SCAN

PCB CLEANUP PLAN FOR CONCRETE AND SOIL 490 BROADWAY FACILITY BUFFALO, NEW YORK

Prepared for
Howden Buffalo, Inc.
November 14, 2006
Revised December 6, 2006

Prepared by

BROWN AND CALDWELL
ASSOCIATES
990 Hammond Drive, Suite 400
Atlanta, Georgia 30328

AMD
Ewm ✓
Scan —

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

JAN 18 2007

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JAN 25 2007
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FOIL
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Neil C. Schemm, Secretary
Howden Buffalo, Inc. c/o Anderson Group
3575 Piedmont Road
15 Piedmont Center, Ste 120
Atlanta, Georgia 30305

Re: Modification of approval for Cleanup and Disposal of PCB Remediation Waste under 40 CFR §761.61(a), and modification of approval for characterization sampling under 40 CFR §761.61(c)

Dear Mr. Schemm:

This is in response to Brown and Caldwell Associates' (Brown and Caldwell's) December 6, 2006 submission, on behalf of Howden Buffalo, Inc. (Howden), concerning the Former Buffalo Forge Facility, located at 490 Broadway in Buffalo, New York (also referred the "Site"). In its submission, Brown and Caldwell proposes a modification to the cleanup plan previously approved by the U.S. Environmental Protection Agency (EPA) on July 7, 2006. The proposed modification was amended through submittal of additional information in Brown and Caldwell's electronic correspondence of December 12, 2006. Collectively, these documents will be referred to as the "Application Amendment". The Site contains PCB remediation waste that exceeds the cleanup levels under the federal PCB regulations at 40 CFR §761.61(a)(4).

With the exception of the characterization sampling requirements under Subpart N of 40 CFR Part 761, the proposed modification of the cleanup plan to completely remove and dispose of the concrete slabs remaining after building demolition meets the self-implementing cleanup and disposal requirements under 40 CFR §761.61(a). Based on the additional characterization sampling (as described in the Application Amendment) for the concrete slabs as well as the underlying soil, EPA finds that this sampling is acceptable for delineating areas of PCB remediation waste to be removed and for determining compliance with the PCB cleanup standards for high and low occupancy areas of 1 part per million and 25 parts per million, respectively. EPA is approving Howden's Application Amendment, and Howden may continue to clean up the site under 40 CFR §§761.61(a) and (c), subject to EPA's July 7, 2006 approval, the Application Amendment, and this modification.

Should you have any questions concerning this matter, please contact James S. Haklar, Ph.D., P.E., of my staff, at (732) 906-6817.

Sincerely yours,

Dore LaPosta, Director
Division of Enforcement and Compliance Assistance

cc: Martin Doster, New York State Department of Environmental Conservation

EWM Ewm
Scan —

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www.brownandcaldwell.com

RECEIVED

December 6, 2006

James Haklar, Ph.D., P.E.
USEPA Region 2
Pesticides and Toxic Substances Branch, MS-105
2890 Woodbridge Avenue
Edison, New Jersey 08837-3679

16-129112-400

Subject: Former Buffalo Forge Facility
490 Broadway, Buffalo, New York
Revised PCB Cleanup Plan for
Sampling and Management of Concrete and Soil

Dear Dr. Haklar:

This letter has been prepared by Brown and Caldwell Associates (BC), on behalf of Howden Buffalo, Inc. (Howden), to transmit a revised PCB Cleanup Plan for Concrete and Soil for the above-referenced site. The revised "Concrete and Soil Plan" was prepared by BC in response to our recent conversations concerning the original Concrete and Soil Plan that was dated November 14, 2006.

Please call me at (770) 673-3652 if you have any questions or comments.

Very truly yours,

BROWN AND CALDWELL ASSOCIATES

Robert J. Rivera, P.E.
Supervising Engineer

RJR:ehs

cc: D. Donald, Howden (1 copy)
Martin Doster, P.E., NYSDEC Region 9 (2 copies)
N. Schemm, AGI (1 copy)
Dennis Sutton, City of Buffalo (1 copy)
H. Van Brenk, c/o Howden (1 copy)

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1.0 INTRODUCTION

Brown and Caldwell Associates (BC), on behalf of Howden Buffalo, Inc. (Howden), submitted a PCB Cleanup Plan (Cleanup Plan) on April 26, 2006, for the former Buffalo Forge facility located at 490 Broadway, Buffalo, New York. A facility Plan is shown as Figure 1-1. The Plan was amended by a May 22, 2006 letter addendum from BC (i.e., Addendum 1), and was approved by USEPA in a letter dated July 7, 2006. Since that time, other addenda and correspondence have been exchanged between BC and USEPA regarding the intended PCB cleanup for the project.

This PCB Cleanup Plan for Concrete and Soil (i.e., "Concrete and Soil Plan") can be considered a proposed Addendum 4 to the Cleanup Plan. On behalf of Howden, BC has prepared this Concrete and Soil Plan to describe how the concrete and soil have been or will be managed consistent with the PCB regulations in effect. In cases where the United States Environmental Protection Agency (USEPA) has already approved an action, the approval date will be noted.

The remainder of this Section describes the general demolition activities through November 22, 2006. Section 2 of this report summarizes the previous and recent concrete sampling that has been performed on the building slab. Section 3 presents the proposed plan for managing the concrete, and Section 4 presents the proposed plan for sampling and managing sub-slab soil. Appendix A presents the laboratory reports for recent concrete sampling discussed in Section 2.

1.1 Summary of Demolition Activities to Date

In July 2006, Howden's demolition contractor, Sevenson Environmental Services (Sevenson), completed the pre-demolition building decommissioning activities that are described in the Cleanup Plan, with BC personnel present at the site. As part of those activities, the slabs of the Capacitor Room and Building 12 were scraped free of miscellaneous solids and debris, and multiple layers of polyethylene sheeting were placed over these slabs prior to any demolition activities, as described in the Cleanup Plan. BC personnel have not been present at the site since that time (Friday, July 14, 2006).

From July 2006 through November 14, 2006, Howden retained another firm to provide construction quality assurance. Information included in this Concrete and Soil Plan regarding demolition activities since July 14, 2006, has been obtained from Howden. During that time, the above-grade portion of the facility was demolished and disposed off-site at licensed landfills. The majority of the debris was disposed as asbestos-containing material (ACM) at Minerva Enterprises Landfill located in Waynesburg, Ohio. The demolition activities also included the removal of the Capacitor Room walls and slab and disposal of that Capacitor Room debris at a TSCA-permitted landfill (Waste Management, Model City, New York) in accordance with the Cleanup Plan.

Based on descriptions provided by Howden during the demolition activities, the surface concrete in Building Nos. 1, 2, 4, 8, 21, 28, and the southern 40 percent of Building 12 consisted of either very thin built-up concrete (i.e., less than two inches thick) or of un-reinforced concrete. The surface concrete in these buildings reportedly did not have sufficient structural integrity, causing the concrete to break apart and crumble during the above-grade demolition and debris disposal activities. As such, the surface concrete in these buildings was disposed with the building debris at Minerva Enterprises Landfill. The areas where concrete has already been removed and disposed are described in Section 3.1.

Howden has elected to implement the complete removal of the remaining building slab, for off-site recycling and/or disposal as appropriate. Based on a BC letter to USEPA dated October 6, 2006 and USEPA's response dated October 31, 2006, USEPA concurred with Howden's proposal that concrete slabs from Building Nos. 9, 10, 11, 13, 23, and 25 could be recycled, subject to Howden's compliance with state and local requirements. Howden has since directed Sevenson to begin the process of removing slabs in these buildings for recycling. Refer to Section 3.2 for a detailed discussion of the recycling activities.

BC personnel returned to the site to provide construction quality assurance services since November 15, 2006. BC will provide these services through completion of the activities described in this Plan.

2.0 RESULTS OF CONCRETE SAMPLING

This section discusses the previous concrete sampling conducted at the site. This sampling consists of a Fall 2005 sampling event that was previously presented in the Cleanup Plan, as well as recent concrete sampling performed by Sevenson.

2.1 Fall 2005 Concrete Sampling

In October and November of 2005, the concrete slab was sampled on a grid pattern, as reported in the USEPA-approved Cleanup Plan. A grid sampling layout was used to provide a systematic check for PCB presence in the general work areas of the facility. The grid was laid out using a triangular 75-foot separation which corresponded to 61 locations in the accessible factory areas.

For clarity only, the analytical results from this event have been included again in this Concrete and Soil Plan on Figure 2-1. The Fall 2005 sample analytical results indicated that concrete slabs in the facility contained PCB concentrations above USEPA's unrestricted use threshold of 1 mg/kg in Buildings 2, 6, 7, 12, 22, 27, and the Capacitor Room.

2.2 October 2006 Concrete Sampling

BC submitted a proposed supplemental concrete sampling plan in Addendum 3, dated October 11, 2006 (which was not approved by USEPA). Addendum 3 included a figure showing proposed concrete sample locations that were to be composited for PCB analysis. While Addendum 3 was under USEPA review, Howden directed Sevenson to collect concrete samples at the locations identified in the Addendum 3 figure, both as individual grab samples and as the proposed composite samples. Howden acknowledges that these samples were collected without prior USEPA approval and thus were performed "at risk." The samples were sent to Columbia Analytical Services of Rochester, New York for analysis. The objective of the October 2006 sampling was to collect and analyze samples to sufficiently characterize areas of the building that had not been sufficiently characterized prior to demolition. Based on USEPA's September 29, 2006 written comments pertaining to proposed Addendum 2, areas were identified in various buildings of the facility where PCB characterization of the concrete slab and foundations was inadequate based on the results of the Fall 2005 sampling.

Concrete samples were collected from Building Nos. 3, 5, and 18, which were not known to be impacted with PCBs from the 2005 sampling event, but also did not contain a sufficient number of samples from that event. Concrete samples were also collected from Building Nos. 6, 7, 12, 22, and 27 which contained previous samples with PCB concentrations above USEPA's unrestricted use threshold of 1 mg/kg, and required further characterization for recycling/disposal determinations. Some of the October 2006 samples were located off of the 2005 sampling grid, where necessary, to provide a sufficient number of samples for a specific building, or to address a specific location of concern. October 2006 sample locations are shown on Figure 2-2.

The analytical results of these concrete samples were recently received. The sample locations and analytical results are reported on Figure 2-2. The laboratory reporting forms and field sketches that were forwarded to BC by Sevenson and form the basis for Figure 2-2, have been included in this Concrete and Soil Plan as Appendix A. The analytical reports forwarded to BC by Sevenson will be retained in BC's project files.

2.2.1 October 2006 Concrete Sampling Methods

Prior to concrete sampling by Sevenson, BC forwarded to Sevenson copies of the previous correspondence and the Cleanup Plan, which contained instructions for the sampling protocols, SOPs, and sampling methods to be followed. After collection, the samples were analyzed by Columbia Analytical Services, Inc. (CAS) of Rochester, New York for PCBs using USEPA SW846 Method 8082. CAS is a New York State-certified laboratory, and performed the PCB analyses of the Fall 2005 sampling event.

3.0 PROPOSED MANAGEMENT OF CONCRETE

This section describes how some concrete has been managed or removed to date, and how Howden proposes to manage the remaining concrete based on the analytical data summarized in Section 2 of this Concrete and Soil Plan.

