

Report



Site Investigation
Salvation Army Site
Syracuse, New York

January 2004

**SITE INVESTIGATION
SALVATION ARMY SITE
BURT STREET
SYRACUSE, NEW YORK**

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1.0 - INTRODUCTION

The Syracuse Housing Authority (SHA) is considering acquiring several properties in the vicinity of its Burt Street headquarters. SHA's goal is to improve the marketability and aesthetics of the neighborhood by removing elements from the surrounding properties that pose potential physical hazards to the community, and otherwise diminish the quality of this urban residential neighborhood. Accordingly, property specific environmental concerns must be identified and characterized so that issues in connection with site ownership can be managed appropriately. S&W Redevelopment of North America, LLC (SWRNA), was retained by SHA to investigate specific target properties and identify potential environmental concerns that would potentially affect restoration of the properties.

This report presents the findings of a site investigation that was completed at a property known as the Salvation Army site ("Site"), located at the intersection of South State and Burt Streets. The location of the Site, a former underground storage tank (UST), and the preliminary findings of prior investigations justified completion of an environmental site investigation to identify and characterize potential environmental concerns (if any) at the Site. The objective of the investigation was to provide data to evaluate whether site remediation is warranted.

1.1 - SITE DESCRIPTION AND BACKGROUND INFORMATION

The Salvation Army property currently occupies approximately 2.5 acres located at 1105 South State Street in Syracuse, New York (Figures 1-1). The property in its current configuration originally consisted of five separate parcels (Moffa Associates, 1994). The main Site structures have been in place since at least 1951. The four additional parcels located at 1117 South State, 307 Burt, 313 Burt, and the 100 block of Oakwood Avenue, were acquired by the Salvation Army between 1980 and 1987. The parcel located along the 100 Block of Oakwood was previously owned by the Roth Steel Corporation and used as a vehicle garage (Moffa Associates, 1994). The Salvation Army previously used the 50,000 square feet (sq. ft.) concrete block/brick building for a dormitory, office space, warehouse, and clothing distribution/retail center, however, it is presently vacant.

A 2,000-gallon capacity UST facility was installed on the South State Street side of the property sometime before 1986 (Moffa Associates, 1994) and was used to fuel Salvation Army delivery trucks used in the distribution operation. The UST failed testing in April

1986 (Moffa Associates, 1986), was removed, and replaced with a 5,000-gallon capacity gasoline UST in the same location December 1986 (Moffa Associates, 1994).

In 1998 the 5,000-gallon capacity gasoline tank was removed from along the State Street side of the property (CES, 1998). During excavation, soils containing petroleum constituents were observed. The New York State Department of Environmental Conservation (NYSDEC) was contacted and subsequently assigned Spill No. 97-11143. Four (4) groundwater monitoring wells were installed near the UST area (Figure 2-1) by Certified Environmental Services, Inc. (CES) to assess the nature and extent of impact. Laboratory results of groundwater and soil samples taken by CES indicated the presence of volatile organic compounds (VOCs) indicative of gasoline-related impacts. No documentation of spill closure could be found.

Other investigations (OBG, 1996) included the collection of surface soil samples from portions of the site that were composited and analyzed, revealing the presence of petroleum hydrocarbons (TPH) in site soils. The analyses indicated the presence of both number 6 fuel oil, and lubricating oil, at levels of over one thousand parts per million (ppm).

SECTION 2 - SITE INVESTIGATION METHODS

A field investigation was completed at the site during April and May 2003, to provide a baseline of data for evaluating whether potential sources of environmental concern existed on the property. The field sampling program included surface soil sampling, subsurface soil sampling, monitoring well installation, and groundwater sampling from the monitoring wells. A geophysical survey was completed to help identify subsurface anomalies that might represent potential sources of impact (e.g. underground tanks, buried drums), which might require further site investigation and sampling, and a pre-demolition survey was completed. Sample locations are shown on Figure 2-1. Field methods are discussed below.

2.1 - SOIL BORING AND MONITORING WELL INSTALLATION

Three soil borings were advanced into the subsurface on April 7 and 9, 2003 (B-4, -5, -6, Figure 2-1). Drilling was completed by advancing hollow stem augers to depths ranging from 14- to 16-feet below ground surface (bgs). In addition, soil samples were collected continuously using a 2-inch stainless steel split spoon soil sampler. Soil samples were field screened with a photoionization detector (PID), visually examined, and described by a SWRNA hydrogeologist. Soil observations and PID readings were recorded in subsurface boring logs (Appendix A).

One surface soil (0.0 to 0.5-feet bgs) and one subsurface soil (greater than 2-feet bgs) sample was taken at boring location B-6 and submitted for laboratory analysis. At locations B-4 and B-5, only a deep soil sample was collected because a separate surface soil sample was collected at a location near these borings. Surface soil and subsurface soil sample collection is discussed further in Section 2.2 below.

Following boring completion, 2-inch diameter PVC monitoring wells were constructed in each boring (MW-4, MW-5, and MW-6, respectively). Each monitoring well was constructed with 10-feet of continuous wrap screen (0.01-inch slot), with a #0 silica sand pack extending from the bottom to 1.5-feet above the screen. Two feet of hydrated bentonite pellets were placed on top of the sand filter pack, and the remaining annulus was filled with sand to allow for drainage. The wells were completed and secured with bolt-down flush mount protective covers. Well construction diagrams are included on the subsurface boring logs (Appendix A).

The monitoring wells were developed after installation to reduce turbidity and to improve sample quality. A minimum of 10 volumes of water was removed from each well.

2.2 - SAMPLE COLLECTION

Figure 2-1 identifies the location of soil boring/monitoring and all sampling locations. All soil and water samples were placed in sample containers, provided by Severn Trent Laboratories, Inc. (STL), which contained the necessary sample preservative for analyses as appropriate (e.g. hydrochloric acid – HCl). The samples were then packed in ice filled coolers, and shipped via overnight delivery to STL. An Analytical Services Protocol (ASP) Category B data deliverable was provided.

2.2.1 Surface Soil Sampling

Eight surface soil samples (SS-1 through SS-7 and B-6) were collected between April 7 - 9, 2003. Soil samples SS-1 and SS-6 were collected from soil beneath asphalt material. SS-1 was collected in an area where a sink hole caused paving to cave in. All of the surface soil samples were collected from the upper six (6) inches using either collected in an isolated area using dedicated stainless steel trowel (“SS” samples), or at boring locations using split spoon samplers (“B” samples, as discussed in Section 2.1). All eight surface soil samples were analyzed for target compound list (TCL) semi-volatile organic compounds (SVOCs) by USEPA Method 8270C, PCBs by USEPA Method 8082, and target analyte list (TAL) metals by USEPA Methods 6010B/7471A.

2.2.2 Sub-Surface Soil Sampling

One sub-surface soil sample was selected from each of the three soil boring locations. The sub-surface soil sample was selected for laboratory analysis based on PID readings or field observation (e.g. color, odor) that suggested the potential presence of constituents of environmental concern. Based on this screening method, sub-surface soil samples from borings B-4, -5, and -6 were collected from 4- to 6-foot bgs, 8- to 10-foot bgs, 6- to 8-foot bgs, respectively. Soil boring samples were submitted for laboratory analysis for TCL volatile organic compounds (VOCs) by EPA Method 8260, TCL SVOCs, PCBs, and TAL metals (Methods 6010B/7471A).

2.2.3 Groundwater Sampling

One groundwater sample was collected from each of the three newly installed monitoring wells (MW-4, -5, -6) and the four pre-existing monitoring wells (CES, 1998) on April 28 and 29, 2003. Prior to sampling, the depth to water was recorded and the well was then purged of at least three volumes of water. Field parameters were recorded including turbidity, pH, temperature, and dissolved oxygen. Groundwater samples were collected and sent to a laboratory for TCL VOCs, TCL SVOCs, PCBs, and TAL metals analysis.

2.2.4 Wipe Samples

PCB wipe samples were collected from the building interior as part of the interior building pre-demolition inspection. The three wipe samples (SA-WS-1, SA-WS-2, SA-WS-3) were collected from selected areas, including near a floor drain, adjacent to a garage bay door, and adjacent to a clothing bailer machine. Each wipe sample was collected by wiping the floor surface with a 10-cm by 10-cm, hexane dampened gauze pad. Following collection, each sample was placed in a vile and then shipped to STL for PCB analysis by EPA Method 8082.

2.2.5 Additional Sampling

A possible floor drain was identified in the building warehouse and identified as an additional area of potential concern. A sample was collected from this suspected drain as part of the site investigation (Figure 1-2):

Floor Drain - A small amount of sediment was present within the drain. A sample of this sediment was collected and shipped to STL to be analyzed for VOCs, SVOCs, metals, and PCBs.

2.3 – GEOPHYSICAL SURVEY

A geophysical survey was completed at the Site on May 29, 2003, by Enviroscan, Inc. of Lancaster Pennsylvania. The survey employed a combination of electromagnetic (EM) and GPR methods, and was intended to detect and delineate targets with at least one dimension of five feet or greater, up to 10 feet below grade.

The survey area at the site included approximately 56,000 square feet, and included terrain covered with mainly asphalt with areas of high grass. Areas with thick vegetation, and areas close to scraps or piles of metal debris, could not be surveyed.

A detailed discussion of the survey methods can be found in the Geophysical Survey Report, Appendix B (Enviroscan, 2003). The survey area was first scanned with a Fisher TW-6 deep-focused metal detector (MD), with an approximate 5-foot grid. Electromagnetic anomalies were further defined using a GSSI SIR-2 GPR controller and 500-megaHertz scanning antenna. The GPR survey was performed by hand towing the antenna along variously oriented profiles that crossed the electromagnetic anomalies.

2.4 – SITE SURVEY

Bryant Associates, PC, a New York State licensed land surveyor, completed a site survey that identified sample locations, building locations, and property boundaries. Monitoring well locations and elevations were also surveyed. The survey was used to create a base map for the site. Site elevations are based on a relative elevation datum of 100-feet assigned to the first floor of the building occupying the former Salvation Army property at 1105 South State Street. Property boundaries and site features are located based on a City of Syracuse survey datum. Depth to groundwater measurements at each monitoring well were referenced to the surveyed well elevation to determine groundwater elevation and groundwater flow direction. A survey base map is provided in Appendix C.

2.5 - ASBESTOS SURVEY

An asbestos survey was completed at the site to identify both friable and non-friable organically bound asbestos. Envirologic of New York, Inc completed an asbestos survey, according to the New York State Department of Labor's (NYSDOL) asbestos standard as specified in subpart 56-1.9(b)(2)(3). A total of fifty-two (52) samples were collected from materials on the site and analyzed for asbestos content. Specific information regarding sample collection and analytical methods can be found in Appendix D.

