				
Fluorene	ug/L	10 U	10 U	10 U
Hexachlorobenzene	ug/L	10 U	10 U	10 U
Hexachlorobutadiene	ug/L	10 U	10 U	10 U
Hexachlorocyclopentadiene	ug/L	50 U	50 U	50 U
Hexachloroethane	ug/L	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	10 U	10 U	10 U
Isophorone	ug/L	10 U	10 U	10 U
2-Methylnaphthalene	ug/L	10 U	10 U	10 U
2-Methylphenol	ug/L	10 U	10 U	10 U
3&4-Methylphenol	ug/L	10 U	10 U	10 U
Naphthalene	ug/L	10 U	10 U	10 U
2-Nitroaniline	ug/L	50 U	50 U	50 U
3-Nitroaniline	ug/L	50 U	50 U	50 U
4-Nitroaniline	ug/L	50 U	50 U	50 U
Nitrobenzene	ug/L	10 U	10 U	10 U
2-Nitrophenol	ug/L	10 U	10 U	10 U
4-Nitrophenol	ug/L	50 U	50 U	50 U
N-nitroso-di-n-propylamine	ug/L	10 U	10 U	10 U
N-nitroso-di-phenylamine	ug/L	10 U	10 U	10 U
2,2'-Oxybis(1-chloropropane)	ug/L	10 U	10 U	10 U
Pentachlorophenol	ug/L	50 U	50 U	50 U
Phenanthrene	ug/L	10 U	10 U	10 U
Phenol	ug/L	10 U	10 U	10 U
Pyrene	ug/L	10 U	10 U	0.75 J
1,2,4-Trichlorobenzene	ug/L	10 U	10 U	10 U
2,4,5-Trichlorophenol	ug/L	10 U	10 U	10 U
2,4,6-Trichlorophenol	ug/L	10 U	10 U	10 U
PCBs				
Aroclor 1016	ug/L	1.0 U	1.0 U	1.0 U
Aroclor 1221	ug/L	1.0 U	1.0 U	1.0 U
Aroclor 1232	ug/L	1.0 U	1.0 U	1.0 U
Aroclor 1242	ug/L	1.0 U	1.0 U	1.0 U
Aroclor 1248	ug/L	1.0 U	1.0 U	1.0 U
Aroclor 1254	ug/L	1.0 U	1.0 U	1.0 U
Aroclor 1260	ug/L	1.0 U	1.0 U	1.0 U

TABLE 2B

ANALYTICAL RESULTS SUMMARY - WATER
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:	Water Sample #1	Water Sample #2	Water Sample #3
Sample ID:	W-14791-DRS-001	W-14791-DRS-002	W-14791-DRS-003
Sample Date:	02/09/2000	02/09/2000	02/09/2000
Parameters	Units		
Metals			
Mercury	ug/L	0.70	0.21	2.7
Antimony	ug/L	3.2	5.4	7.4
Silver	ug/L	10.0 U	10.0 U	0.76
Aluminum	ug/L	397	883	11800
Arsenic	ug/L	7.0	3.3	18.3
Barium	ug/L	322	97.5	326
Beryllium	ug/L	0.19 U	0.22 U	0.89
Calcium	ug/L	50400	100000	108000
Cadmium	ug/L	6.2	10.2	23.8
Zinc	ug/L	2680	1230	1290
Cobalt	ug/L	15.2	6.7	17.2
Chromium	ug/L	9.7 U	13.1 U	90.2
Copper	ug/L	54.5	61.8	307
Iron	ug/L	69600	8460	105000
Potassium	ug/L	20100	20000	17500
Magnesium	ug/L	28000	22300	39700
Manganese	ug/L	280	117	1850
Sodium	ug/L	81700	333000	105000
Nickel	ug/L	40.0 U	40.0 U	53.0
Lead	ug/L	224	198	1320
Selenium	ug/L	3.2 J	2.5 J	4.4 J
Thallium	ug/L	10.0 U	5.3	10.0 U
Vanadium	ug/L	3.7	3.7	63.4
General Chemistry				
Cyanide, total	ug/L	10.0 U	10.0 U	10.0 U

Notes

U - Not detected at or above the associated value.

J - Estimated.

-- - Not applicable.