3.1 Concrete Removed to Date

As described in Section 1, and based on descriptions provided by Howden during the demolition activities, the surface concrete in Building Nos. 1, 2, 4, 8, 21, 28, and the southern 40 percent of Building 12 consisted of either very thin built-up concrete (i.e., less than two inches thick) or of un-reinforced concrete. The concrete in these buildings reportedly did not have sufficient structural integrity, causing the concrete to break apart and crumble during the above-grade demolition and debris disposal activities. As such, the concrete slabs in these buildings were disposed with the building debris as asbestos-contaminated debris at the Minerva Enterprises Landfill located in Waynesburg, Ohio. The areas where concrete has already been removed and disposed are depicted on Figure 3-1.

These demolition activities also included the removal of the Capacitor Room walls and slab and disposal of that Capacitor Room debris at a TSCA-permitted landfill (Waste Management, Model City, New York) in accordance with the Cleanup Plan.

3.2 Concrete Currently Being Removed for Recycling

Based on a BC letter to USEPA dated October 6, 2006 and USEPA's response dated October 31, 2006, USEPA concurred with Howden's proposal that concrete slabs from Building Nos. 9, 10, 11, 13, 23, and 25 could be recycled, subject to Howden's compliance with state and local requirements. Howden has since directed Sevenson (after October 31, 2006) to begin the process of removing slabs in these buildings for recycling. These areas are depicted on Figure 3-1.

After the concrete to be recycled has been removed from its state as a slab and stockpiled, Howden has been having Sevenson collect additional samples of the stockpiled concrete for further final screening. The final screening samples are and will be collected at a frequency of one sample per 500 cubic yards, and will be analyzed for PCBs and total metals as dictated by the recycling facility and/or by other regulatory agencies.

3.3 Management of Remaining Concrete

The management of the remaining concrete that has not been approved in earlier submissions of this Plan will be managed as described below. This work will not be implemented prior to USEPA approval of this Concrete and Soil Plan.

3.3.1 Building 18 – Recycling

The Building 18 slab was sampled in one location in 2005, with non-detectable concentrations of PCBs. Two additional discrete samples and a composite sample were collected in October 2006, also indicating that concentrations of PCBs were not detected. Howden proposes to recycle the concrete from Building 18, as shown on Figure 3-1. Recycling will comply with the procedures described in Section 3.2 regarding agency approvals and final screening analysis.

3.3.2 Building 14 – Recycling or Disposal

Building 14 is a facility garage located across the street from (east of) the facility manufacturing buildings, as shown on Figure 1-1. This building has not been considered a likely location for PCBs based on historical operations as an employee parking garage and visual observations of a clean slab, and therefore has not been sampled to date for PCBs.

Howden proposes sampling of this concrete slab using the same grid pattern used in the other buildings. This grid sampling is used to provide a systematic check for PCB presence. The grid is laid out using a triangular 75-foot separation which corresponds to three sample locations in the Building, as shown on Figure 3-2. Based upon the PCB analytical results, Howden proposes to recycle the concrete if the results indicate either non-detectable PCB concentrations or detectable PCB concentrations below 1 mg/kg. If any concentrations exceed 1 mg/kg, this slab will be disposed at a RCRA Subtitle D permitted facility. The sampling protocols for concrete are described in Appendix A.

3.3.3 Buildings 6, 7, and 27 – Disposal and Recycling

Buildings 6, 7, and 27 each previously had at least one concrete sample with PCB concentrations above USEPA's unrestricted use threshold of 1 mg/kg (results ranged from non-detect to 5.1 mg/kg in Building 27). These building slabs were re-sampled in October 2006 as described in Section 2.2. The recent samples indicate either non-detectable PCB concentrations, or detectable PCB concentrations well below 1 mg/kg (highest result was 0.55 mg/kg in Building 7).

Due to the discrepancies between sampling events, Howden will agree to dispose of the concrete at the locations of the Fall 2005 samples that contained greater than 1 mg/kg PCBs. The initial limits of concrete removal for disposal will be a 20 foot by 20 foot square surrounding the original concrete sample. One sample will be collected from each face of the concrete square as shown on Figure 3-2. If any of the four samples have PCB concentrations above 1 mg/kg, an additional sample will be taken another 10 feet out, extending in the same direction. This methodology will continue until a concrete sample is obtained with a PCB concentration less than 1 mg/kg on each face, or until the limit of the building slab is encountered.

Figure 3-2 shows that in most locations, one additional sample will be collected 10 feet out from each face sample at this time. These samples will be archived, and will be analyzed only if the corresponding original face sample exceeds 1 mg/kg.

The final area of concrete defined by either the limit of the building slab or by samples with PCBs less than 1 mg/kg will be removed and disposed at a RCRA Subtitle D permitted landfill. The concrete will be recycled if it is located outside the samples with PCBs less than 1 mg/kg.

3.3.4 Buildings 3, 5, 12, and 22 – Disposal

Buildings 12 and 22 previously had at least one concrete sample with PCB concentrations above USEPA's unrestricted use threshold of 1 mg/kg (results ranged from non-detect to 10 mg/kg in Building 12). These building slabs were re-sampled in October 2006 as described in Section 2.2. The recent concrete samples indicated additional PCB concentrations above 1 mg/kg (results ranged from 0.58 to 14 mg/kg in Building 12 and the one sample in Building 22 had a PCB result of 6.1 mg/kg). In addition, Buildings 3 and 5 also had recent concrete samples with PCB results above 1 mg/kg. Based on the range of PCB concentrations from 1 mg/kg to 14 mg/kg, Howden proposes to dispose of the concrete from Buildings 3, 5, 12, and 22 as demolition debris at a RCRA Subtitle D permitted landfill.

4.0 PROPOSED SOIL SAMPLING AND MANAGEMENT

The approved Cleanup Plan included proposed sampling grids for soil located beneath the building slabs in Building 12 and in the Capacitor Room. Howden will implement soil sampling in those locations as previously proposed, and as shown again for clarity on Figure 4-1. The soil sampling methods will be as approved in the Cleanup Plan.

In addition, Howden recognizes the need to determine whether PCBs are present in sub-slab soil, in areas where the overlying concrete was/is impacted with PCBs above 1 mg/kg. Therefore, Howden proposes to implement a soil sampling program on a sampling grid, in areas below Buildings 2, 3, 5, 6, 7, 22, and 27, as shown on Figure 4-1. The soil sampling protocols are provided in Appendix A.

The proposed sampling grid/locations are consistent with the grid that USEPA previously approved for concrete in the Cleanup Plan, when it was intended that the concrete would remain in place in the environment. Howden also proposes to collect an additional soil sample from beneath the sump location in Building 12 that contained elevated concentrations of PCBs. Also, Howden will collect soil samples from other areas of concern that may be encountered, such as below any sumps that may be found to contain oily water.

Results of the soil sampling will be summarized and presented to USEPA if a soil cleanup program is necessary. If soil samples indicate PCB concentrations greater than 1 mg/kg, then it is anticipated the cleanup options would entail either:

- Removal and disposal of soil, followed by additional confirmatory sampling
- Covering the affected soil with a cap, consistent with the requirements of 40 CFR 761.61(a) (7) and (8)
- If concentrations are less than 25 mg/kg, the site may be permanently fenced to maintain it in a low-occupancy setting.

These options are consistent with those approved by the USEPA in the Cleanup Plan for management of the soil located beneath the building slabs in the northern portion of Building 12 and in the Capacitor Room. The decision of which option(s) is selected will depend on the size of any affected areas, concentrations encountered, as well as schedule and other constraints.

Howden intends to sample the underlying soil immediately following slab removal in each area. However, if winter weather conditions do not permit sampling of the soil at that time, Howden requests the flexibility to implement the proposed soil sampling and any necessary soil cleanup in spring of 2007. In this case, Howden will restrict access to the site with maintained six-foot-high chain link fencing. Additionally, areas requiring further soil samples will be delineated from other site areas with orange safety fencing or similar demarcation measures. Inspections of these site controls will be conducted on a weekly basis.

Until such time that soil samples can be collected and indicate no PCB concentrations in excess of 1 mg/kg, appropriate erosion controls will be installed and maintained around the soil areas where sampling is required. These measures will minimize the potential for soil from these areas to be carried into known non-PCB-impacted areas. After all slabs have been removed, clean fill material that the City requires be placed over the native soil will be graded towards the middle of the property, to prevent any possible discharge of storm water off of the site.

SPRING STREET

PLAYGROUND

BROADWAY YARD

No. 9 PATTERN STORAGE

No. 10 FOUNDRY / PRESS PIT

No. 11 FACTORY / ERECTING

No. 25 FACTORY / ERECTING

No. 21

No. 28

SYCAMORE YARD

No. 18

SYCAMORE STREET

TOUSEY STREET

No. 13 CRANEWAY

BROADWAY

No. 3 OFFICES

BOILER ROOM

No. 6

No. 4 SHIPPING AND CRATING

No. 2 OFFICES

PIPE SHOP

FAN SHOP

SHEET METAL WORK

No. 12 ASSEMBLY AREA / MACHINE SHOP

No. 27 FACTORY / ERECTING

No. 23

Capacitor Room

No. 1 OFFICES

No. 8

No. 5

No. 7

No. 22

MORTIMER STREET

No. 14 GARAGE

NORTH

0 80 160

SCALE IN FEET

LEGEND

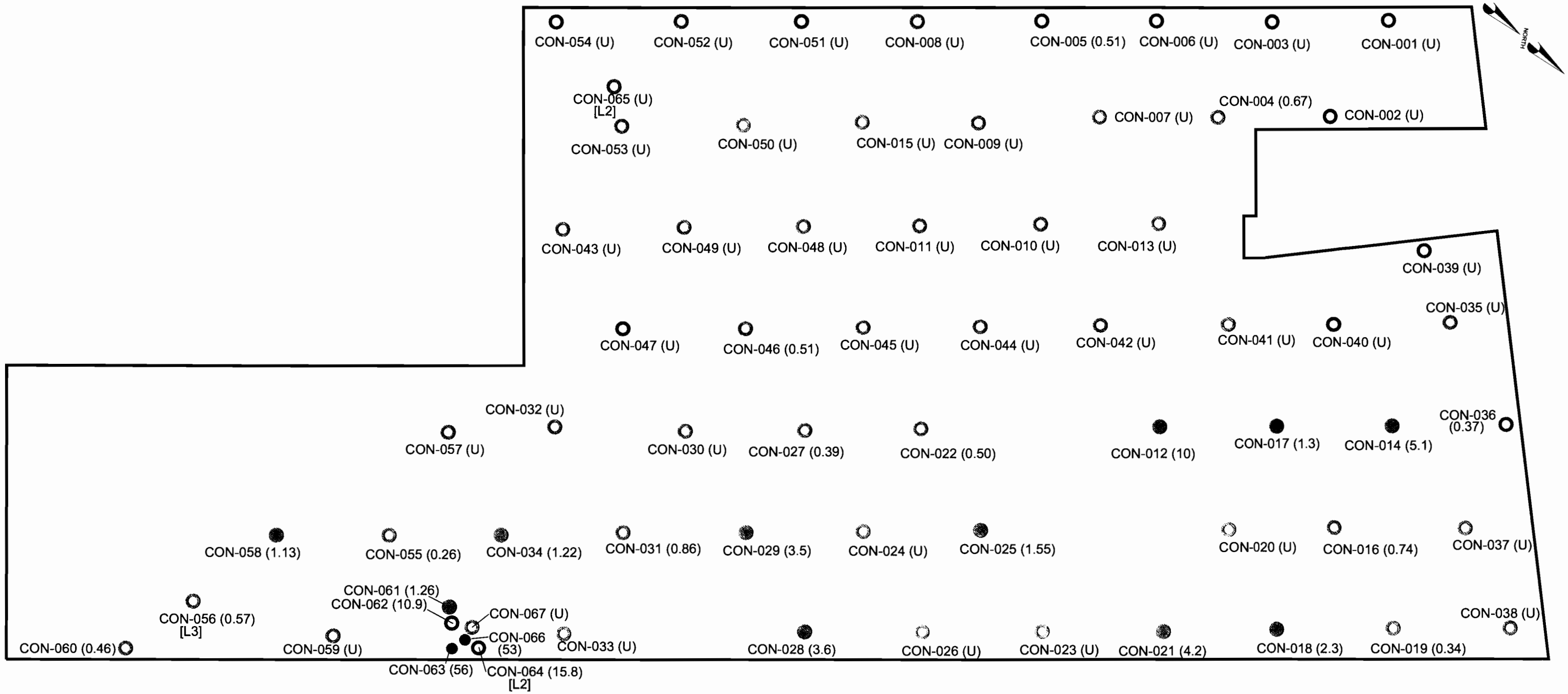
No. 1 Building Number

Figure 1-1
Facility Plan

490 Broadway
Buffalo, New York

Prepared For:	Howden Buffalo	DATE:	11/13/06
		SCALE:	1" = 80'
BROWN AND CALDWELL		DRAWN BY:	LAR
		PROJ.	129112