SECTION 3 – SITE INVESTGATION RESULTS

3.1 SITE GEOLOGY

The three soil borings (B-4, B-5, B-6) were advanced in the eastern portion of the site to depths of 16-feet, 16-feet, and 14-feet bgs, respectively. From field observations, the upper five to six feet of soil in the eastern part of the site is a mixture of silt, sand, and gravel. A clay unit was encountered at approximately 6.5 feet bgs, and contains variable amounts of sand and silt, with occasional sand/silt seams. Between 12- to 14-feet bgs a sandy silt unit was observed below the clay. Soil borings advanced previously as part of the UST investigation on the northwest portion of the site (CES, 1998) indicate the subsurface is composed predominantly of silt and clay with variable amounts of sand and fine gravel. Groundwater was encountered in the site borings between 4- and 6-feet bgs.

3.2 SAMPLE ANALYTICAL RESULTS

Laboratory analytical reports for the samples collected at the Site are provided under separate cover (SWRNA, July 2003) Analytical results were compared to applicable standards, criteria, and guidance (SCGs), including Technical and Administrative Guidance Memorandum (TAGM) 4046 soil cleanup objectives, and Technical and Operational Guidance Series (TOGS) Class GA ambient water quality standards. Analytical summary Tables are included as Tables 3-1 through 3-12. A discussion of the field observations and analytical results is provided below.

3.2.1 Surface Soils

Analytical results for the surface soil samples are summarized on Figure 3-1 (SVOCs and PCBs), Figure 3-2 (mercury, arsenic, chromium, lead), and Tables 3-1 through 3-3.

A. SVOCs. The majority of the SVOCs detected in surface soils are polycyclic aromatic hydrocarbons (PAHs), which are a subclass of SVOCs found in a variety of common sources including petroleum distillates (fuel oil, diesel fuel), vehicular exhaust, coal, and coal by-products. As such, PAHs are common contaminants in urban and industrial areas.

All eight (8) of the surface soil samples contained SVOCs above TAGM cleanup objectives (Table 3-1). The average total SVOC concentration of surface soil samples collected was 67.7 mg/Kg and total SVOC concentrations ranged from 2.15 mg/Kg (SS-6) to 282 mg/Kg (SS-2). Sample SS-2 was taken from boring B-4, south of a former loading dock area, and contained seven SVOCs above TAGM objectives. Sample SS-1, located in the southwestern portion of the property, contained 157 mg/Kg total SVOCs, which is the second-highest concentration among the surface soil samples, and also contained seven SVOCs above TAGM objectives. The average total SVOC concentration among the other six surface soil sample locations (SS-3, SS-4, SS-5, SS-6, SS-7, B-6) was noticeably lower, at 17.1 mg/Kg.

B. PCBs. PCBs were detected in seven of the eight samples (Table 3-2). However, only one sample (SS-5) contained total PCBs (1.16 mg/Kg) above the 1 mg/Kg TAGM cleanup objective.

C. Metals. Metals are naturally occurring in all soils, and accordingly there were metals detected in every surface soil sample. Eight (8) metals were detected above TAGM cleanup objectives: arsenic, beryllium, chromium, copper, iron, mercury, nickel, and zinc (see Table 3-3). Only iron and zinc were above the cleanup objective in all eight of the surface soil samples. Copper and nickel were above TAGM cleanup objectives in five of the samples, chromium in four of the samples, arsenic and mercury in two of the samples, and beryllium in one of the sample.

3.2.2 Sub-Surface Soils

The three soil borings (B-4, B-5, B-6) were advanced to depths of 16-feet, 16-feet, and 14-foot bgs, respectively. Volatile organic vapors, based on soil screening with a PID, were detected in all fifteen (15) of the split-spoon soil samples collected from borings B-4 and B-5, but no organic vapors were detected in the six samples collected from boring B-6. Only three soil samples (B-4 from 2- to 4-foot bgs and 4 to 6-foot bgs, and B-5 from 0- to 2-foot bgs) had readings over 1 part per million (ppm).

Based on soil screening, one sub-surface soil sample was selected from each boring (B-4 4- to 6-foot, B-5 8- to 10-foot bgs, B-6 6- to 8-foot bgs). The laboratory analytical results for the subsurface soil samples are summarized on Tables 3-4 through 3-7.

A. VOCs. A total of five (5) different VOCs were detected in sub-surface soil samples; however, all of the VOCs were below TAGM cleanup objectives (Table 3-4). Note also that one of the detected compounds, methylene chloride, was found in a laboratory blank and is probably related to laboratory contamination.

B. SVOCs. The soil sample from boring B-4 (4-6 feet) contained the highest number of SVOCs, with lighter SVOC compounds detected. The other two samples from borings B-5 and B-6 contained noticeably lower levels of SVOCs, each sample containing only a single compound (bis-2ethylhexyl-phthalate), at 0.27 mg/Kg and 0.39 mg/Kg, respectively.

The detected concentrations of SVOCs were all below TAGM values except for three compounds in sample B-4.

C. PCBs. No PCBs were detected in the subsurface soil samples (Table 3-7).

D. Metals. Beryllium, chromium, copper, iron, nickel, and zinc were detected in subsurface soils above TAGM cleanup objectives (Table 3-8). Chromium, iron, nickel, and zinc were above the cleanup objective in all three of the sub-surface soil samples. Copper and beryllium were above TAGM objectives only in the sample from B-4.

3.2.3 - Groundwater

Table 3-8 includes the depth to water and groundwater elevation measurements, as well as field parameter measurements recorded at the time of sampling. Groundwater analytical results are summarized on Tables 3-9 through 3-12. Figure 3-3 shows the groundwater flow direction across the site.

The depth to groundwater at the site on April 28, 2003 was 7.11-feet at MW-4, 6.55-feet at MW-5, and 6.68-feet at MW-6 (upgradient). The depth to groundwater data were converted to groundwater elevations based on the surveyed elevation for the top of each well casing. Based on the April 28 measurements, groundwater flows from east to west across the site. Monitoring wells MW-4 and -5 are downgradient.

A. VOCs. Four compounds were detected (methylene chloride, benzene, xylenes, and tetrachloroethene) but only benzene (MW-16) exceeded Class GA ambient water quality standards. Methylene chloride (1 ug/L) was detected in well MW-4, but it was also detected

in a laboratory method blank, which indicates laboratory contamination. Tetrachloroethene was detected in MW-5 (2 ug/L), and xylenes were detected in MW-15, and MW-16. Wells MW-14 through -16 were previously installed (CES, 1998) in the former UST area in the northwestern corner of the site.

B. SVOCs. Only one SVOC – chrysene in well MW-17 - was detected in groundwater samples above Class GA standards. Of the seven wells sampled, only MW-15 and MW-17 contained detectable SVOCs, but concentrations were generally very low. MW-17 contained 9.9 ug/L total SVOCs, and MW-15 contained 1 ug/L total SVOCs.

C. PCBs. No PCBs were detected in the groundwater samples.

D. Metals. Five metals – iron, manganese, magnesium, mercury and sodium – were detected in groundwater samples above Class GA ambient water quality standards. Four of these metals (iron, manganese, magnesium, sodium) are common natural elements that often exceed standards in this region. Iron, magnesium, and sodium were above standards in all four wells, and manganese in two wells (MW-4, MW-6). Mercury was detected in well MW-5 (4.6 ug/L). The presence of these metals is likely related to natural water quality and elevated turbidity of the water samples.

3.2.4- Wipe Samples

PCBs were detected in each of the three wipe samples collected from the warehouse floor. Aroclor 1254 was detected at a concentration of 1.9-, 1.7-, and 0.81- ug/wipe (100 cm²) in wipe sample SA-WS-1, -2, and -3, respectively. However, none of the wipe samples exceeded the surface PCB clean up standard of 100 ug/100 cm² for low occupancy areas (40 CFR Part 761.61(a), June 2003).

3.2.5 Additional Samples

A. VOCs. Methylene chloride was the only VOC detected in the sample taken from the warehouse drain (SA-DS-1), however, it was detected in the method blank and is likely related to laboratory contamination.

B. SVOCs. A total of 19 SVOCs were detected in the in sample SA-DS-1. The concentration of SVOCs ranged from 0.32 mg/kg (acenaphylene) to 19 mg/kg (bis (2-

ethylhexyl) phthalate). The total concentration of SVOCs was 69 mg/kg, or 50 mg/kg excluding bis (2-ethylhexyl) phthalate, which was detected in a method blank, which suggests it is a laboratory contaminant.

C. PCBs. The total PCB concentration of sample SA-DS-1 was 2.05 mg/kg. Two aroclors- Aroclor 1254 and Aroclor 1260- were detected at 1.6 mg/kg and 0.45 mg/kg, respectively.

D. Metals. Twenty (20) of the twenty-three (23) metals included on the target analyte list were detected in sample SA-DS-1. The concentration of mercury, chromium, and lead were detected at a concentration of 11.4-, 65.7-, and 833-mg/kg, respectively.

3.3 GEOPHYSICAL SURVEY

The geophysical survey report provided by Envirosan, Inc. is included as Appendix B of this report. In general, the GPR penetration at the site was good, with an average depth of penetration approximately 7- to 8-feet bgs.

Six metallic anomalies were observed at the site (Figure 3-4). Four of the anomalies had characteristics that indicate numerous small buried objects and debris. Two of the anomalies (SA4 and SA5) had characteristics that suggest the possibility of a buried drum (SA4) and an underground tank (SA5). However, these anomalies may also represent debris oriented in similar dimensions as a drum or tank.

3.4 ASBESTOS SURVEY

The results of the asbestos survey indicated that approximately 21,000 square feet (sq.ft.) of asbestos containing materials (ACMs) are present in, and on, the Salvation Army building. ACMs include floor tiles, ceiling material, pipe insulation, felt paper, mastic material, transite, roof flashing, and various roofing material. Most of the ACM that was sampled was described to be in "fair" condition, but some material was found to be in "poor" condition, including pipe insulation and associated fitting insulation found in portions of the building basement. Specific details concerning the quantity of ACM and specific analytical results can be found in Appendix D.

SECTION 4 – QUALITATIVE EXPOSURE ASSESSMENT

A qualitative exposure assessment was completed for the site, in accordance with NYSDOH guidance. The assessment consisted of the following steps:

1. Characterizing the exposure setting, including the physical environment and potentially exposed human populations;
2. Identifying exposure pathways;
3. Evaluating contaminant fate and transport.

The purpose of the exposure assessment is to evaluate whether on-site and off-site human receptors, under both existing and possible future site conditions, can potentially be exposed to site-related contaminants. Accordingly, the exposure assessment considers the site in its current state, and also considers future site occupancy scenarios that might occur if the site or surrounding areas were ever redeveloped for an alternate use.