TABLE 2C

SOIL ANALYTICAL RESULTS SUMMARY
FORMER BUFFALO FORGE PLANT NO.1
HOWDEN BUFFALO, INC.
FEBRUARY 2000

Location:		SB-22
Sample ID:		S-14791-DRS-012
Sample Date:		02/09/2000
Parameters	Units	
STARS-Gasoline		
BENZENE	ug/kg	6.0 U
ETHYLBENZENE	ug/kg	6.0 U
TOLUENE	ug/kg	1.9 J
XYLENES (TOTAL)	ug/kg	6.0 U
ISOPROPYLBENZENE	ug/kg	24 U
N-PROPYLBENZENE	ug/kg	24 U
P-ISOPROPYL TOLUENE	ug/kg	24 U
1,2,4-TRIMETHYLBENZENE	ug/kg	24 U
1,3,5-TRIMETHYLBENZENE	ug/kg	24 U
N-BUTYLBENZENE	ug/kg	24 U
SEC-BUTYLBENZENE	ug/kg	24 U
NAPHTHALENE	ug/kg	24 U
METHYL TERT BUTYL ETHER	ug/kg	24 U

Notes

STARS - Spill Tecnology and Remediation Systems.
U - Not detected at or above the associated value.
J - Estimated.

TABLE 3

QUALIFIED SAMPLE DATA DUE TO HOLDING TIME EXCEEDANCES
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.
BUFFALO, NEW YORK
FEBRUARY 2000

Parameter	*Sample ID*	*Holding Time (Days)*	*Holding Time Criteria (Days)*	*Analyte*	*Sample Result*	*Units*	*Qualifier*
SVOCs	S-14791-DRS-013	16	14	Benzo(a)anthracene	250 J	µg/Kg	*
				Benzo(a)pyrene	230 J	µg/Kg	*
				Benzo(b)fluoranthene	230 J	µg/Kg	*
				Benzo(k)fluoranthene	200 J	µg/Kg	*
				Chrysene	260 J	µg/Kg	*
				Fluoranthene	650	µg/Kg	J
				Phenanthrene	360 J	µg/Kg	*
				Pyrene	360 J	µg/Kg	*
Cyanide	S-14791-DRS-013	19	14	Cyanide	2.6	mg/Kg	J

Notes:

* Sample results were previously qualified as estimated by the laboratory.

J Estimated value.

SVOCs Semi-Volatile Organic Compounds.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES

FORMER BUFFALO FORGE PLANT NO. 1

HOWDEN BUFFALO, INC.

BUFFALO, NEW YORK

FEBRUARY 2000

Parameter	*Spike ID*	*Analyte*	*MS Recovery (Percent)*	*MSD Recovery (Percent)*	*RPD* [1]	*Control Limits (Percent)*	*RPD Control Limits (Percent)*	*Associated Sample ID*	*Sample Result*	*Units*	*Qualifier*
Metals	S-14791-DRS-015	Mercury	0	177	200	75-125	20	S-14791-DRS-003	0.24	mg/Kg	J
								S-14791-DRS-004	0.18	mg/Kg	J
								S-14791-DRS-005	0.025	mg/Kg	J
								S-14791-DRS-006	0.036	mg/Kg	J
								S-14791-DRS-007	0.038	mg/Kg	J
								S-14791-DRS-008	0.019	mg/Kg	J
								S-14791-DRS-014	0.014	mg/Kg	J
								S-14791-DRS-015	0.22	mg/Kg	J
Metals	S-14791-DRS-015	Antimony	49	49	0	75-125	20	S-14791-DRS-003	2.9	mg/Kg	J
								S-14791-DRS-004	2.5	mg/Kg	J
								S-14791-DRS-005	0.32	mg/Kg	J
								S-14791-DRS-006	0.31	mg/Kg	J
								S-14791-DRS-007	0.72	mg/Kg	J
								S-14791-DRS-008	7.2 U	mg/Kg	J
								S-14791-DRS-009	6.9 U	mg/Kg	J
								S-14791-DRS-014	0.41	mg/Kg	J
								S-14791-DRS-015	29.5	mg/Kg	J
Metals	S-14791-DRS-015	Calcium	118	592	85	75-125	20	S-14791-DRS-003	48200	mg/Kg	J
								S-14791-DRS-004	56400	mg/Kg	J
								S-14791-DRS-005	89400	mg/Kg	J
								S-14791-DRS-006	23300	mg/Kg	J
								S-14791-DRS-007	13500	mg/Kg	J
								S-14791-DRS-008	78800	mg/Kg	J
								S-14791-DRS-009	113000	mg/Kg	J
								S-14791-DRS-014	21700	mg/Kg	J
								S-14791-DRS-015	11700	mg/Kg	J

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES

FORMER BUFFALO FORGE PLANT NO. 1

HOWDEN BUFFALO, INC.