P:\Howden\129112\Project Deliverables\TSCA Char Rpt & Cleanup Plan\Addendum 4 CAD\Figure 1-1.dwg



LEGEND

- Total PCBs ≤ 1.0 mg/kg
- Total PCBs > 1.0 mg/kg and ≤ 10 mg/kg
- Total PCBs > 10 mg/kg and ≤ 25 mg/kg
- Total PCBs > 25 mg/kg and ≤ 100 mg/kg

Building Number

CON-001 (0.86) Sample Identification Number and Total PCB Concentration in mg/kg

[L2] Floor level of sample [1st floor if no designation]

(U) PCB Concentration below method detection limit

NOTE

1. Samples were collected from first floor level unless otherwise noted.

0 60 120

SCALE IN FEET

Figure 2-1
Fall 2005 Concrete Sampling Results

490 Broadway
Buffalo, New York

Prepared For: Howden Buffalo

BROWN AND CALDWELL

DATE:	11/13/06
SCALE:	1" = 60'
DRAWN BY:	LAR
PROJ.	129112

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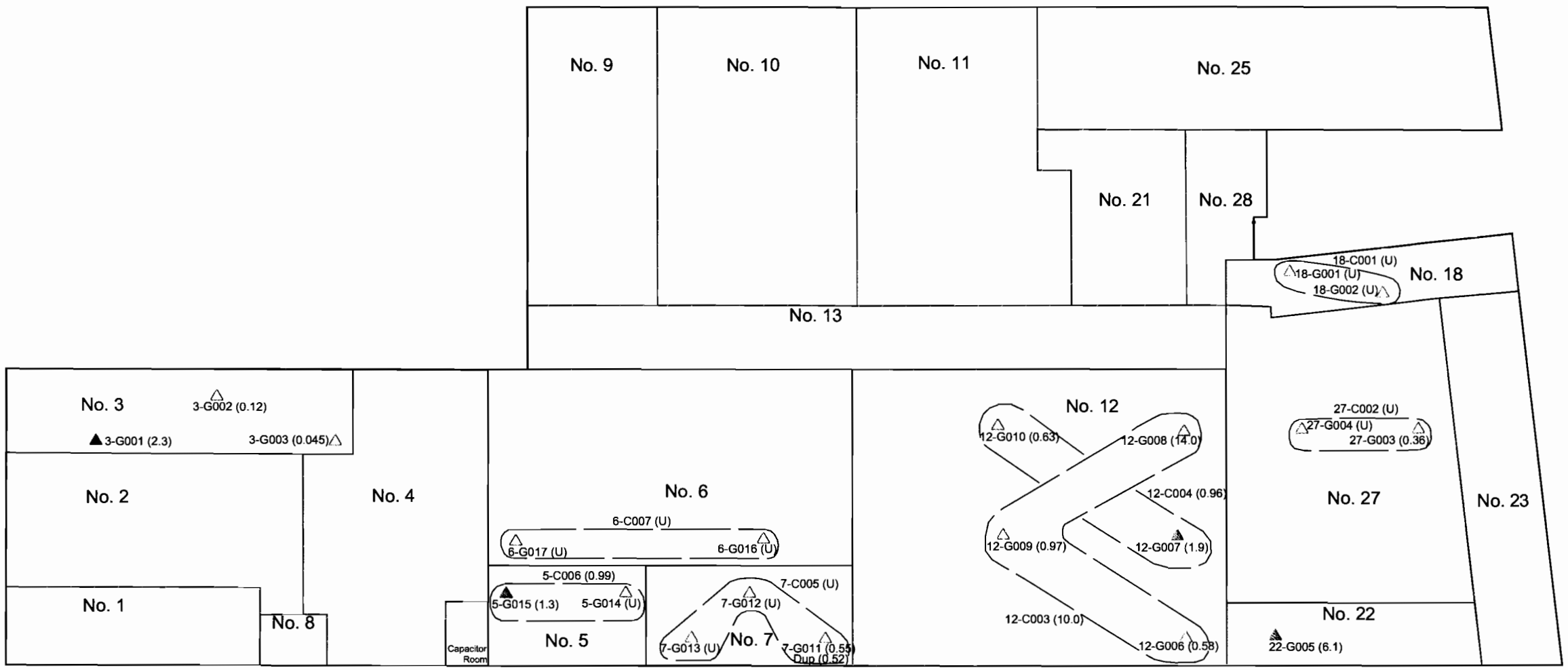

0 80 160

SCALE IN FEET

LEGEND

- Areas where concrete slab was not sampled during October 2006
- △, ▲, △ Concrete sample location (as reported by Howden/Sevenson)
- △ Total PCBs ≤ 1.0 mg/kg
- ▲ Total PCBs > 1.0 mg/kg and ≤ 10 mg/kg
- △ Total PCBs > 10 mg/kg and ≤ 25 mg/kg

18-G001 (0.86) Grab Sample Identification Number and Total PCB Concentration in mg/kg

18-C001 (0.86) Composite Sample Identification Number and Total PCB Concentration in mg/kg

(U) PCB Concentration below method detection limit

No. 1 Building Number

Figure 2-2
October 2006 Concrete Sampling Results

490 Broadway
Buffalo, New York

Prepared For: Howden Buffalo

BROWN AND CALDWELL

DATE: 11/14/06
SCALE: 1" = 60'
DRAWN BY: LAR
PROJ. 129112

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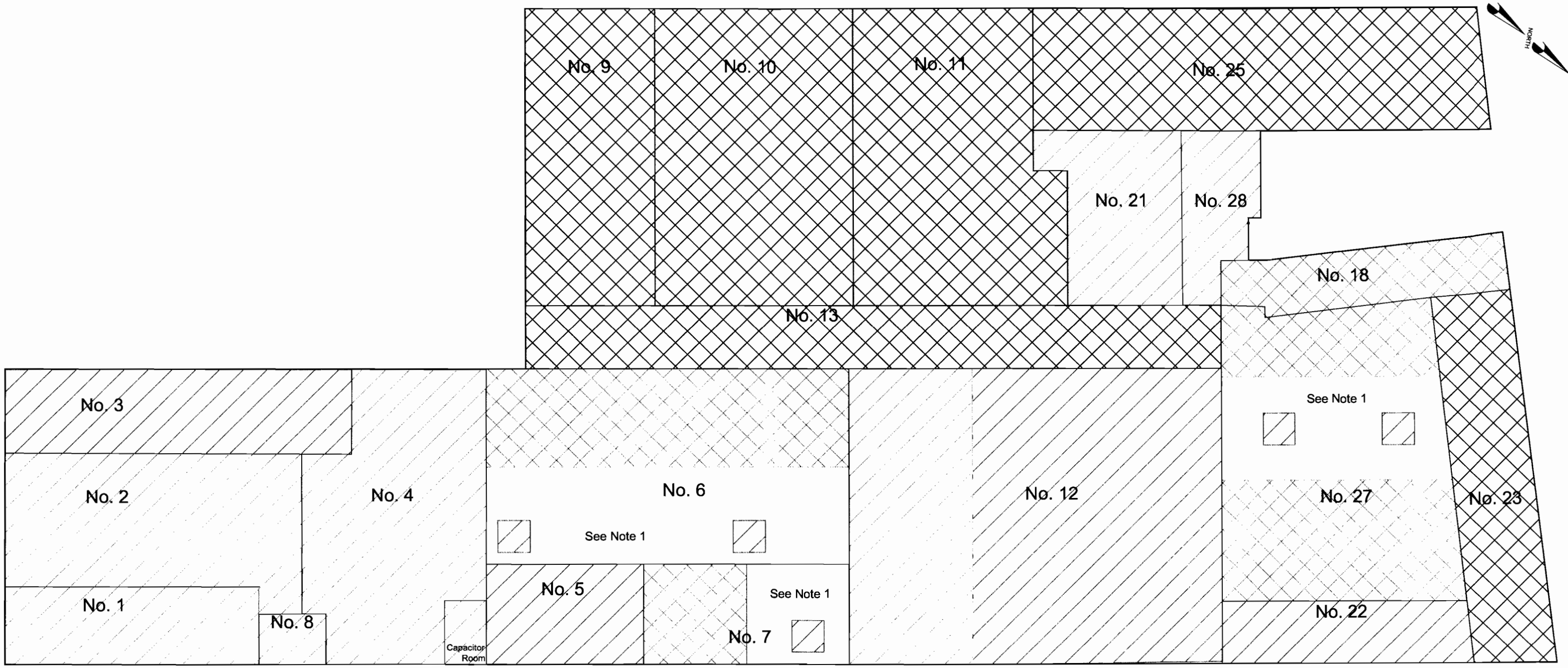

LEGEND

- Areas where concrete slab was previously removed and disposed at a RCRA Subtitle D landfill (Capacitor Room disposed at a TSCA-permitted landfill)
- Areas where concrete slab is proposed for landfill disposal at a RCRA Subtitle D landfill
- Areas where concrete slab is being removed and recycled at a recycling facility, per EPA concurrence letter dated October 31, 2006
- Areas where concrete slab is proposed for recycling at a recycling facility (Including Building 14 - Garage)

Note: 1. Undesignated areas in Buildings 6, 7 and 27 will be managed as described in Section 3.3.3 of this Plan.
2. Information regarding concrete that has been removed or remains is based on information provided by Howden.