Human receptors are potentially exposed to contaminants only if there is a complete exposure pathway. An exposure pathway describes the way in which a site-related constituent can potentially reach a human receptor, based on existing site conditions and future scenarios. An exposure pathway has five elements:

1. a contaminant source;
2. contaminant release and transport mechanisms;
3. a point of exposure;
4. a route of exposure;
5. a receptor population.

The manner in which humans could potentially be exposed to each medium (e.g. soil or groundwater) was evaluated to determine whether complete pathways exist, based on current and future land-use scenarios.

If a complete or potentially complete exposure pathway is identified for a particular medium, the concentrations of each constituent detected that medium are evaluated to determine if the concentrations could potentially represent a health risk. This is done by calculating an exposure point concentration, which is usually based on the average or maximum detected value for each constituent in a specific medium. The exposure concentration is compared to an appropriate regulatory screening value, which is based on conservative exposure assumptions, to determine if the constituent is a constituent of potential concern (COPC).

The result of the process is a generally conservative assessment of the potential for humans to be exposed to site related constituents. The degree of conservatism depends on the actual site conditions in comparison with the standard set of assumptions that are used, however, as a general rule the exposure potential and related risks tends to be overestimated.

The following sections describe the step-wise process that was completed for the Salvation Army site exposure assessment, including site characterization, an assessment of potential exposure pathways, and the screening of COPCs.

4.1 - DETERMINATION OF EXPOSURE PATHWAYS

The land use and environmental setting of a site will, to a large degree, determine the amount of potential risk to human health posed by site conditions. Land use determines the extent to which potential receptors could contact impacted media (air, soil, and water). The environmental setting of the site also determines the relative importance of transport of chemicals through the various media. This information is then integrated into an evaluation of current and future pathways by which exposure to site-related chemicals may occur.

A proposed future use of the former Salvation Army property is a combination of residential and urban parkland. Residents and passers-by may potentially be exposed to the site-related contaminants of concern. The medium that offers the greatest exposure opportunity is site surface soils. The most probable pathways are direct contact, inhalation, and accidental ingestion of soils. Exposure to subsurface soils will only occur under potential future site redevelopment scenarios in which soil excavation is necessary. In this case, the exposed population would be site construction and utility workers. Exposure to groundwater is considered to be highly unlikely, since the area is serviced by a municipal water supply.

4.2 - DETERMINATION OF EXPOSURE CONCENTRATIONS

Analytical results for soil and groundwater were screened to identify contaminants of concern and potential exposure concentrations. Because fewer than 20 samples were collected for each medium (e.g. soil and water), the maximum detected concentration for each parameter per each medium was used as an exposure point concentration. Maximum parameter concentrations in soil samples that exceed USEPA Health Based Cleanup Objectives (TAGM 4046-VOCs, SVOCs, and PCBs) and NYSDEC Recommended Soil Cleanup Objectives (TAGM 4046-metals) are considered to be COPCs. Maximum parameter concentrations in groundwater samples that exceed NYSDEC Technical Operational Guidance Series (TOGS) Class GA Water Quality Standards and Guidance Values (June 1998) are also considered COPCs.

4.3 - EXPOSURE TO SURFACE SOIL

Tables 4-1 through 4-3 summarize the screening of surface soils. The maximum detected concentrations for the following parameters exceeded TAGM Cleanup Objectives, and are identified as COPCs:

Benzo(a)anthracene	Mercury	Iron
Benzo(a)pyrene	Arsenic	Nickel
Dibenzo(a,h)anthracene	Beryllium	Zinc
	Cadmium	
PCBs	Chromium	
	Copper	

4.4 - EXPOSURE TO SUBSURFACE SOILS

Tables 4-4 through 4-7 summarize the screening of subsurface soils. As indicated on the tables, the exposure risk to subsurface soils is lower in comparison to surface soils. The maximum detected concentrations for the following parameters exceeded TAGM Cleanup Objectives, and are identified as COPCs:

Benzo(a)anthracene	Beryllium	Nickel
Benzo(a)pyrene	Chromium	Zinc
Dibenzo(a,h)anthracene	Copper	
	Iron	

4.5 - EXPOSURE TO GROUNDWATER

Groundwater exposure risk is minimized by an available public water supply. Nonetheless, it is customary to assess groundwater exposure risk in terms of its possible consumption as a drinking water source, regardless of its actual potential for such use. One organic compound and six metals were identified as COPCs based on a comparison with TOGS water quality standards and guidance values (Tables 4-8 and 4-9):

Benzene	Magnesium
	Manganese
Mercury	Sodium
Copper	
Iron	

4.6 EXPOSURE ASSESSMENT SUMMARY

Exposure to surface soils by direct contact and accidental ingestion is the only complete exposure route existing at this time. There is future potential for exposure to subsurface soils and groundwater during construction activity, but it is highly unlikely that groundwater would ever be consumed as a water supply.

A screening of surface soils identified thirteen (13) COPCs, including PCBs, three PAHs, and nine metals. For subsurface soils nine (9) COPCs were identified, three PAHs and six metals. Groundwater screening identified seven (7) COPCs, including one organic compound and six metals.

SECTION 5 - SUMMARY AND CONCLUSIONS

A total of eight (8) surface soil, four subsurface soil, seven (7) groundwater, three (3) PCB wipe samples, and one (1) sediment sample from a suspected floor drain, were collected from the Site and analyzed for TCL VOCs (except surface soils and wipe samples), TCL SVOCs (except wipe samples), PCBs, and TAL metals (except wipe samples). In addition, a geophysical survey, a site survey, and an asbestos survey were completed during investigation activities at the site.

5.1 SURFACE SOILS

Semivolatile organic compounds (SVOCs), PCBs, and metals were detected in surface soil samples collected at the site. All eight (8) surface soil samples contained SVOCs and contained at least one SVOC that exceeds TAGM cleanup objectives. Most of the SVOCs detected were PAHs, which are a class of compounds common in fuel oil, diesel fuel, and coal. As such, PAHs are common constituents in urban areas.

PCBs were detected in seven (7) of the eight (8) soil samples. Sample SS-5 (1.16 mg/kg) was the only surface soil sample to contain PCBs at a concentration greater than the TAGM soil quality cleanup objective of 1 mg/kg for soils less than 1-foot bgs.

Although several metals were detected in surface soil samples collected at the site, only six (6) metals were detected at levels that exceed TAGM cleanup objectives. Samples SS-2 and SS-5, on the southeast side of the site building, contained slightly elevated concentrations of mercury relative to the recommended soil cleanup objective of 0.1 mg/kg with 0.29 mg/kg and 1.16 mg/kg of mercury, respectively. Sample SS-5 also contained levels of several other metals that were elevated with respect to other surface soil samples taken at the site.

5.2 SUBSURFACE SOILS

Subsurface soil samples did not contain VOCs above TAGM cleanup objectives.

Sample B-4 (4-6-feet) contained five (5) SVOCs that exceed TAGM cleanup objectives, however, the highest concentration of these SVOCs is 1.3 mg/kg and the total concentration of SVOCs was 18 mg/kg.

PCBs were not detected in any of the three (3) subsurface soil samples collected from the site.

Six (6) metals were present in subsurface soils at concentrations above TAGM cleanup objectives. Sample B-4 (4-6-feet) contained six (6) metals that exceed TAGM, and samples B-5 (8-10-feet) and B-6 (6-8-feet) contained four (4) metals each.

5.3 GROUNDWATER

Only one VOC (benzene in MW-16) and one SVOC (chrysene in MW-17) were detected above TOGS Class GA water quality standards in groundwater samples taken at the site.

PCBs were not detected in any of the seven groundwater samples taken from the site.

Five (5) metals detected above standards, four are common natural elements (iron, manganese, magnesium, and sodium), and the fifth metal (mercury) was above standards in only one well (MW-17), and detected in only two of the seven wells.

5.4 WIPE SAMPLES

PCBs were detected in wipe samples taken from the concrete floor within the site building's warehouse. However, none of the wipe samples were above the surface PCB clean up standard of 100 ug/100 cm² for low occupancy areas (40 CFR Part 761.61(a), June 2003).

5.5 ADDITIONAL SAMPLE

Nineteen (19) SVOCs were detected in sample SA-DS-1 taken from the potential drain within the building's warehouse. The concentration of SVOCs ranged from 0.32 mg/kg (acenaphthylene) to 19 mg/kg (bis (2-ethylhexyl) phthalate). The total concentration of SVOCs was 69 mg/kg, or 50 mg/kg excluding bis (2-ethylhexyl) phthalate, which is likely a laboratory contaminant based on its presence in a method blank.

The total PCB concentration of sample SA-DS-1 was 2.05 mg/kg. Two aroclors- Aroclor 1254 and Aroclor 1260- were detected at 1.6 mg/kg and 0.45 mg/kg, respectively.

Twenty (20) of the twenty-three (23) metals included on the target analyte list were detected in sample SA-DS-1. The concentration of mercury, chromium, and lead were detected at a concentration of 11.4-, 65.7-, and 833-mg/kg, respectively.

5.6 GEOPHYSICAL SURVEY

The GPR survey identified six metallic anomalies, four of which appear to represent buried debris and miscellaneous small buried objects. Two anomalies were identified with dimensions that suggest they could represent buried drums or USTs.

5.7 ASBESTOS SURVEY

Asbestos-containing materials (ACMs) were positively identified in various building materials at the site, including ceiling and floor tiles, pipe insulation, mastic, transite, and roofing material. Most of the ACM was reportedly in fair to good condition, but pipe insulation and associated fitting insulation in portions of the basement were reportedly in poor condition.

5.8 SUMMARY

Overall, only minor impacts were observed in samples collected at the site, and these impacts were in surface soil samples. In particular sample SS-5 appears to have the greatest number of analytes that exceed applicable SCGs. Sub-surface soils and groundwater contained noticeably fewer analytes above SCGs, and on that basis appear to be less impacted than surface soils.

Groundwater samples did not contain PCBs. Benzene and chrysene, each detected in a single well, were the only organic compounds detected in groundwater samples above Class GA standards.

Based on this information it appears that there is minimal human exposure risk in relation to subsurface soils and groundwater. There is potential human health exposure risk in relation to surface soils, for three SVOCs, PCBs, and several metals, however; with proper redevelopment planning it is expected that these risks can be limited. Future Site development and restoration will need to consider a strategy for managing potential exposure to surface soils by site occupants.

Wipe samples taken within the building's warehouse indicate that PCBs were present above detection limits. However, none of the wipe samples exceeded the surface PCB clean up standard of 100 ug/100 cm² for low occupancy areas (40 CFR Part 761.61(a), June 2003) and therefore should not pose a significant risk to human health or the environment.