BUFFALO, NEW YORK

FEBRUARY 2000

Parameter	*Spike ID*	*Analyte*	*MS Recovery (Percent)*	*MSD Recovery (Percent)*	*RPD* [1]	*Control Limits (Percent)*	*RPD Control Limits (Percent)*	*Associated Sample ID*	*Sample Result*	*Units*	*Qualifier*
Metals	S-14791-DRS-015	Copper	153	129	2	75-125	20	S-14791-DRS-003	39.7	mg/Kg	J
								S-14791-DRS-004	57.0	mg/Kg	J
								S-14791-DRS-005	17.5	mg/Kg	J
								S-14791-DRS-006	24.0	mg/Kg	J
								S-14791-DRS-007	15.5	mg/Kg	J
								S-14791-DRS-008	15.5	mg/Kg	J
								S-14791-DRS-009	9.2	mg/Kg	J
								S-14791-DRS-014	20.3	mg/Kg	J
								S-14791-DRS-015	255	mg/Kg	J
Metals	S-14791-DRS-015	Magnesium	101	208	54	75-125	20	S-14791-DRS-003	14600	mg/Kg	J
								S-14791-DRS-004	16600	mg/Kg	J
								S-14791-DRS-005	29100	mg/Kg	J
								S-14791-DRS-006	15800	mg/Kg	J
								S-14791-DRS-007	2640	mg/Kg	J
								S-14791-DRS-008	26200	mg/Kg	J
								S-14791-DRS-009	38400	mg/Kg	J
								S-14791-DRS-014	5540	mg/Kg	J
								S-14791-DRS-015	2610	mg/Kg	J
Metals	S-14791-DRS-015	Manganese	270	128	30	75-125	20	S-14791-DRS-003	313	mg/Kg	J
								S-14791-DRS-004	594	mg/Kg	J
								S-14791-DRS-005	839	mg/Kg	J
								S-14791-DRS-006	372	mg/Kg	J
								S-14791-DRS-007	219	mg/Kg	J
								S-14791-DRS-008	330	mg/Kg	J
								S-14791-DRS-009	239	mg/Kg	J
								S-14791-DRS-014	1680	mg/Kg	J
								S-14791-DRS-015	159	mg/Kg	J
Metals	S-14791-DRS-010	Copper	65	70	4	75-125	20	S-14791-DRS-010	28.8	mg/Kg	J
								S-14791-DRS-011	41.7	mg/Kg	J
								S-14791-DRS-013	49.4	mg/Kg	J

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES

FORMER BUFFALO FORGE PLANT NO. 1

HOWDEN BUFFALO, INC.

BUFFALO, NEW YORK

FEBRUARY 2000

Parameter	*Spike ID*	*Analyte*	*MS Recovery (Percent)*	*MSD Recovery (Percent)*	*RPD* [1]	*Control Limits (Percent)*	*RPD Control Limits (Percent)*	*Associated Sample ID*	*Sample Result*	*Units*	*Qualifier*
Metals	S-14791-DRS-010	Magnesium	101	142	16	75-125	20	S-14791-DRS-010	8970	mg/Kg	J
								S-14791-DRS-011	2480	mg/Kg	J
								S-14791-DRS-013	10600	mg/Kg	J
Metals	S-14791-DRS-010	Mercury	65	21	22	75-125	20	S-14791-DRS-010	0.12 U	mg/Kg	J
								S-14791-DRS-011	0.35	mg/Kg	J
								S-14791-DRS-013	1.3	mg/Kg	J
Metals	W-14791-DRS-001	Selenium	69	75	8	75-125	20	W-14791-DRS-001	3.2	µg/L	J
								W-14791-DRS-002	2.5	µg/L	J
								W-14791-DRS-003	4.4	µg/L	J

Notes:

[1] RPD values were calculated based on concentration rather than percent recovery.

J Estimated value.

MS Matrix Spike.

MSD Matrix Spike Duplicate.

RPD Relative Percent Difference.

U Non-detect at associated value.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.
BUFFALO, NEW YORK
FEBRUARY 2000

Parameter	*Blank ID/Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Sample Result*	*Units*
Metals	02/21/00	Beryllium	0.85	W-14791-DRS-001	0.19	0.19 U	µg/L
				W-14791-DRS-002	0.22	0.22 U	µg/L

Notes:
U Non-detect at associated value.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE RINSE BLANKS
FORMER BUFFALO FORGE PLANT NO. 1
HOWDEN BUFFALO, INC.
BUFFALO, NEW YORK
FEBRUARY 2000