0 60 120
SCALE IN FEET

Figure 3-1
Proposed Management of Concrete Slabs

490 Broadway
Buffalo, New York

Prepared For: Howden Buffalo

BROWN AND CALDWELL

DATE: 11/13/
SCALE: 1" = 6
DRAWN BY: LAR
PROJ. 12911

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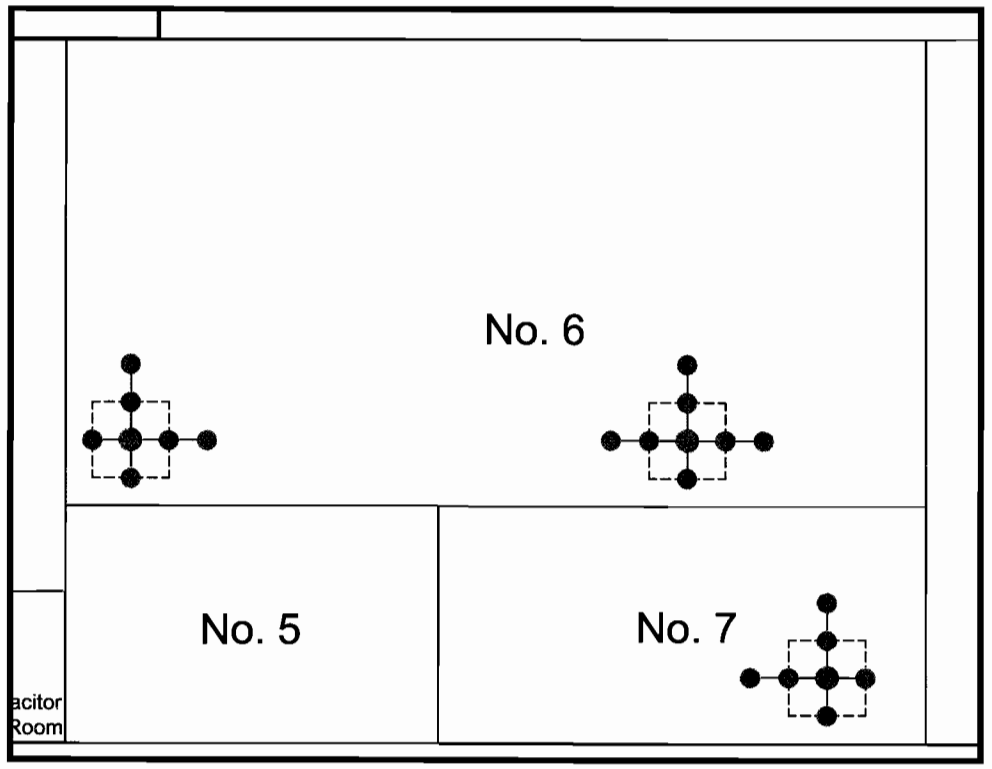
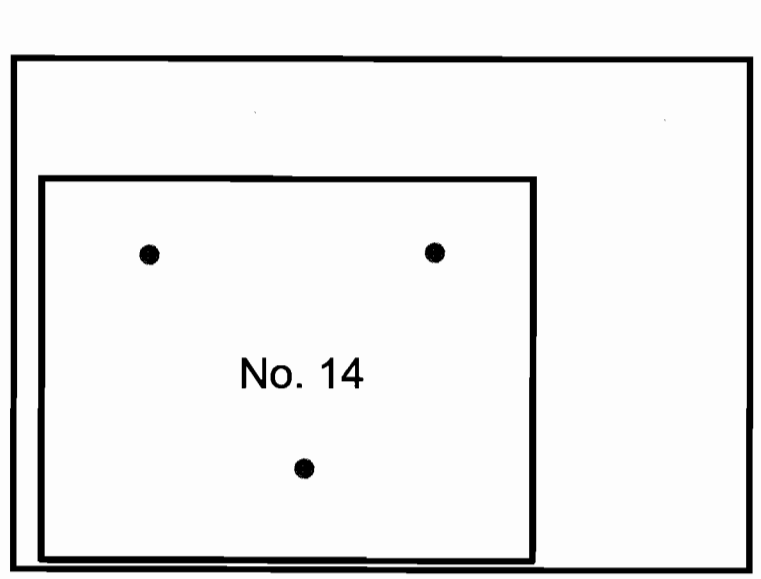


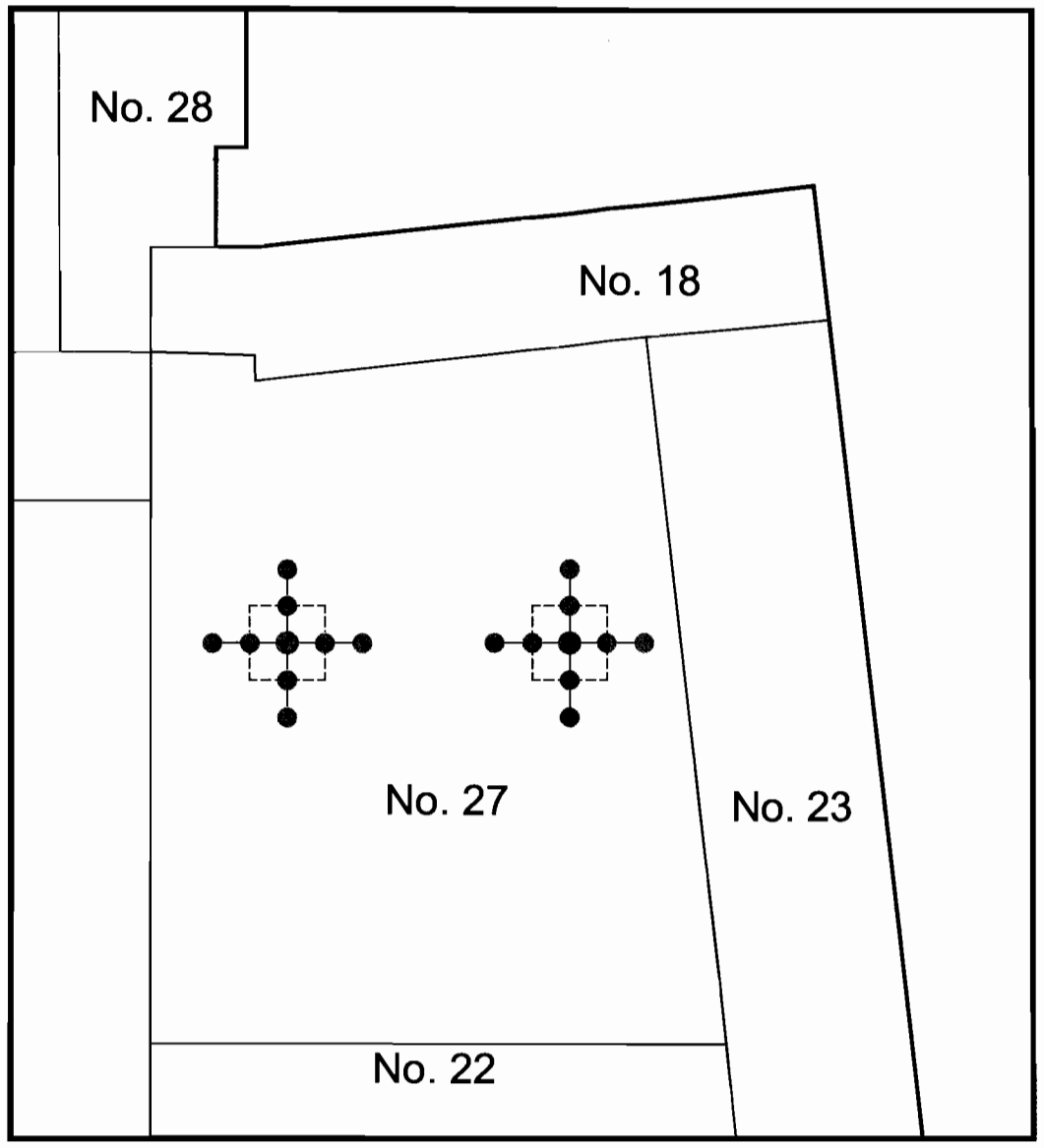
BUILDINGS 6 AND 7



BUILDING 14

NORTH

ALL VIEWS



BUILDING 27

LEGEND

- Areas where concrete slab was not sampled during Fall 2006
- Proposed Sampling Grid and initial limits of Concrete to be landfilled
- Total PCBs > 1.0 mg/kg and ≤ 10 mg/kg (Fall 2005)
- Proposed concrete sample location - refer to Section 3.3.3

0 50 100

SCALE IN FEET
ALL VIEWS

Figure 3-2
Proposed Concrete Sample Locations

490 Broadway
Buffalo, New York

Prepared For: Howden Buffalo	DATE: 11/14/06
	SCALE: 1" = 60'
BROWN AND CALDWELL	DRAWN BY: LAR
	PROJ. 129112

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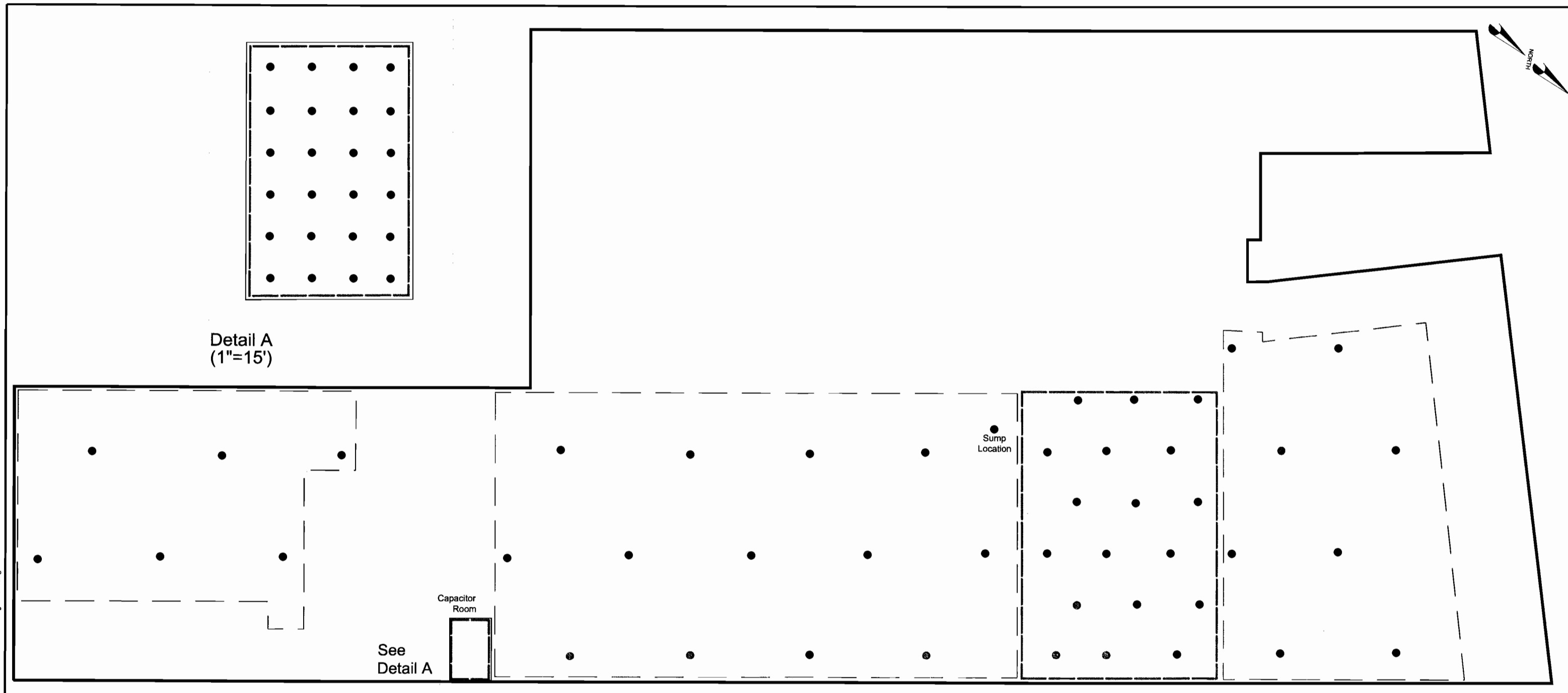

LEGEND

- ● Proposed Soil Sample Location
- Building Number
- ——— Soil sampling areas previously approved by EPA
- – – – Additional proposed soil sampling areas

0 60 120

SCALE IN FEET

Figure 4-1
Proposed Soil Sample Locations

490 Broadway
Buffalo, New York

Prepared For:	Howden Buffalo	DATE:	4/19/06
		SCALE:	1" = 60'
BROWN AND CALDWELL		DRAWN BY:	LAR
		PROJ.	129112

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APPENDIX A

Sampling Procedures

SHALLOW PENETRATION SAMPLING PROCEDURE

OBJECTIVE

The shallow penetration sampling procedure should be used to sample building surfaces such as walls, floors, and ceilings, as applicable.