The sample taken from the suspected drain located in the building's warehouse (SA-DS-1) indicates the presence of several SVOCs, PCBs, and metals. Because there is a nominal volume of sediment within the suspected drain, the sediment is not likely to pose a significant health risk. However, if this suspected drain discharges into the ground below the building slab it is possible that constituents of concern have accumulated or released to the environment. Therefore, it is recommended that prior to, or immediately following, building demolition that the area beneath the building slab be investigated.

The results of the geophysical survey indicate the possible presence of drums and a UST on the eastern side of the parcel. Although groundwater data do not suggest the presence of USTs or drums, it is recommended that prior to, or immediately following building demolition, this area be investigated to confirm or refute the source of the anomalies. If a UST or drums are identified the materials they contain should be sampled and disposed of in accordance with applicable regulations.

Envirologic's asbestos survey identified the presence of ACM associated with the site building. Identified ACM should be dealt with in accordance with applicable regulations prior to and during building demolition.

Documentation of NYSDEC Spill No. 97-11143 relating to the UST, formerly located in the northwest portion of the site, could not be ascertained during the course of this investigation. It is recommended that an inquiry be made to determine if the spill has been closed, and if not that the proper steps be followed to establish closure.

FIGURES



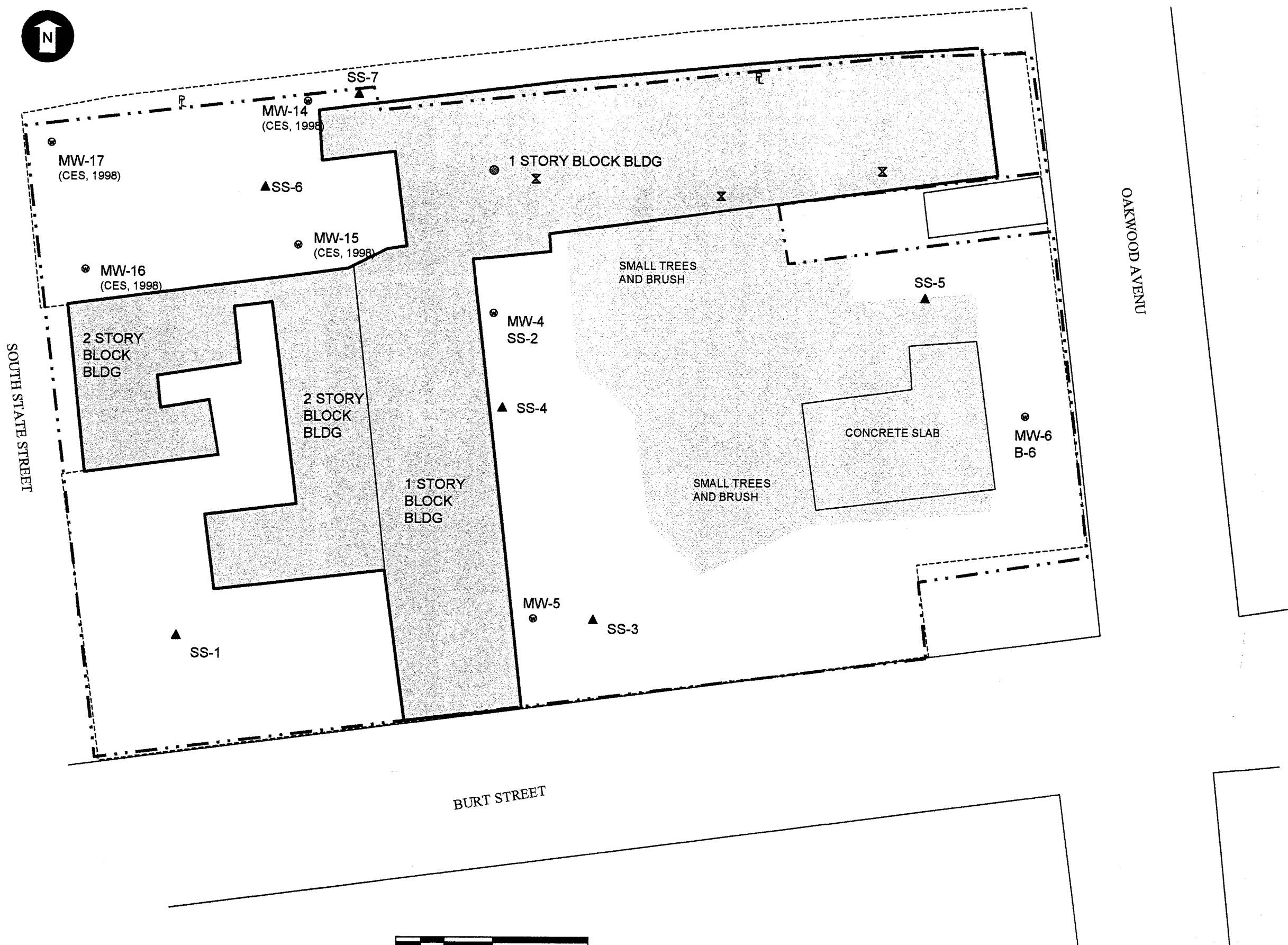
Syracuse Housing Authority
 Salvation Army Parcel Investigation

S&W Redevelopment
 of North America, LLC
 SYRACUSE, NEW YORK

JOB No: N2014

Not To Scale

FIGURE 1-1
SITE LOCATION

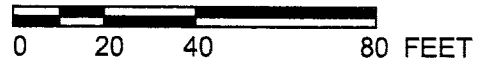


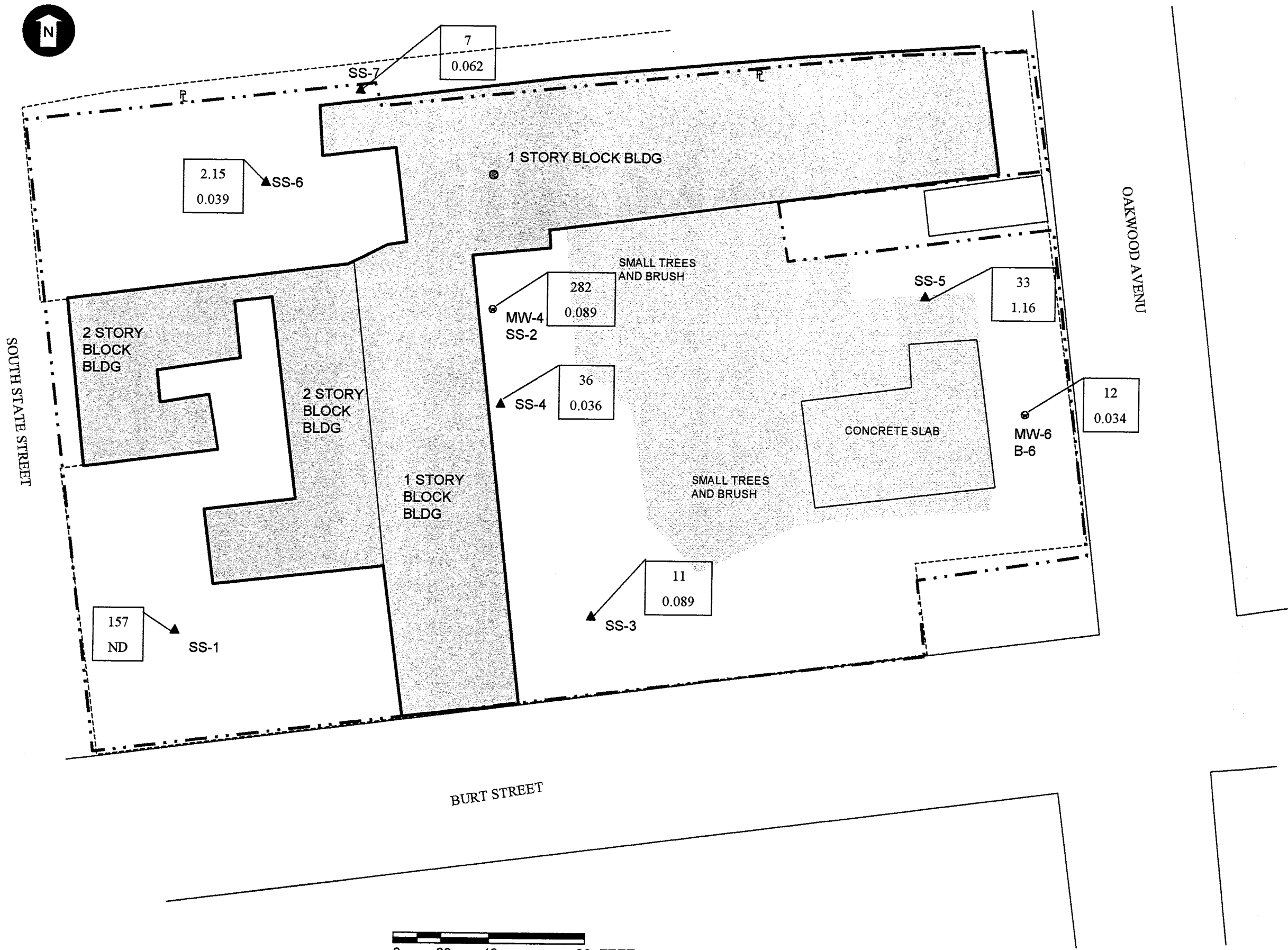
- ▲ Surface Soil Sample
- Monitoring Well
- ⊗ PCB Wipe Sample
- ⊙ Suspected Floor Drain