Parameter	*Rinse Blank Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Sample Result*	*Units*
VOCs	02/10/00	Acetone	3.8J	W-14791-DRS-001	4.5J	20 U	µg/L
				S-14791-DRS-005	35	35 U	µg/Kg
				S-14791-DRS-006	21J	27 U	µg/Kg
VOCs	02/10/00	2-Butanone	12J	W-14791-DRS-001	1.9J	20 U	µg/L
Metals	02/10/00	Beryllium	0.12	W-14791-DRS-001	0.19	0.19 U	µg/L
				W-14791-DRS-002	0.22	0.22 U	µg/L
Metals	02/10/00	Sodium	52	S-14791-DRS-003	142	142 U	mg/Kg
			50	S-14791-DRS-004	172	172 U	mg/Kg
			55	S-14791-DRS-006	190	190 U	mg/Kg
			47	S-14791-DRS-007	199	199 U	mg/Kg
			48	S-14791-DRS-009	168	168 U	mg/Kg
			48	S-14791-DRS-010	121	121 U	mg/Kg
			49	S-14791-DRS-015	150	150 U	mg/Kg
Metals	02/10/00	Chromium	8.4	W-14791-DRS-001	9.7	9.7 U	µg/L
				W-14791-DRS-002	13.1	13.1 U	µg/L

Notes:

J Estimated value.

U Non-detect at associated value.

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SHIPPED TO (Laboratory Name): Quanterra, INC.

REFERENCE NUMBER: 14791 Former Buffalo Forge Plant

SAMPLER'S SIGNATURE: Dustin R. Steiner
PRINTED NAME: Dustin Steiner

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	TCL VOA	BNA (TCL)	PCB (TCL)	TAL Metals	Cyanide	STARS Gasoline	Moisture	REMARKS
	2/7/2000	0900	S-14791-DRS-001 Transformer Room	Soil	~~3~~ 1			X					
	↓	1120	S-14791-DRS-003 Paint storage Room	↓	3	X	X	X	X	X		X	No sample - DRS-002
		1130	S-14791-DRS-004 machine shop floor (wood blocks)		3	X	X	X	X	X		X	
		1145	S-14791-DRS-005 machine shop floor (wood blocks)		3	X	X	X	X	X		X	
		1200	S-14791-DRS-006 machine shop floor (wood blocks)		3	X	X	X	X	X		X	
	↓	1440	S-14791-DRS-007 Press Pit		3	X	X	X	X	X		X	COC. 1 of 2
	2/8/2000	1200	S-14791-DRS-008 machine Pit		3	X	X	X	X	X		X	
	↓	1430	S-14791-DRS-009 Paint grate	↓	3	X	X	X	X	X		X	COC 2 of 3
	2/9/2000	0800	W-14791-DRS-001 ~~[illegible]~~	water	8	X	X	X	X	X			other portion COC. 3949
		0830	W-14791-DRS-002		8	X	X	X	X	X			
		0900	W-14791-DRS-003	↓	8	X	X	X	X	X			
		0830	S-14791-DRS-010 50,000 gal UST Broadway Yard	Soil	2	X	X	X	X	X		X	
		1015	S-14791-DRS-011 50,000 gal. UST "		2	X	X	X	X	X		X	
		1315	S-14791-DRS-012 Sycamore Yard AST		2	X					X	X	
	↓	1415	S-14791-DRS-013 Haz. waste storage area		2	X	X	X	X	X		X	
	2/10/2000	0930	S-14791-DRS-014 Parking lot Between Rey + Broadway		3	X	X	X	X	X		X	
	↓	1000	S-14791-DRS-015 [illegible] North side of garage	↓	~~3~~ 6	X	X	X	X	X		X	

TOTAL NUMBER OF CONTAINERS

HEALTH/CHEMICAL HAZARDS —

RELINQUISHED BY: ① Dustin R. Steiner	DATE: 2/10/2000 TIME: 1600	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FEDEX

WAY BILL No. 4569 8651 2034

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: DRS

RECEIVED FOR LABORATORY BY:

DATE: TIME:

№ NF-2363

1001 (D) OCT 31/94(NF) REV.1 (F-05)

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SHIPPED TO (Laboratory Name): Quanterra Inc.

REFERENCE NUMBER: 11791 Former Buffalo Forge Plant

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Dustin Sleiver

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: TCL VOA	BNA	PESTICIDES	TAL Metals	Cyanide	SVOCs Baseline	REMARKS
	2/10/2000	1230	RB-11791-DRS-001	Water	6	X	X	X	X	X		
			TRIP BLANK	Water	2	X	X	X	X	X	X	

TOTAL NUMBER OF CONTAINERS: 71 HEALTH/CHEMICAL HAZARDS: —

RELINQUISHED BY: ① [signature]	DATE: 2/11/2000 TIME: 1600	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FEDEX WAY BILL No.

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM: DRS

RECEIVED FOR LABORATORY BY:

DATE: TIME:

Nº NF-3949

1001 (D) OCT 31/94(NF) REV.1 (F-05)