EQUIPMENT AND MATERIALS

1. Drill bit of the appropriate type and length for the subject medium (1/2 inch – 1 inch diameter or larger)
2. Hand-held electric or pneumatic power drill (rotary or percussion)
3. Latex gloves
4. Stainless steel spoons
5. Aluminum foil
6. Aluminum pans
7. Natural bristle brushes (3/4 inch to 1-1/2 inch wide)
8. Sample container, as appropriate

PROCEDURE

A sample of the surface layer of the structural material (e.g., masonry walls, wooden floors) will be collected by drilling into the material to be sampled to a depth of approximately 0.5 inches with the use of a power drill and collecting the cuttings for analysis. The number of adjacent locations drilled and thus the area of surface sampled will be dependent on the density of the material and the mass of sample needed for analysis.

A new pair of latex gloves will be donned prior to the collection of each sample. A hole will be advanced into the material to be sampled. Cuttings from the hole will be collected with aluminum foil or an aluminum pan and will be transferred into an appropriate pre-labeled sample container(s). A natural bristle brush will be used if needed. The aluminum foil, aluminum pan, and natural bristle brush will be disposed of (and managed with other investigation-derived waste) after each sample (or composite sample) is collected for analyses. The sample material may be handled with

use of stainless steel spoons, aluminum foil, or gloved hands, if necessary. Samples will be handled in accordance with standard chain-of-custody protocol.

For this screening survey, all equipment contacting a sample (or composite sample) will be dedicated to that sample. Therefore, sample equipment decontamination will not be necessary. Discarded sampling supplies (e.g., drill bits, latex gloves, etc.) will be treated as investigation derived waste and will be disposed of accordingly.

Detailed sampling records will be maintained that are both technically and legally defensible. These records may be maintained either on a pre-printed data sheet or in a field book. At a minimum, the sampling records will describe the sampling location and identification, physical description of the sample (including if the sample surface is painted), physical dimensions of the sampled area, sample collection method, and other pertinent notations as applicable.

_____

Kenton H. Oma
Brown and Caldwell

June 7, 2000
Procedure No. 1

For more information, contact Kenton H. Oma (koma@brwncald.com) or
Maria Megehee (mmegehee@brwncald.com)

SOIL SAMPLING PROCEDURES

OBJECTIVE

The objective of this procedure is to describe how representative soil samples shall be collected for all required soil PCB analyses.

EQUIPMENT AND MATERIALS

1. Stainless steel spoons
2. Sample containers
3. Direct-push equipment
4. Acetate sleeves

Optional:

5. Laboratory Detergent (Alconox or equivalent)
6. Potable Water
7. Decontamination Buckets or Containers
8. Brushes
9. Organic Solvent (Diesel Fuel)
10. Clean Rags

PROCEDURE

Procedures are provided below for surface soils and subsurface soils. Procedures stated below apply to the collection of grab samples unless otherwise stated.

A new pair of latex gloves will be donned prior to the collection of each sample. All equipment contacting a sample or composite sample will be dedicated to that sample. Therefore, it is anticipated that sample equipment decontamination will not be necessary. However, some re-usable equipment may be required to collect soil samples if the soil is frozen (e.g., chisels, augers). If equipment will be re-used, that equipment will require decontamination between uses. Since the only analyte of concern is PCBs, the

decontamination is intended to remove only soil particles and oils. Decontamination will consist of either 1) a detergent wash followed by a potable water rinse, or 2) diesel fuel solvent wash (as an accepted organic solvent for PCBs) followed by rag wipe to remove excess solvent. Wash and rinse fluids will be collected for appropriate disposal.

Discarded sampling supplies will be treated as investigation derived waste and will be disposed of accordingly. Samples will be handles in accordance with standard chain-of-custody procedures.

Surface Samples

Surface soil samples will be collected from the 0 to 0.5-foot level at specified locations. In locations where concrete, pavement or fill gravel is present at ground surface, zero feet should be interpreted to occur at the base of the concrete, pavement or gravel layer. Each sample will be collected using a dedicated stainless steel spoon, placing the sample directly into an appropriately labeled jar, and cooled to 4 degrees Centigrade (C). Each soil sample will be assigned a unique identifier incorporating the site location and sample number (e.g., 14-GS-001 indicates a soil grab sample collected from boring 001 in Building 14.)

Subsurface Samples

Soil samples that are required from depth intervals greater than the surface soil intervals described above shall be collected using the following procedure. Soil borings will be advanced at specified locations.

Soil samples will be recovered from the borings using direct-push drilling methods. Soil cores will be collected in 4- or 5-foot acetate liners. Soil samples will be used for visual field classification and chemical analysis. Visual inspection will occur continuously over the entire length of the boring. Lithologic descriptions will be documented on a soil boring log.

For intervals requiring soil samples for analysis, soil cores will be extruded in the field immediately following retrieval. Each core will be divided into 2-foot sections. A representative portion of each 2-foot section will be trimmed to remove the smear zone formed during sample acquisition and split into two halves. Samples will be immediately collected and placed in clean sample containers appropriate for the method, labeled, and cooled to 4 degrees Centigrade (C). Each soil sample will be assigned a unique identifier incorporating the boring number and sample-depth interval in feet (e.g., 14-001 (0.5-2) indicates a soil sample from boring 001 in Building 14, collected from the depth interval of 0.5 to 2 feet).

Robert J. Rivera
Brown and Caldwell

November 28, 2006
Procedure No. 2

FIELD QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

OBJECTIVE

Field QA/QC samples will be utilized as a part of each sampling program. As a guide, approximately 5 percent of the total number of samples will be collected as field QA/QC samples.

The types of QA/QC samples that will be collected are solid matrix samples, i.e., samples of wood, masonry, etc. These samples are described below including guidance for their collection frequency.

PROCEDURE

Duplicate Solid Matrix Samples. Duplicate solid matrix samples will be collected in order to verify the repeatability of sample collection and laboratory analysis methodologies. The primary concern with replicate solid matrix samples is to collect two samples that are as alike as possible. For wood or masonry samples, it is usually necessary to collect adjacent (side by side) samples due to the inherent inability to physically "split" this type of medium. The location for the adjacent samples will be chosen such that they are visually similar as to the type of medium, degree of apparent contamination, etc. However, care and discretion will be exercised for any type of duplicate sampling.

Duplicate solid matrix samples will be analyzed for the same chemical constituents as the primary samples. Duplicate solid matrix samples will be collected at a frequency of approximately 5 percent of the total number of solid matrices.

Kenton H. Oma
Brown and Caldwell

June 7, 2000
Procedure No. 3

For more information, contact Kenton H. Oma (koma@brwncald.com) or
Maria Megehee (mmegehee@brwncald.com)

SAMPLE HANDLING PROCEDURE

OBJECTIVE

The purpose of this procedure is to provide standardization in the handling of samples for chemical analyses. These handling procedures include using the appropriate sample containers and preservatives, following standard chain-of-custody procedures, and using appropriate sample shipment methods.

SAMPLE CONTAINERS AND PRESERVATION

Different combinations of container and preservation techniques are required for the various media and constituents in association with specified maximum allowable sample holding times. The various required preservation methods, container types, and maximum sample holding times for aqueous and non-aqueous samples will be followed according to the analytical method used for sample analysis.

SAMPLE LABELS

Sample labels are required on sample containers for the primary purpose of sample identification. Specific field data need not be recorded on the labels as they would be recorded on media-specific sampling data records. The sample labels should contain the following information:

- Sample or location identification number (i.e., well number, boring number/depth, or arbitrary sample number)
- Analysis to be performed
- Preservative (optional)
- Project name and number
- Date and time of sample collection
- Initials of sampler.

CHAIN-OF-CUSTODY

The goal of implementing chain-of-custody procedures is to ensure that the sample is traceable from the time that it is collected until it, or its derived data, are used. A sample would be considered to be "in custody" under the following conditions:

- It is in personal possession.
- It is in personal view after being in personal possession.
- It was in personal possession when it was properly secured.
- It is in a designated secure area.

A chain-of-custody form is to be initiated at the time that the sample containers leave the site at which they are prepared, usually that of the analytical laboratory supplying the containers together with the samples. It is important that the field personnel completely fill out the applicable sections of the form. The chain-of-custody forms should be placed in shipping containers, protected from moisture by using sealed plastic bags (e.g., Ziploc®), and should accompany the containers during shipment to the laboratory. The field personnel collecting the samples will be responsible for the custody of the samples until transportation to the laboratory. Sample transfer requires the individuals relinquishing and receiving the samples to sign, date, and note the time of transfer on the chain-of-custody forms. The chain-of-custody is considered to be complete after it has been received and signed in by the analytical laboratory. A copy of the chain-of-custody record should be maintained by the field personnel along with the other field records.

Common carriers (i.e., Federal Express) are not expected to sign the chain-of-custody form. However, the bill of lading or airbill becomes part of the chain-of-custody record in the event that a common carrier is used to transport the samples.

SAMPLE SHIPMENT

Shipment of samples to an analytical laboratory is usually required upon completion of sample collection. Packaging is necessary in order to protect the sample containers, to maintain the samples at a temperature of 4°C, and to comply with applicable transportation regulations.

In general, samples are shipped using packaging that is supplied by the analytical laboratory. The packaging normally includes a shippable insulated box such as an ice cooler and contains protective internal packaging materials such as foam sleeves. Some laboratories use proprietary sample packaging with integral internal packaging. In either case, provisions need to be made for maintaining the temperature of the samples with the use of re-freezable ice packs. Sample containers will be packed to avoid inadvertent spillage during shipment.