SOUTH STATE STREET

OAKWOOD AVENUE

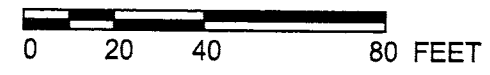
BURT STREET

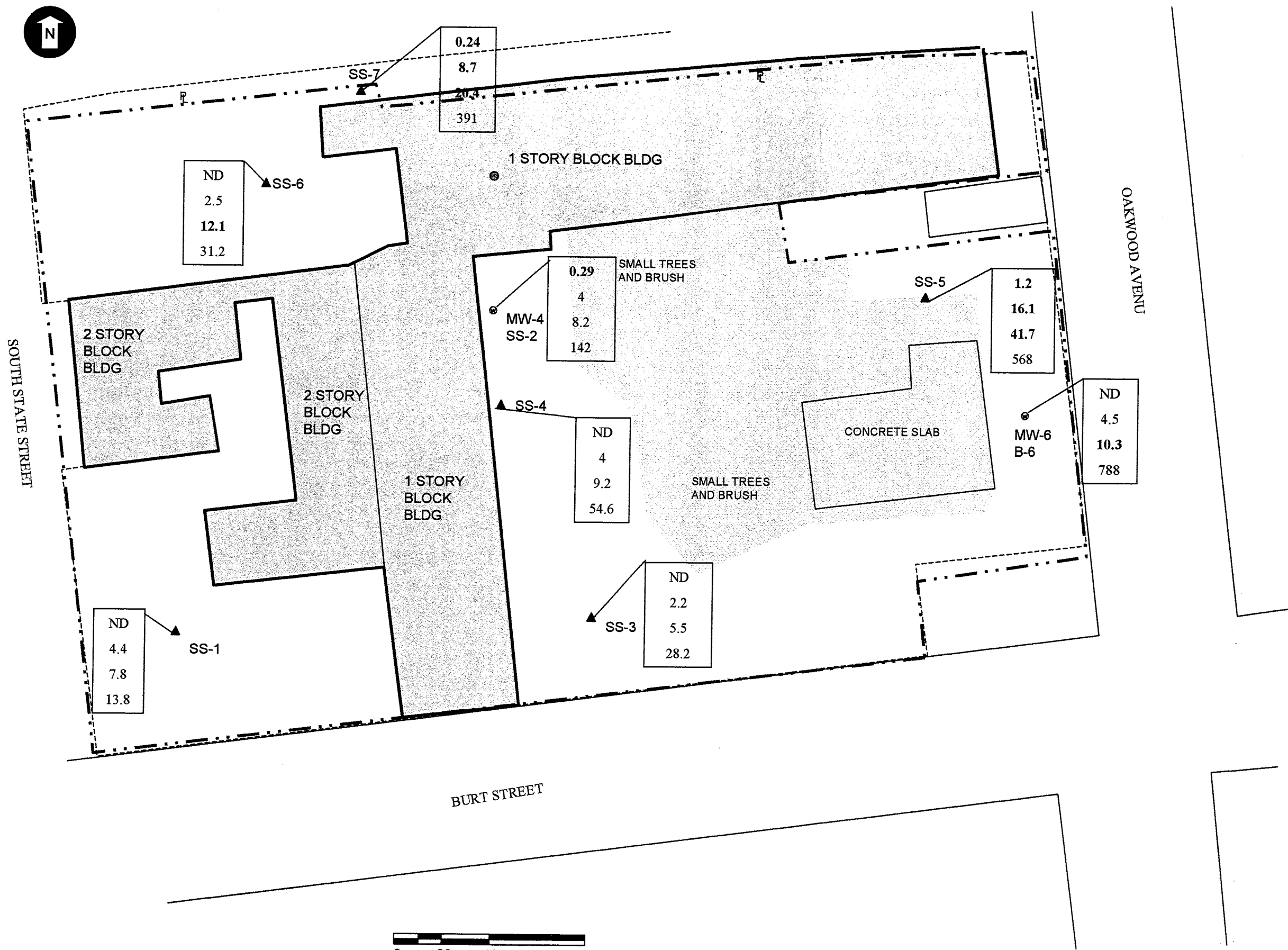




- ▲ Surface Soil Sample
- EW Existing Monitoring Well (CES, 1998)
- MW New Monitoring Well (SWRNA, 2003)

36	Total SVOCs (mg/kg)
0.036	Total PCBs (mg/kg)





- ▲ Surface Soil Sample
- EW Existing Monitoring Well (CES, 1998)
- MW New Monitoring Well (SWRNA, 2003)

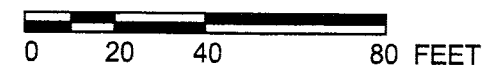
TAGM	
0.1	Mercury (mg/kg)
7.5 or SB	Arsenic (mg/kg)
10 or SB	Chromium (mg/kg)
SB	Lead (mg/kg)

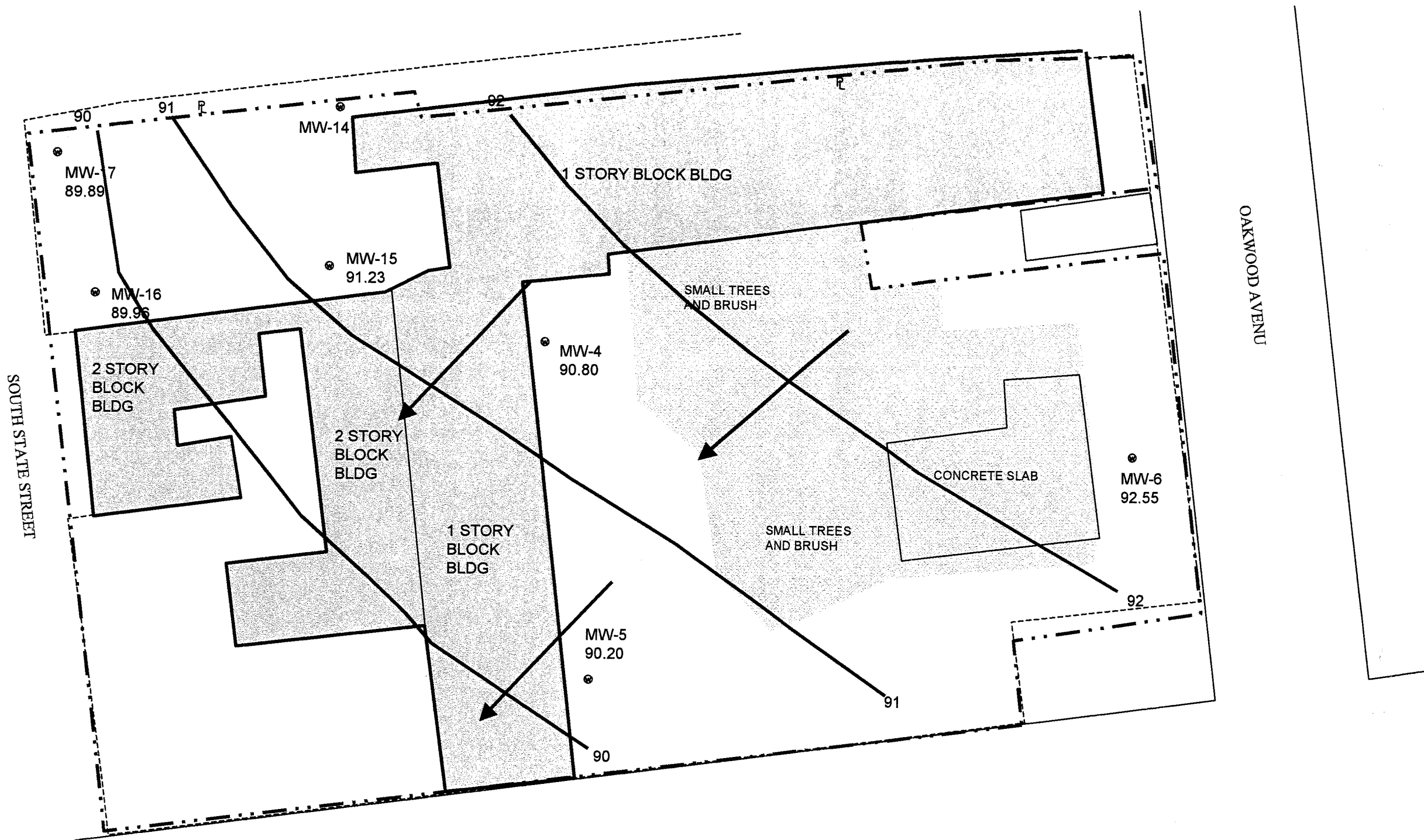
Bold Face Value Indicates Exceedance of TAGM

SOUTH STATE STREET

OAKWOOD AVENUE

BURT STREET



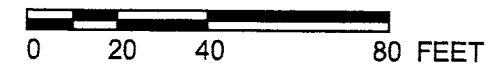


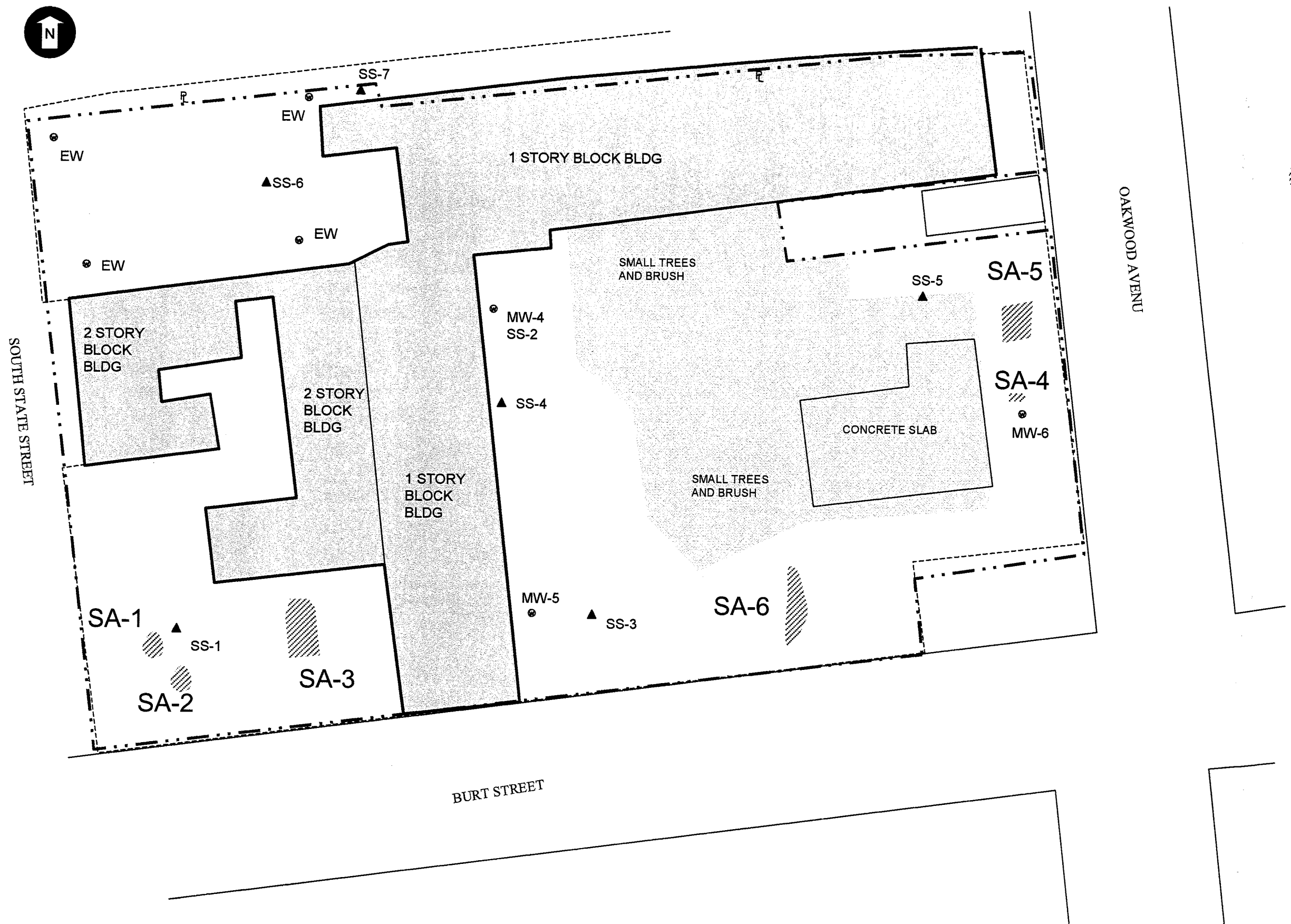
- MW-5 90.20 Monitoring Well
Relative Groundwater Elevation (Feet)
- Groundwater Contour
- ➔ Groundwater Flow Direction

SOUTH STATE STREET

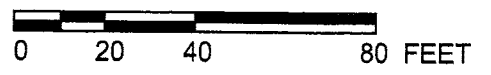
OAKWOOD AVENUE

BURT STREET 90





- ▲ Surface Soil Sample
- EW Existing Monitoring Well (CES, 1998)
- MW New Monitoring Well (SWRNA, 2003)
- ▨ GPR Anomaly



TABLES

Table 3-1. Surface Soil Analytical Results - Target Compound List Semi-Volatile Organic Compounds. Salvation Army Parcel Investigation, October 2003

COMPOUND	TAGM STD.*	SS-1 0-0.5 ft	SS-2 0-0.5 ft	SS-3 0-0.5 ft	SS-4 0-0.5 ft	SS-5 0-0.5 ft	SS-6 0-0.5 ft	SS-7 0-0.5 ft	B-6 0-2 ft
Phenol		U	U	U	U	U	U	U	0.11 J
Bis(2-chloroethyl)ether		U	U	U	U	U	U	U	U
1 3-Dichlorobenzene		U	U	U	U	U	U	U	U
1 4-Dichlorobenzene		U	U	U	U	U	U	U	U
1 2-Dichlorobenzene		U	U	U	U	U	U	U	U
Benzyl alcohol		U	U	U	U	U	U	U	U
2-Methylphenol	0.10	U	U	U	U	U	U	U	U
2 2-oxybis (1-chloropropane)		U	U	U	U	U	U	U	U
n-Nitroso-di-n-propylamine		U	U	U	U	U	U	U	U
Hexachloroethane		U	U	U	U	U	U	U	U
4-Methylphenol	0.9	U	U	U	U	U	U	U	U
2-Chlorophenol	0.8	U	U	U	U	U	U	U	U
Nitrobenzene	0.2	U	U	U	U	U	U	U	U
Bis(2-chloroethoxy)methane		U	U	U	U	U	U	U	U
1 2 4-Trichlorobenzene	3.4	U	U	U	U	U	U	U	U
Benzoic acid	2.7	U	U	U	U	U	U	U	U
Isophorone	4.4	19	U	U	U	U	U	U	U
2 4-Dimethylphenol		U	U	U	U	U	U	U	U
Hexachlorobutadiene		U	U	U	U	U	U	U	U
Naphthalene	13	1.6 J	4.6 J	U	U	0.83	U	0.07 J	U
2 4-Dichlorophenol	0.40	U	U	U	U	U	U	U	U
4-Chloroaniline	0.22	U	U	U	U	U	U	U	U
2 4 6-Trichlorophenol		U	U	U	U	U	U	U	U
2 4 5-Trichlorophenol	0.10	U	U	U	U	U	U	U	U
Hexachlorocyclopentadiene		U	U	U	U	U	U	U	U
2-Methylnaphthalene	36.4	U	2 J	U	U	1.60	U	0.06 J	U
2-Nitroaniline	0.43	U	U	U	U	U	U	U	U
2-Chloronaphthalene		U	U	U	U	U	U	U	U
4-Chloro-3-methylphenol	0.24	U	U	U	U	U	U	U	U
2 6-Dinitrotoluene	1	U	U	U	U	U	U	U	U
2-Nitrophenol	0.33	U	U	U	U	U	U	U	U
3-Nitroaniline	1	U	U	U	U	U	U	U	U
Dimethyl phthalate	2	U	U	U	U	U	U	0.44	U
2 4-Dinitrophenol	2	U	U	U	U	U	U	U	U
Acenaphthylene	41	U	U	0.036 J	0.047 J	0.53 J	0.022 J	0.09 J	0.26 J
2 4-Dinitrotoluene		U	U	0.02 U	U	U	U	U	U
Acenaphthene	50	2.4 J	3.6 J	0.35 J	0.48 J	0.24 J	UH	0.04 J	U
Dibenzofuran		1.5 J	4.3 J	0.033 J	0.15 J	0.42 J	U	0.05 J	U
4-Nitrophenol		U	U	U	U	U	U	U	U
Fluorene	50	2.3 J	6.8 J	0.064 J	0.31 J	0.22 J	U	0.06 J	U
4-Nitroaniline		U	U	U	U	U	U	U	U
4-Bromophenyl phenyl ether		U	U	U	U	U	U	U	U
Hexachlorobenzene		U	U	U	U	U	U	U	U
Diethyl phthalate		U	U	U	U	U	U	U	U
4-Chlorophenyl phenyl ether		U	U	U	U	U	U	U	U
Pentachlorophenol		U	U	U	U	U	U	U	U
n-Nitrosodiphenylamine		0.9 J	U	U	0.29 J	U	U	U	U
4 6-Dinitro-2-methylphenol		U	U	U	U	U	U	U	U
Phenanthrene	50	14	40	2	2.8	4.10	0.130 J	0.61	0.72 J
Anthracene	50	4.6 J	13 J	0.14 J	1.1 J	0.88	0.034 J	0.17 J	0.11 J
Carbazole		5.4 J	3.1 J	0.38	0.63 J	0.45 J	U	0.09 J	0.20 J
Di-n-butyl phthalate		U	U	U	0.12 J	0.10 J	0.025 J	0.09 J	0.10 J
Fluoranthene	50	38	53	2.2	9.8	5.60	0.270 J	0.88	0.98 J
Pyrene	50	17	45	0.8	3.1	3.00	0.290 J	1	0.32 J
Butyl benzyl phthalate		U	U	U	0.077 J	0.09 J	0.047 J	0.13 J	U
Benzo(a)anthracene	0.224	7.3 J	24	0.4	2.1	2.10	0.130 J	0.47	0.77 J
Chrysene	0.4	7.1	14	1.2	2.2	3.30	0.220 J	0.62	0.74 J
3 3-Dichlorobenzidine		U	U	U	U	U	U	U	U
Bis(2-ethylhexyl)phthalate	50	11	U	0.1 J	5.2	0.43 J	0.240 J	0.32 J	6.3
Di-n-octyl phthalate		U	U	U	U	U	0.019 J	U	U
Benzo(b)fluoranthene	1.1	6 J	16	1	1.7	2.90	0.170 J	0.57	0.23 J
Benzo(k)fluoranthene	1.1	6 J	12	0.4	1.6	2.20	0.200 J	0.47	0.21 J
Benzo(a)pyrene	0.0609	6 J	21	1	1.9	2.80	0.140 J	0.44	0.25 J
Indeno(1 2 3-cd)pyrene		4 J	7.2 J	0.2 J	1.1 J	0.33 J	0.090 J	0.23 J	0.47 J
Dibenzo(a h)anthracene	0.014	1 J	4.3 J	0.4	0.69 J	0.92 J	0.046 J	0.13 J	0.22 J
Benzo(ghi)perylene	50	3 J	8.1	0.2 J	1.10 J	0.24 J	0.077 J	0.19 J	0.30 J
Total	500	157	282	11.0	36	33	2.15	7	12

Units in milligrams per kilogram (mg/kg).

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-2. Surface Soil Analytical Results - Polychlorinated Biphenyls (PCBs). Salvation Army Parcel Investigation. October 2003.

Aroclor	TAGM STD.*	SS-1 0-0.5 ft	SS-2 0-0.5 ft	SS-3 0-0.5 ft	SS-4 0-0.5 ft	SS-5 0-0.5 ft	SS-6 0-0.5 ft	SS-7 0-0.5 ft	B-6 0-2 ft
Aroclor 1016		U	U	U	U	U	U	U	U
Aroclor 1221		U	U	U	U	U	U	U	U
Aroclor 1232		U	U	U	U	U	U	U	U
Aroclor 1242		U	U	U	U	U	U	U	U
Aroclor 1248		U	U	U	U	U	U	U	U
Aroclor 1254		U	0.053	0.011 JM	0.021	0.47	0.039	0.024	0.019 J
Aroclor 1260		U	0.036	0.078 JM	0.015 JM	0.69	U	0.038 M	0.015 J
Total Aroclors	1	ND	0.089	0.089	0.036	1.16	0.039	0.062	0.034

Units in milligrams per kilogram (mg/kg).

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-3. Surface Soil Analytical Results - Target Analyte List Metals. Salvation Army Parcel Investigation. October 2003.

Analyte	TAGM Cleanup Objective.*	SS-1		SS-2		SS-3		SS-4		SS-5		SS-6		SS-7		B-6	
		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-0.5 ft		0-2 ft	
% Solids		95.6		88.1		94.2		91.9		79.3		90.6		82.9		88	
% Moisture		4.4		11.9		5.8		8.1		20.7		9.4		17.1		12	
Mercury	0.1		U	0.29	B		U		U	1.2	B		U	0.24	B		U
Aluminum	SB	4670		3,870		2,450		5,100		2,770		3,750		8,930		6070	
Antimony			U		U		U		U		U		U		B		U
Arsenic	7.5 or SB	4.4	B	4	B	2.2	B	4	B	16.1	B	2.5	B	8.7		4.5	B
Barium	300 or SB	70.1		116		13.4		95		239		132		126		62.6	
Beryllium	0.16 or SB		U		U		U		U		U		U		B		U
Cadmium	1.0 or SB		U		U		U		U		U		U		B		U
Calcium	SB	168,000		147,000		162,000		111,000		205,000		134,000		52,900		150,000	
Chromium	10 or SB	7.8		8.2		5.5		9.2		41.7		12.1		20.4		10.3	
Cobalt	30 or SB	5.2		3.9		1.6		5.6		6.7	B	2.5		8.8		5.8	
Copper	25 or SB	17.2		26.6		6.9		29.2		170		17.1		517		36.7	
Iron	2,000 or SB	8,950		9,250		4,180		11,800		47,300		7,130		18,900		10,600	
Lead	SB	13.8		142		28.2		54.6		568		31.2		391		788	
Magnesium	SB	27,900		19,900		25,500		31,000		59,300		87,800		10,600		17,500	
Manganese	SB	354		275		93.3		341		462		183		461		454	
Nickel	13 or SB	14.8		11.3		5.6		16.4		45.1		8.1		39.9		14.5	
Potassium	SB	1,850		1,890		1,790		1,610		773	B	2400		1930		1940	
Selenium	2 or SB		U		U		U		U		U		U		U		U
Silver	SB		U		U		U		U		U		U	0.41	B		U
Sodium	SB	1,240		336		713	E	780	E	304	B	1050		779		816	
Thallium	SB		U		U		U		U		U		U		U		U
Vanadium	150 or SB	15.5		8		4.6		10.1		12.6	B	9.2		19.3		11	
Zinc	20 or SB	31.2		113		27.6		65.6		877		63.1	E	425	E	170	

Units are in milligrams parts kilograms (mg/kg).