Kenton H. Oma
Brown and Caldwell

June 7, 2000
Procedure No. 4

For more information, contact Kenton H. Oma (koma@brwncald.com) or
Maria Megehee (mmegehee@brwncald.com)

APPENDIX B

Analytical Reports of October 2006 Concrete Samples

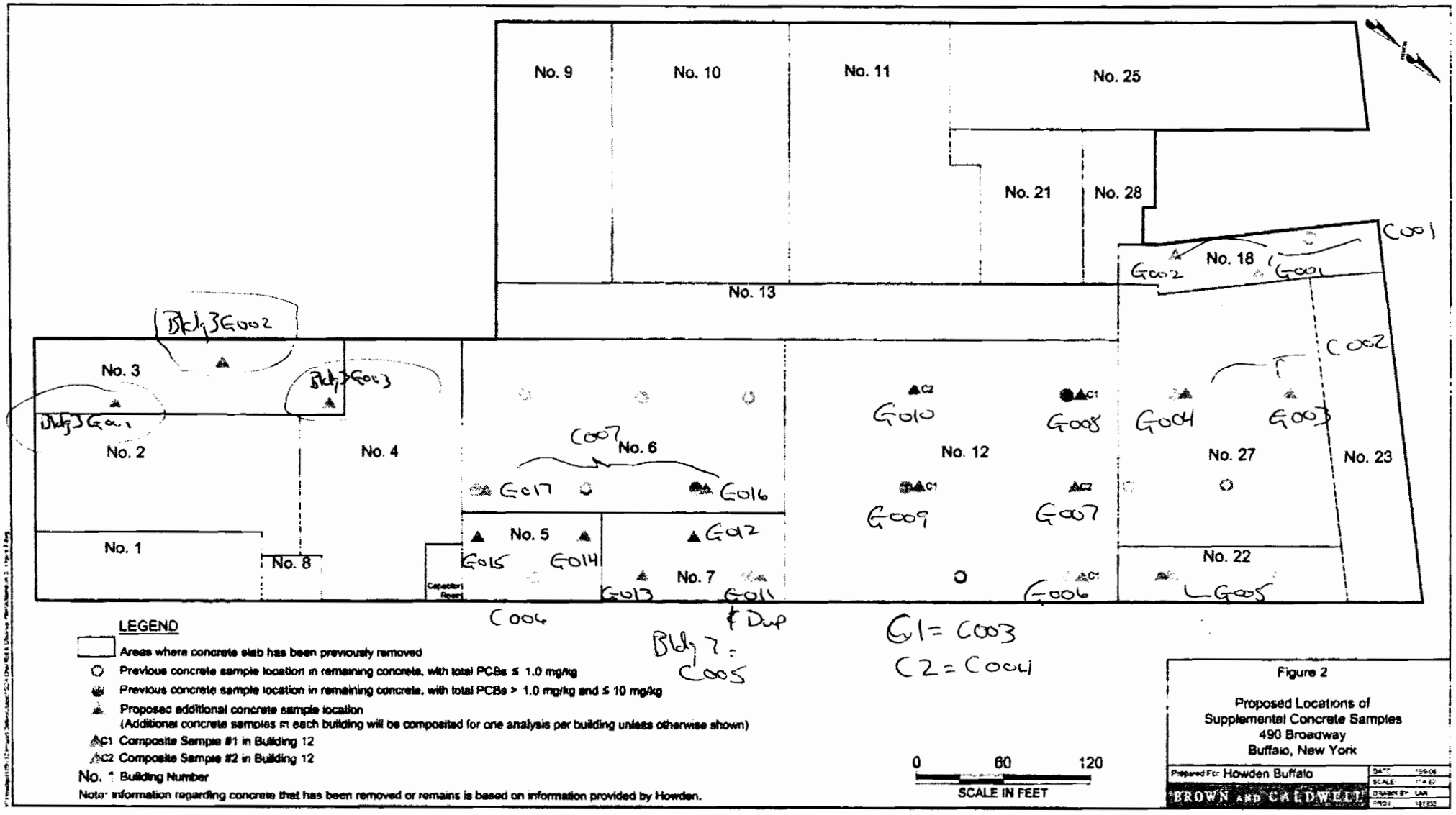

Figure 2

Proposed Locations of
Supplemental Concrete Samples
490 Broadway
Buffalo, New York

Prepared For: Howden Buffalo

BROWN AND CALDWELL

Columbia Analytical Services, Inc.
1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client : Sevenson Environmental
Project Reference: BUFFALO-FORGE
Lab Submission # : R2634449
Project Manager : Aimee Keefer
Reported : 11/06/06

Report Contains a total of 23 pages

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. Michael E. Perry

CASE NARRATIVE
COMPANY: Sevenson Environmental
Buffalo – Forge
SUBMISSION # R2634449

Sevenson Environmental samples were collected on 10/24/06 and received at CAS on 10/25/06 with a cooler temperature of 3°C. All data has been reported on a dry-weight basis.

PCB'S

Seven debris samples were analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

Site QC was not requested for this SDG. All Blank Spike and Blank Spike Duplicate recoveries and RPD's were within limits.

The Laboratory Blank associated with these analyses was free of contamination.

All surrogate standard recoveries were within limits except the surrogates for sample BF-BLDG22G005-102406 were diluted out and have been flagged with a "D".

All samples were extracted and analyzed within required holding times.

All samples were analyzed at a dilution due to matrix interference.

No other analytical or QC problems were encountered.

Columbia Analytical Services, Inc.

This report contains analytical results for the following samples:

Submission #: R2634449

Lab ID	Client ID
949019	BF-BLDG18G001-102406
949020	BF-BLDG18G002-102406
949021	BF-BLDG18C001-102406
949022	BF-BLDG27G003-102406
949023	BF-BLDG27G004-102406
949024	BF-BLDG27C002-102406
949026	BF-BLDG22G005-102406

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

ORGANIC QUALIFIERS

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds, or when the data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit and greater than the MDL. This flag is also used for DoD instead of "P" as indicated below.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns. The concentration is reported on the Form I and flagged with a "P" ("J" for DoD).

Q - for DoD only - indicates a pesticide/Aroclor target is not confirmed. This flag is used when there is ≥ 100% difference for the detected concentrations between the two GC columns.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - As specified in Case Narrative.

* - This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

Columbia Analytical Services INC.
An Employee - Owned Company

ACCREDITED IN ACCORDANCE WITH nelac

Service Quality Ethics Environmental ACIL

INORGANIC QUALIFIERS

C (Concentration) qualifier -

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL). This qualifier may also be used to indicate that there was contamination above the reporting limit in the associated blank. See Narrative for details.
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- D - Spike was diluted out
- E - The reported value is estimated because the serial dilution did not meet criteria.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- * - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "AF" for Automated Cold Vapor Atomic Fluorescence Spectrometry
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

CAS/Rochester Lab ID # for State Certifications

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID # 68-786
Rhode Island ID # 158
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG18G001-102406

Date Sampled : 10/24/06 13:30 **Order #:** 949019 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	94.7	%	10/27/06	08:18	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG18G001-102406

Date Sampled : 10/24/06 13:30 **Order #:** 949019 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449 **Percent Solid:** 94.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	350 U	UG/KG
PCB 1221	67	710 U	UG/KG
PCB 1232	33	350 U	UG/KG
PCB 1242	33	350 U	UG/KG
PCB 1248	33	350 U	UG/KG
PCB 1254	33	350 U	UG/KG
PCB 1260	33	350 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	110	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	104	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG18G002-102406

Date Sampled : 10/24/06 13:50 **Order #:** 949020 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	96.5	%	10/27/06	08:18	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG18G002-102406

Date Sampled : 10/24/06 13:50 **Order #:** 949020 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449 **Percent Solid:** 96.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	140	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	108	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG18C001-102406

Date Sampled : 10/24/06 13:55 **Order #:** 949021 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	95.8	%	10/27/06	08:18	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG18C001-102406

Date Sampled : 10/24/06 13:55 **Order #:** 949021 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449 **Percent Solid:** 95.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	700 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	111	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	112	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG27G003-102406

Date Sampled : 10/24/06 14:10 **Order #:** 949022 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	96.2	%	10/27/06	08:18	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG27G003-102406

Date Sampled : 10/24/06 14:10 **Order #:** 949022 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449 **Percent Solid:** 96.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	700 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	360	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	140	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	126	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG27G004-102406

Date Sampled : 10/24/06 14:20 **Order #:** 949023 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	93.9	%	10/27/06	08:18	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG27G004-102406

Date Sampled : 10/24/06 14:20 **Order #:** 949023 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449 **Percent Solid:** 93.9

ANALYTE		PQL	RESULT	UNITS
DATE EXTRACTED	: 10/27/06			
DATE ANALYZED	: 11/02/06			
ANALYTICAL DILUTION:	10.00			Dry Weight
PCB 1016		33	350 U	UG/KG
PCB 1221		67	710 U	UG/KG
PCB 1232		33	350 U	UG/KG
PCB 1242		33	350 U	UG/KG
PCB 1248		33	350 U	UG/KG
PCB 1254		33	350 U	UG/KG
PCB 1260		33	350 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	110	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	91	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG27C002-102406

Date Sampled : 10/24/06 14:25 **Order #:** 949024 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	95.1	%	10/27/06	08:18	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG27C002-102406

Date Sampled : 10/24/06 14:25 **Order #:** 949024 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449 **Percent Solid:** 95.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	350 U	UG/KG
PCB 1221	67	700 U	UG/KG
PCB 1232	33	350 U	UG/KG
PCB 1242	33	350 U	UG/KG
PCB 1248	33	350 U	UG/KG
PCB 1254	33	350 U	UG/KG
PCB 1260	33	350 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	124	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	126	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG22G005-102406

Date Sampled : 10/24/06 14:45 **Order #:** 949026 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	96.3	%	10/27/06	08:18	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO-FORGE
Client Sample ID : BF-BLDG22G005-102406

Date Sampled : 10/24/06 14:45 **Order #:** 949026 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/25/06 **Submission #:** R2634449 **Percent Solid:** 96.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/03/06			
ANALYTICAL DILUTION: 20.00			Dry Weight
PCB 1016	33	690 U	UG/KG
PCB 1221	67	1400 U	UG/KG
PCB 1232	33	690 U	UG/KG
PCB 1242	33	690 U	UG/KG
PCB 1248	33	690 U	UG/KG
PCB 1254	33	6100	UG/KG
PCB 1260	33	690 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	D	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	D	%

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY: LABORATORY CONTROL SAMPLE
SOIL/SEDIMENT

Spiked Order No : 951120

Dup Spiked Order No. : 951121

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/KG

Run Number : 136637

			BLANK SPIKE		BLANK SPIKE DUP			QC LIMITS	
ANALYTE	SPIKE ADDED	SAMPLE CONCENT	FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
PCB 1260	170	0	173	104	195	117	12	30	57 - 141

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 951119 **Sample Matrix:** SOIL/SEDIMENT
Date Received: **Submission #:** **Percent Solid:** 100

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/01/06			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	67	67 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	102	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	98	%

Columbia Analytical Services, Inc.
An Employee - Owned Company
www.caslab.com

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF _____

SR # _____

CAS Contact _____

Project Name: Buffalo Forge	Project Number:
Project Manager: Jeff Shirley	Report CC:
Company/Address: Severn Trent Environmental 2749 Lockport Rd Niagara Falls, NY 14305	
Phone #: 716-284-0431	FAX#: 716-285-4201
Sampler's Signature:	Sampler's Printed Name: Jeff Shirley

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

Preservative Key: 0. NONE; 1. HCL; 2. HNO_3; 3. H_2SO_4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. $NaHSO_4$; 8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
BF-Bldg 18G001-102406	949019	10/24/06	1330	Solid	1			X	X				
BF-Bldg 18G002-102406	949020		1350	Solid	1				X				
BF-Bldg 18C001-102406	949021		1355	Solid	1				X				
BF-Bldg 27G003-102406	949022		1410	Solid	1				X				
BF-Bldg 27G004-102406	949023		1420	Solid	1				X				
BF-Bldg 27C002-102406	949024		1425	Solid	1				X				
BF-Bldg 22G005-102406	949026		1445	Solid	1				X				

SPECIAL INSTRUCTIONS/COMMENTS

Metals

logged in as Sed - same as '05.

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ RUSH (SURCHARGES APPLY)

_____ 24 hr _____ 48 hr X 5 day

_____ STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

_____ I. Results Only

_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

_____ III. Results + QC and Calibration Summaries

_____ IV. Data Validation Report with Raw Data

_____ V. Specialized Forms / Custom Report

Edata _____ Yes _____ No

INVOICE INFORMATION

PO#

BILL TO:

SUBMISSION # 1263449

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature FedEx	Signature	Signature Rachel Jones	Signature	Signature
Printed Name: Jeff Shirley	Printed Name	Printed Name	Printed Name Rachel Jones	Printed Name	Printed Name
Firm SES	Firm	Firm	Firm CAS	Firm	Firm
Date/Time 10/24/06 (7pm)	Date/Time	Date/Time	Date/Time 10/25/06 0935	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Cooler Receipt And Preservation Check Form

Project/Client Severson Environmental Submission Number R2634491

Cooler received on 10/25/06 by: RG **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO
4.	Did any VOA vials have significant air bubbles?	YES	NO (N/A)
5.	Were **Ice** or **Ice packs** present?	(YES)	NO
6.	Where did the bottles originate?	CAS/ROC, (CLIENT)	
7.	Temperature of cooler(s) upon receipt:	3°	

Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 10/25/06 @ 0945

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

PC Secondary Review: JMC 10/25/06

Cooler Breakdown: Date: 10/25/06 by: KM

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added	Final pH
pH	Reagent						
≥12	NaOH						
≤2	HNO_3						
≤2	H_2SO_4						
Residual Chlorine (+/-)	for TCN & Phenol						

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH_____

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2		

Other Comments:

PC Secondary Review: JMC 10/25/06

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG12G006-102506

Date Sampled : 10/25/06 13:00 **Order #:** 949027 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 96.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	700 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	580	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	105	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	82	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG12G007-102506

Date Sampled : 10/25/06 13:05 **Order #:** 949029 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 96.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	700 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	1900	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	114	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	109	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG12G008-102506

Date Sampled : 10/25/06 13:15 **Order #:** 949030 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/03/06			
ANALYTICAL DILUTION: 50.00			Dry Weight
PCB 1016	33	1700 U	UG/KG
PCB 1221	67	3400 U	UG/KG
PCB 1232	33	1700 U	UG/KG
PCB 1242	33	1700 U	UG/KG
PCB 1248	33	1700 U	UG/KG
PCB 1254	33	14000	UG/KG
PCB 1260	33	1700 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	D	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	D	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG12G009-102506

Date Sampled : 10/25/06 13:20 **Order #:** 949032 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 98.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	680 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	970	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	117	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	109	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG12G010-102506

Date Sampled : 10/25/06 13:30 **Order #:** 949033 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	630	UG/KG
PCB 1260	33	340 U	UG/KG
SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	145	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	119	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG12C003-102506

Date Sampled : 10/25/06 13:35 **Order #:** 949034 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/03/06			
ANALYTICAL DILUTION: 50.00			Dry Weight
PCB 1016	33	1700 U	UG/KG
PCB 1221	67	3400 U	UG/KG
PCB 1232	33	1700 U	UG/KG
PCB 1242	33	1700 U	UG/KG
PCB 1248	33	1700 U	UG/KG
PCB 1254	33	10000	UG/KG
PCB 1260	33	1700 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	D	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	D	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG12C004-102506

Date Sampled : 10/25/06 13:40 **Order #:** 949036 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 96.9

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	960	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	123	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	107	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG7011-102506

Date Sampled : 10/25/06 13:50 **Order #:** 949038 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 98.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	680 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	550	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	125	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	102	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG7012-102506

Date Sampled : 10/25/06 14:00 **Order #:** 949040 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	132	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	107	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-DUP1-102506

Date Sampled : 10/25/06 **Order #:** 949043 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	520	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	126	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	104	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG7G013-102506

Date Sampled : 10/25/06 14:05 **Order #:** 949044 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 88.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	380 U	UG/KG
PCB 1221	67	760 U	UG/KG
PCB 1232	33	380 U	UG/KG
PCB 1242	33	380 U	UG/KG
PCB 1248	33	380 U	UG/KG
PCB 1254	33	380 U	UG/KG
PCB 1260	33	380 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	128	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	100	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG7C005-102506

Date Sampled : 10/25/06 14:10 **Order #:** 949046 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 91.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	360 U	UG/KG
PCB 1221	67	730 U	UG/KG
PCB 1232	33	360 U	UG/KG
PCB 1242	33	360 U	UG/KG
PCB 1248	33	360 U	UG/KG
PCB 1254	33	360 U	UG/KG
PCB 1260	33	360 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	133	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	113	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG5G014-102506

Date Sampled : 10/25/06 14:15 **Order #:** 949048 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 96.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	131	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	102	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG5G015-102506

Date Sampled : 10/25/06 14:20 **Order #:** 949049 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.9

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	680 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	1300	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	142	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	116	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG5C006-102506

Date Sampled : 10/25/06 14:25 **Order #:** 949052 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/02/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	990	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	125	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	104	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG6G016-102506

Date Sampled : 10/25/06 14:35 **Order #:** 949055 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 96.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/03/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	700 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	151	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	98	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG6G017-102506

Date Sampled : 10/25/06 14:40 **Order #:** 949057 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : **/**/**			
DATE ANALYZED : 11/03/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	124	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	98	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/06/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG6C007-102506

Date Sampled : 10/25/06 14:45 **Order #:** 949059 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 10/26/06 **Submission #:** R2634451 **Percent Solid:** 97.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/27/06			
DATE ANALYZED : 11/03/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	67	690 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	340 U	UG/KG
PCB 1260	33	340 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	124	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	91	%

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SR #

CAS Contact

Project Name: Buffalo Forge	Project Number
Project Manager: Jeff Shirley	Report CC
Company/Address: Severson Environmental Services 2749 Lockport Rd Niagara Falls NY 14305	
Phone #: 716 284 0431	FAX#: 716-285-4201
Sampler's Signature:	Sampler's Printed Name: Jeff Shirley

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 4°C

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608 ☐ CLP	PCB's ☐ 8082 ☐ 608 ☐ CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
BF-Bldg12G006-102506	944027	10/25/06	1300	S					X				
BF-Bldg12G007-102506	944029	10/25/06	1305	S					X				
BF-Bldg12G008-102506	944030	10/25/06	1315	S					X				
BF-Bldg12G009-102506	944032	10/25/06	1320	S					X				
BF-Bldg12G010-102506	944033	10/25/06	1330	S					X				
BF-Bldg12C003-102506	944034	10/25/06	1335	S					X				
BF-Bldg12C004-102506	944036	10/25/06	1340	S					X				
BF-Bldg7011-102506	944038	10/25/06	1350	S					X				
BF-Bldg7012-102506	944040	10/25/06	1900	S					X				
BF-Dupl-102506	944043	10/25/06	-	S					X				

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

Samples Shipped in 2 Coolers!

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr X 5 day
____ STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION # R63445.1

SAMPLE RECEIPT: CONDITION/COOLER TEMP: _____ CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Jeffrey L. Shirley	Printed Name	Printed Name	Printed Name: Gregory O. Gonedian	Printed Name	Printed Name
Firm: SES	Firm	Firm	Firm: CAS	Firm	Firm
Date/Time: 10/25/06 - 1900	Date/Time	Date/Time	Date/Time: 10-26-06 9:20	Date/Time	Date/Time

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PAGE 2 OF 2

SR #:
CAS Contact:

Project Name: Buffalo Forge
Project Number:
Project Manager: Jeff Shirley
Report CC:
Company/Address: Severson Environmental Services, 2749 Lockport Rd, Niagara Falls NY 14305
Phone #: 716-284-0[illegible]
FAX#: 716-285-4201
Samplers Signature: [signature]
Samplers Printed Name: Jeff Shirley

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625 ☐CLP	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608 ☐CLP	PCB's ☐8082 ☐608 ☐CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)						REMARKS/ ALTERNATE DESCRIPTION
~~BF-Bldg 7G013-102506~~		~~10/25/06~~	~~1405~~	~~S~~					JS	~~X~~								
~~BF-Bldg 7G012-102506~~		10/25/06	~~1405~~	~~S~~					JS	~~X~~								
BF-Bldg 7G013-102506	949044	10/25/06	1405	S						X								
BF-Bldg 7C005-102506	949046	10/25/06	1410	S						X								
BF-Bldg 5G014-102506	949048	10/25/06	1415	S						X								
BF-Bldg 5G015-102506	949049	10/25/06	1420	S						X								
BF-Bldg 5C006-102506	949052	10/25/06	1425	S						X								
BF-Bldg 6G016-102506	949055	10/25/06	1435	S						X								
BF-Bldg 6G017-102506	949057	10/25/06	1440	S						X								
BF-Bldg 6C007-102506	949059	10/25/06	1445	S						X								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals

Samples Shipped in 2 coolers

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr X 5-day
____ STANDARD
REQUESTED FAX DATE ______
REQUESTED REPORT DATE ______

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:

SUBMISSION #: R2634451

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	[signature]	[signature]		[signature]		
Printed Name	Jeff Shirley			Gregory A. Esmerian		
Firm	SES			CAS		
Date/Time	10/25/06			10/26/06 920		

Cooler Receipt And Preservation Check Form

Project/Client Sevenson E.S. Submission Number R263451.

Cooler received on 10-26-06 by: KE **COURIER:** CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant air bubbles?	YES	NO	(N/A)		
5.	Were **Ice or Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	(CAS/ROC), CLIENT				
7.	Temperature of cooler(s) upon receipt:	6°	6°			
	Is the temperature within 0° - 6° C?:	(Yes)	(Yes)	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 10-26-06 @ 10:12