U - indicates analyte was not detected at or above the reporting limit.

B - Results is less than the CRDL, but greater than or equal to the MDL.

* Standards are from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-4. Sub-surface Soil Analytical Results - Target Compound List Volatile Organic Compounds. Salvation Army Parcel Investigation, October 2003.

Compound	TAGM STD.*	B-4 4-6 Feet	B-5 8-10 Feet	B-6 6-8 Feet
Chloromethane		U	U	U
Vinyl chloride	2	U	U	U
Bromomethane		U	U	U
Chloroethane	1.9	U	U	U
1 1-Dichloroethene	0.4	U	U	U
Carbon disulfide	2.7	U	U	U
Acetone	0.2	U	U	U
Methylene chloride	0.1	0.002 JB	0.004 JB	0.003 JB
trans-1 2-Dichloroethene	0.3	U	U	U
1 1-Dichloroethane	0.2	U	U	U
Vinyl acetate		U	U	U
cis-1 2-Dichloroethene		U	U	U
2-Butanone (MEK)	0.3	U	U	U
Chloroform	0.3	U	U	U
1 1 1-Trichloroethane	0.8	U	U	U
Carbon tetrachloride	0.6	U	U	U
Benzene	0.06	0.0007 J	0.005 J	0.004 J
1 2-Dichloroethane	0.1	U	U	U
Trichloroethene	0.7	U	U	U
1 2-Dichloropropane		U	U	U
Bromodichloromethane		U	U	U
cis-1 3-Dichloropropene		U	U	U
4-Methyl-2-pentanone (MIBK)	1	U	U	U
Toluene	1.5	0.001 J	0.005 J	0.002 J
trans-1 3-Dichloropropene		U	U	U
1 1 2-Trichloroethane		U	U	U
Tetrachloroethene	1.4	U	U	U
2-Hexanone		U	U	U
Dibromochloromethane		U	U	U
Chlorobenzene	1.7	U	U	U
Ethylbenzene	5.5	U	0.002 J	0.0009 J
Styrene		U	U	U
Bromoform		U	U	U
1 1 2 2-Tetrachloroethane	0.6	U	U	U
Xylenes (total)	1.2	U	0.004 J	0.001 J

Units in milligrams per kilopgram (mg/kg).

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

B- indicates that the compound is detected in the method blank.

Table 3-5. Sub-Surface Soil Analytical Results - Target Compound List Semi-Volatile Organic Compounds. Salvation Army Parcel Investigation. October 2003.

COMPOUND	TAGM STD.	B-4 4-6 Feet	B-5 8-10 Feet	B-6 6-8 Feet
Phenol		U	U	U
Bis(2-chloroethyl)ether		U	U	U
1 3-Dichlorobenzene		U	U	U
1 4-Dichlorobenzene		U	U	U
1 2-Dichlorobenzene		U	U	U
Benzyl alcohol		U	U	U
2-Methylphenol	0.1	U	U	U
2 2-oxybis (1-chloropropane)		U	U	U
n-Nitroso-di-n-propylamine		U	U	U
Hexachloroethane		U	U	U
4-Methylphenol	0.9	U	U	U
2-Chlorophenol	0.8	U	U	U
Nitrobenzene	0.2	U	U	U
Bis(2-chloroethoxy)methane		U	U	U
1 2 4-Trichlorobenzene	3.4	U	U	U
Benzoic acid	2.7	U	U	U
Isophorone	4.4	U	U	U
2 4-Dimethylphenol		U	U	U
Hexachlorobutadiene		U	U	U
Naphthalene	13	U	U	U
2 4-Dichlorophenol	0.4	U	U	U
4-Chloroaniline	0.22	U	U	U
2 4 6-Trichlorophenol		U	U	U
2 4 5-Trichlorophenol	0.1	U	U	U
Hexachlorocyclopentadiene		U	U	U
2-Methylnaphthalene	36.4	0.088 J	U	U
2-Nitroaniline	0.43	U	U	U
2-Chloronaphthalene		U	U	U
4-Chloro-3-methylphenol	0.24	U	U	U
2 6-Dinitrotoluene	1	U	U	U
2-Nitrophenol	0.33	U	U	U
3-Nitroaniline	0.5	U	U	U
Dimethyl phthalate	2	U	U	U
2 4-Dinitrophenol	0.2	U	U	U
Acenaphthylene	41	U	U	U
2 4-Dinitrotoluene		U	U	U
Acenaphthene	50	0.37 J	U	U
Dibenzofuran		0.2 J	U	U
4-Nitrophenol		U	U	U
Fluorene	50	0.37 J	U	U
4-Nitroaniline		U	U	U
4-Bromophenyl phenyl ether		U	U	U
Hexachlorobenzene		U	U	U
Diethyl phthalate		U	U	U
4-Chlorophenyl phenyl ether		U	U	U
Pentachlorophenol		U	U	U
n-Nitrosodiphenylamine		U	U	U
4 6-Dinitro-2-methylphenol		U	U	U
Phenanthrene	50	2.6	U	U
Anthracene	50	0.76 J	U	U
Carbazole		0.38 J	U	U
Di-n-butyl phthalate		U	U	U
Fluoranthene	50	3.4	U	U
Pyrene	50	2.4	U	U
Butyl benzyl phthalate		U	U	U
Benzo(a)anthracene	0.224	1.3	U	U
Chrysene	0.4	1.2	U	U
3 3-Dichlorobenzidine		U	U	U
Bis(2-ethylhexyl)phthalate	50	0.15 J	0.27 J	0.39 J
Di-n-octyl phthalate		U	U	U
Benzo(b)fluoranthene	1.10	1.2	U	U
Benzo(k)fluoranthene	1.10	0.96	U	U
Benzo(a)pyrene	0.06	1.1	U	U
Indeno(1 2 3-cd)pyrene		0.65 J	U	U
Dibenzo(a h)anthracene	0.01	0.33 J	U	U
Benzo(ghi)perylene	50	0.65 J	U	U
Total	500	18	0.27	0.39

Units in milligrams per kilogram (mg/kg).

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-6. Sub-Surface Soil Analytical Results - Polychlorinated Biphenyls (PCBs). Salvation Army Parcel Investigation. October 2003.

Aroclor	TAGM STD.	B-4 4-6 Feet	B-5 8-10 Feet	B-6 6-8 Feet
Aroclor 1016		U	U	U
Aroclor 1221		U	U	U
Aroclor 1232		U	U	U
Aroclor 1242		U	U	U
Aroclor 1248		U	U	U
Aroclor 1254		U	U	U
Aroclor 1260		U	U	U
Total Aroclors	10	ND	ND	ND

Units in milligrams per kilogram (mg/kg).

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-7. Sub-Surface Soil Analytical Results - Target Analyte List Metals. Salvation Army Parcel Investigation. October 2003.

Analyte	TAGM STD.*	B-4 4-6 Feet	B-5 8-10 Feet	B-6 6-8 Feet
% Solids		84.2	81.8	76.4
% Moisture		15.8	18.2	23.6
Mercury	0.1	U	U	U
Aluminum	SB	11,800	7680	8450
Antimony		1.2	U	U
Arsenic	7.5 or SB	3.6 B	4 B	3.3 B
Barium	300 or SB	46.9	134	117
Beryllium	0.16 or SB	0.61 B	U	U
Cadmium	1.0 or SB	U	U	U
Calcium	SB	12,800	54,300	54,200
Chromium	10 or SB	18.8	11.7	12.7
Cobalt	30 or SB	12	7.9	8.2
Copper	25 or SB	26.5	18.3	19.8
Iron	2,000 or SB	22,900	16,900	16,400
Lead	SB	58.7	7.5 B	8.8
Magnesium	SB	4,640	21,000	19,700
Manganese	SB	517	328	394
Nickel	13 or SB	28.2	19	19.1
Potassium	SB	1,860	2,070	1,820
Selenium	2 or SB	U	U	U
Silver	SB	U	U	U
Sodium	SB	615	871	934
Thallium	SB	U	U	U
Vanadium	150 or SB	21.5	14	15.2
Zinc	20 or SB	56.2	37.3	38.8

Units are in milligrams parts kilograms (mg/kg).

U - indicates analyte was not detected at or above the reporting limit.

B - Results is less than the CRDL, but greater than or equal to the MDL.

* Standards are from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-9. Groundwater Analytical Results - Target Compound List Volatile Organic Compounds. Salvation Army Parcel Investigation. October 2003.

Compounds	TOGS STD.	MW-4	MW-5	MW-6	MW-14	MW-15	MW-16	MW-17
Chloromethane	5	U	U	U	U	U	U	U
Vinyl chloride	2	U	U	U	U	U	U	U
Bromomethane	5	U	U	U	U	U	U	U
Chloroethane	5	U	U	U	U	U	U	U
1 1-Dichloroethene	50	U	U	U	U	U	U	U
Carbon disulfide		U	U	U	U	U	U	U
Acetone	50G	U	U	U	U	U	U	U
Methylene chloride		1 JB	UB	UB	UB	UB	UB	UB
trans-1 2-Dichloroethene	5	U	U	U	U	U	U	U
1 1-Dichloroethane	5	U	U	U	U	U	U	U
Vinyl acetate		U	U	U	U	U	U	U
cis-1 2-Dichloroethene	5	U	U	U	U	U	U	U
2-Butanone (MEK)		U	U	U	U	U	U	U
Chloroform	7	U	U	U	U	U	U	U
1 1 1-Trichloroethane	5	U	U	U	U	U	U	U
Carbon tetrachloride	5	U	U	U	U	U	U	U
Benzene	1	U	U	U	U	U	4 J	U
1 2-Dichloroethane	0.6	U	U	U	U	U	U	U
Trichloroethene	5	U	U	U	U	U	U	U
1 2-Dichloropropane	1	U	U	U	U	U	U	U
Bromodichloromethane	50G	U	U	U	U	U	U	U
cis-1 3-Dichloropropene	0.4	U	U	U	U	U	U	U
4-Methyl-2-pentanone (MIBK)	50	U	U	U	U	U	U	U
Toluene	5	U	U	U	U	U	U	U
trans-1 3-Dichloropropene	0.4	U	U	U	U	U	U	U
1 1 2-Trichloroethane	5	U	U	U	U	U	U	U
Tetrachloroethene	5	U	2 J	U	U	U	U	U
2-Hexanone	50G	U	U	U	U	U	U	U
Dibromochloromethane	50G	U	U	U	U	U	U	U
Chlorobenzene	5	U	U	U	U	U	U	U
Ethylbenzene	5	U	U	U	U	U	U	U
Styrene		U	U	U	U	U	U	U
Bromoform	50	U	U	U	U	U	U	U
1 1 2 2-Tetrachloroethane		U	U	U	U	U	U	U
Xylenes (total)	5	U	U	U	U	2 J	1 J	U

Units in micrograms per liter (ug/L)

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards & Guidance Values.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-10. Groundwater Analytical Results - Target Compound List Semi-Volatile Organic Compounds. Salvation Army Parcel Investigation. October 2003.