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

PC Secondary Review: [illegible] 10/26/06

Cooler Breakdown: Date: 10-27-06 by: KE

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies: _____

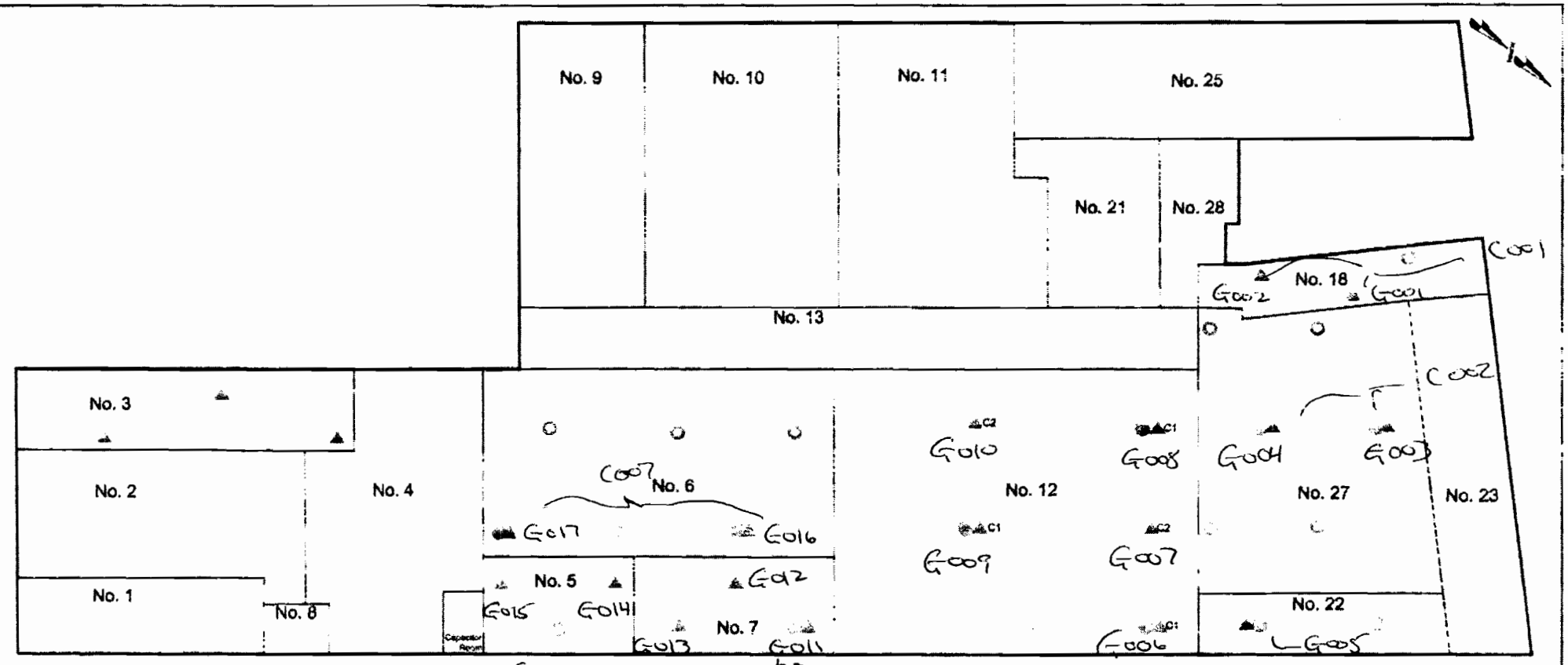
		YES	NO	Sample I.D.	Reagent	Vol. Added	Final pH
pH	Reagent						
≥12	NaOH						
≤2	HNO_3						
≤2	H_2SO_4						
Residual Chlorine (+/-)	for TCN & Phenol						

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH _____

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2		

Other Comments:

PC Secondary Review: [illegible] 10/30/06



LEGEND

- Areas where concrete slab has been previously removed
- Previous concrete sample location in remaining concrete, with total PCBs ≤ 1.0 mg/kg
- Previous concrete sample location in remaining concrete, with total PCBs > 1.0 mg/kg and ≤ 10 mg/kg
- Proposed additional concrete sample location
  (Additional concrete samples in each building will be composited for one analysis per building unless otherwise shown)
- C1 Composite Sample #1 in Building 12
- C2 Composite Sample #2 in Building 12
- No. 1 Building Number

Note: Information regarding concrete that has been removed or remains is based on information provided by Howden.

0 60 120
SCALE IN FEET

Figure 2

Proposed Locations of
Supplemental Concrete Samples
490 Broadway
Buffalo, New York

Prepared For Howden Buffalo

BROWN AND CALDWELL

Columbia Analytical Services inc.

A FULL SERVICE ENVIRONMENTAL LABORATORY

November 9, 2006

Mr. Jeffrey L. Shirley
Sevenson Environmental
2749 Lockport Road
Niagara Falls, NY 14305

PROJECT:BUFFALO FORGE
Submission #:R2634627

Dear Mr. Shirley

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Aimee Keefer
Project Chemist

Enc.

Columbia Analytical Services Inc.

1 Mustard ST.
Suite 250
Rochester, NY 14609
(585) 288-5380

THIS IS AN ANALYTICAL TEST REPORT FOR:

Client	: Sevenson Environmental
Project Reference	: BUFFALO FORGE
Lab Submission #	: R2634627
Project Manager	: Aimee Keefer
Reported	: 11/09/06

Report Contains a total of _____ pages

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. Michael K. Perry

Columbia Analytical Services inc.

CASE NARRATIVE

This report contains analytical results for the following samples:

Submission #: R2634627

Lab ID	Client ID
952920	BF-BLDG3G001-110306
952924	BF-BLDG3G002-110306
952925	BF-BLDG3G003-110306

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.

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ORGANIC QUALIFIERS

U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.

J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds, or when the data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit and greater than the MDL. This flag is also used for DoD instead of "P" as indicated below.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.

P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 40% (25% for CLP) difference for detected concentrations between the two GC columns. The concentration is reported on the Form I and flagged with a "P" ("J" for DoD).

Q - for DoD only – indicates a pesticide/Aroclor target is not confirmed. This flag is used when there is ≥ 100% difference for the detected concentrations between the two GC columns.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as in the sample.

E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.

A - This flag indicates that a TIC is a suspected aldol-condensation product.

X - As specified in Case Narrative.

* - This flag identifies compounds associated with a quality control parameter which exceeds laboratory limits.

CAS/Rochester Lab ID # for State Certifications

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

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Ethics Service Quality ACIL 2005 SEAL OF EXCELLENCE PROGRAM Environmental

INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL). This qualifier may also be used to indicate that there was contamination above the reporting limit in the associated blank. See Narrative for details.
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- D - Spike was diluted out
- E - The reported value is estimated because the serial dilution did not meet criteria.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- * - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "AF" for Automated Cold Vapor Atomic Fluorescence Spectrometry
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

CAS/Rochester Lab ID # for State Certifications

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Massachusetts ID # M-NY032
Navy Facilities Engineering Service Center Approved
Nebraska Accredited
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID # 68-786
Rhode Island ID # 158
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

Reported: 11/09/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG3G001-110306

Date Sampled : 11/03/06 13:45 **Order #:** 952920 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/04/06 **Submission #:** R2634627

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	94.2	%	11/07/06	10:44	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/09/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG3G001-110306

Date Sampled : 11/03/06 13:45 **Order #:** 952920 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/04/06 **Submission #:** R2634627 **Percent Solid:** 94.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/06/06			
DATE ANALYZED : 11/06/06			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	350 U	UG/KG
PCB 1221	67	710 U	UG/KG
PCB 1232	33	350 U	UG/KG
PCB 1242	33	2300	UG/KG
PCB 1248	33	350 U	UG/KG
PCB 1254	33	1900	UG/KG
PCB 1260	33	350 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	139	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	102	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/09/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG3G002-110306

Date Sampled : 11/03/06 14:00 **Order #:** 952924 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/04/06 **Submission #:** R2634627

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	91.8	%	11/07/06	10:44	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/09/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG3G002-110306

Date Sampled : 11/03/06 14:00 **Order #:** 952924 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/04/06 **Submission #:** R2634627 **Percent Solid:** 91.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/06/06			
DATE ANALYZED : 11/07/06			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	36 U	UG/KG
PCB 1221	67	73 U	UG/KG
PCB 1232	33	36 U	UG/KG
PCB 1242	33	36 U	UG/KG
PCB 1248	33	36 U	UG/KG
PCB 1254	33	120	UG/KG
PCB 1260	33	88	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	92	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	74	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/09/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG3G003-110306

Date Sampled : 11/03/06 14:15 **Order #:** 952925 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/04/06 **Submission #:** R2634627

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.3M	1.00	99.5	%	11/07/06	10:44	1.0

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/09/06

Sevenson Environmental
Project Reference: BUFFALO FORGE
Client Sample ID : BF-BLDG3G003-110306

Date Sampled : 11/03/06 14:15 **Order #:** 952925 **Sample Matrix:** SOIL/SEDIMENT
Date Received: 11/04/06 **Submission #:** R2634627 **Percent Solid:** 99.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/06/06			
DATE ANALYZED : 11/07/06			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	67	67 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	45	UG/KG
PCB 1260	33	33 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	91	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	82	%

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY: LABORATORY CONTROL SAMPLE
SOIL/SEDIMENT

Spiked Order No. : 953469

Dup Spiked Order No. : 953470

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/KG

Run Number : 137041

			BLANK SPIKE		BLANK SPIKE DUP.			QC LIMITS	
ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
PCB 1260	170	0	174	104	194	116	11	30	57 - 141

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS
METHOD 8082 PCB'S
Reported: 11/09/06

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 953468 **Sample Matrix:** SOIL/SEDIMENT
Date Received: **Submission #:** **Percent Solid:** 100

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/06/06			
DATE ANALYZED : 11/06/06			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	67	67 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(29 - 153 %)	101	%
TETRACHLORO-META-XYLENE	(27 - 134 %)	79	%

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SR #

CAS Contact

Project Name: Buffalo Forge
Project Number:
Project Manager: Jeff Shirley
Report CC:
Company/Address: Sevenson Environmental
2749 Lockport Rd
Niagara Falls NY 14305
Phone #: 716-284-0431
FAX#: 716-285-9201
Sampler's Signature: [signature]
Sampler's Printed Name: Jeffrey L Shirley

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0 (under METALS, DISSOLVED column)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625 ☐CLP	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608 ☐CLP	PCB's ☐8082 ☐608 ☐CLP	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)								REMARKS/ ALTERNATE DESCRIPTION
BF-Bldg3G001-110306	952920	11/3/06	1345	Solid	1					X										
BF-Bldg3G002-110306	952924	|	1400	|	1					X										
BF-Bldg3G003-110306	952925	|	1415	|	1					X										
Temp Blank																				

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
X RUSH (SURCHARGES APPLY)
___ 24 hr ___ 48 hr ___ 5 day
___ STANDARD
REQUESTED FAX DATE ______
REQUESTED REPORT DATE ______

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO#
BILL TO: Sevenson Env.
Above Address
SUBMISSION #: 263412

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	[signature]	Fed EX		[signature]		
Printed Name	Jeff Shirley			Gregory O. Esmerian		
Firm	SES			CAS		
Date/Time	11/3/06 1600			11-4-06 10:55		

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

Cooler Receipt And Preservation Check Form

Project/Client Stevenson Submission Number 2634627

Cooler received on 11-4-06 by: KE COURIER: CAS UPS (FEDEX) VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO			
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO			
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO			
4.	Did any VOA vials have significant air bubbles?	YES	NO	(N/A)		
5.	Were **Ice** or **Ice packs** present?	(YES)	NO			
6.	Where did the bottles originate?	CAS/ROC, (CLIENT)				
7.	Temperature of cooler(s) upon receipt:	6°				
	Is the temperature within 0° - 6° C?:	(Yes)	Yes	Yes	Yes	Yes
	If No, Explain Below	No	No	No	No	No

Date/Time Temperatures Taken: 11-4-06 @ 11:19

Thermometer ID: 161 or (IR GUN) Reading From: Temp Blank or (Sample Bottle)

If out of Temperature, Client Approval to Run Samples _____

PC Secondary Review: [signature] 11/6/06

Cooler Breakdown: Date: 11/6/06 by: [signature]

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated		(N/A)

Explain any discrepancies: _____

		YES	NO	Sample I.D.	Reagent	Vol. Added	Final pH
pH	Reagent						
≥12	NaOH						
≤2	HNO_3						
≤2	H_2SO_4						
Residual Chlorine (+/-)	for TCN & Phenol						

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH _____

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2		

Other Comments:

PC Secondary Review: [signature] 11/6/06