COMPOUND	TAGM STD.	MW-4	MW-5	MW-6	MW-14	MW-15	MW-16	MW-17
Phenol	1	U	U	U	U	U	U	U
Bis(2-chloroethyl)ether	1	U	U	U	U	U	U	U
1 3-Dichlorobenzene	3	U	U	U	U	U	U	U
1 4-Dichlorobenzene	3	U	U	U	U	U	U	U
1 2-Dichlorobenzene	3	U	U	U	U	U	U	U
Benzyl alcohol		U	U	U	U	U	U	U
2-Methylphenol		U	U	U	U	U	U	U
2 2-oxybis (1-chloropropane)		U	U	U	U	U	U	U
n-Nitroso-di-n-propylamine	5	U	U	U	U	U	U	U
Hexachloroethane	5	U	U	U	U	U	U	U
4-Methylphenol		U	U	U	U	U	U	U
2-Chlorophenol	1	U	U	U	U	U	U	U
Nitrobenzene	0.4	U	U	U	U	U	U	U
Bis(2-chloroethoxy)methane	5	U	U	U	U	U	U	U
1 2 4-Trichlorobenzene	5	U	U	U	U	U	U	U
Benzoic acid		U	U	U	U	U	U	U
Isophorone	50G	U	U	U	U	U	U	U
2 4-Dimethylphenol	50	U	U	U	U	U	U	U
Hexachlorobutadiene	0.5	U	U	U	U	U	U	U
Naphthalene	10G	U	U	U	U	U	U	U
2 4-Dichlorophenol	5	U	U	U	U	U	U	U
4-Chloroaniline	5	U	U	U	U	U	U	U
2 4 6-Trichlorophenol		U	U	U	U	U	U	U
2 4 5-Trichlorophenol		U	U	U	U	U	U	U
Hexachlorocyclopentadiene	5	U	U	U	U	U	U	U
2-Methylnaphthalene		U	U	U	U	U	U	U
2-Nitroaniline	5	U	U	U	U	U	U	U
2-Chloronaphthalene	10G	U	U	U	U	U	U	U
4-Chloro-3-methylphenol		U	U	U	U	U	U	U
2 6-Dinitrotoluene		U	U	U	U	U	U	U
2-Nitrophenol		U	U	U	U	U	U	U
3-Nitroaniline	50G	U	U	U	U	U	U	U
Dimethyl phthalate		U	U	U	U	U	U	U
2 4-Dinitrophenol	10	U	U	U	U	U	U	U
Acenaphthylene		U	U	U	U	U	U	U
2 4-Dinitrotoluene	5	U	U	U	U	U	U	U
Acenaphthene	20G	U	U	U	U	U	U	U
Dibenzofuran		U	U	U	U	U	U	U
4-Nitrophenol		U	U	U	U	U	U	U
Fluorene	50G	U	U	U	U	U	U	0.4
4-Nitroaniline	5	U	U	U	U	U	U	J
4-Bromophenyl phenyl ether		U	U	U	U	U	U	U
Hexachlorobenzene	0.04	U	U	U	U	U	U	U
Diethyl phthalate		U	U	U	U	U	U	0.3
4-Chlorophenyl phenyl ether	50G	U	U	U	U	U	U	J
Pentachlorophenol	1	U	U	U	U	U	U	U
n-Nitrosodiphenylamine	50G	U	U	U	U	U	U	U
4 6-Dinitro-2-methylphenol		U	U	U	U	U	U	U
Phenanthrene	50G	U	U	U	U	U	U	0.9
Anthracene	50G	U	U	U	U	U	U	J
Carbazole		U	U	U	U	U	U	U
Di-n-butyl phthalate	50G	U	U	U	U	0.5	J	0.7
Fluoranthene	50G	U	U	U	U	U	U	0.6
Pyrene	50G	U	U	U	U	U	U	2
Butyl benzyl phthalate	50G	U	U	U	U	U	U	J
Benzo(a)anthracene	5	U	U	U	U	U	U	1
Chrysene	0.002G	U	U	U	U	U	U	2
3 3-Dichlorobenzidine	0.002G	U	U	U	U	U	U	J
Bis(2-ethylhexyl)phthalate	5	U	U	U	U	0.5	J	2
Di-n-octyl phthalate	0.002G	U	U	U	U	U	U	J
Benzo(b)fluoranthene	0.002G	U	U	U	U	U	U	U
Benzo(k)fluoranthene	0.002G	U	U	U	U	U	U	U
Benzo(a)pyrene	ND	U	U	U	U	U	U	U
Indeno(1 2 3-cd)pyrene	0.002G	U	U	U	U	U	U	U
Dibenzo(a h)anthracene		U	U	U	U	U	U	U
Benzo(ghi)perylene		U	U	U	U	U	U	U
Total	500	ND	ND	ND	ND	1	ND	9.9

Units in micrograms per liter (ug/L)

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Operational Guidance Series (TOGS) Ambient

Water Quality Standards & Guidance Values.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-11. Groundwater Analytical Results - Polychlorinated Biphenyls (PCBs). Salvation Army Parcel Investigation. October 2003.

Aroclor	TOGS STD.*	MW-4	MW-5	MW-6	MW-14	MW-15	MW-16	MW-17
Aroclor 1016		U	U	U	U	U	U	U
Aroclor 1221		U	U	U	U	U	U	U
Aroclor 1232		U	U	U	U	U	U	U
Aroclor 1242		U	U	U	U	U	U	U
Aroclor 1248		U	U	U	U	U	U	U
Aroclor 1254		U	U	U	U	U	U	U
Aroclor 1260		U	U	U	U	U	U	U
Total Aroclors	0.09	ND	ND	ND	ND	ND	ND	ND

Units in micrograms per liter (ug/L)

U - indicates analyte was not detected at or above the reporting limit.

J - Result is an estimated value, below the reporting limit, or tentatively identified compound.

* Standards are from NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards & Guidance Values.

Bold face indicates the exceedance of a NYSDEC standard or guidance value.

Table 3-12. Warehouse Wipe Samples - PCBs Salvation Army Parcel Investigation. October 2003.

Analyte	SA-WS-1	SA-WS-2	SA-WS-3
Aroclor 1016	U	U	U
Aroclor 1221	U	U	U
Aroclor 1232	U	U	U
Aroclor 1242	U	U	U
Aroclor 1248	U	U	U
Aroclor 1254	1.9	1.7	0.81
Aroclor 1260	U	U	U
Total	1.9	1.7	0.81

units are in micograms per wipe ($\mu\text{g}/100\text{ cm}^2$)

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compo

Table 3-13. Warehouse Drain Sample - Target Compound List Volatile Organic Compounds. Salvation Army Parcel Investigation. October 2003.

COMPOUND	SA-DS-1
Chloromethane	U
Vinyl chloride	U
Bromomethane	U
Chloroethane	U
1 1-Dichloroethene	U
Carbon disulfide	U
Acetone	U
Methylene chloride	0.014 B
trans-1 2-Dichloroethene	U
1 1-Dichloroethane	U
Vinyl acetate	U
cis-1 2-Dichloroethene	U
2-Butanone (MEK)	U
Chloroform	U
1 1 1-Trichloroethane	U
Carbon tetrachloride	U
Benzene	U
1 2-Dichloroethane	U
Trichloroethene	U
1 2-Dichloropropane	U
Bromodichloromethane	U
cis-1 3-Dichloropropene	U
4-Methyl-2-pentanone (MIBK)	U
Toluene	U
trans-1 3-Dichloropropene	U
1 1 2-Trichloroethane	U
Tetrachloroethene	U
2-Hexanone	U
Dibromochloromethane	U
Chlorobenzene	U
Ethylbenzene	U
Styrene	U
Bromoform	U
1 1 2 2-Tetrachloroethane	U
Xylenes (total)	U

Units in milligrams per liter (ug/Kg)

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

B - Indicated that the sample was detected in the method blank.

Table 3-14. Warehouse Drain Sample - Target Compound List Semi-Volatile Organic Compounds. Salvation Army Parcel Investigation. October 2003.

COMPOUND	SA-DS-1
Phenol	U
Bis(2-chloroethyl)ether	U
1 3-Dichlorobenzene	U
1 4-Dichlorobenzene	U
1 2-Dichlorobenzene	U
Benzyl alcohol	U
2-Methylphenol	U
2 2-oxybis (1-chloropropane)	U
n-Nitroso-di-n-propylamine	U
Hexachloroethane	U
4-Methylphenol	U
2-Chlorophenol	U
Nitrobenzene	U
Bis(2-chloroethoxy)methane	U
1 2 4-Trichlorobenzene	U
Benzoic acid	U
Isophorone	U
2 4-Dimethylphenol	U
Hexachlorobutadiene	U
Naphthalene	U
2 4-Dichlorophenol	U
4-Chloroaniline	U
2 4 6-Trichlorophenol	U
2 4 5-Trichlorophenol	U
Hexachlorocyclopentadiene	U
2-Methylnaphthalene	U
2-Nitroaniline	U
2-Chloronaphthalene	U
4-Chloro-3-methylphenol	U
2 6-Dinitrotoluene	U
2-Nitrophenol	U
3-Nitroaniline	U
Dimethyl phthalate	0.92 J
2 4-Dinitrophenol	U
Acenaphthylene	0.32 J
2 4-Dinitrotoluene	U
Acenaphthene	U
Dibenzofuran	U
4-Nitrophenol	U
Fluorene	U
4-Nitroaniline	U
4-Bromophenyl phenyl ether	U
Hexachlorobenzene	U
Diethyl phthalate	U
4-Chlorophenyl phenyl ether	U
Pentachlorophenol	U
n-Nitrosodiphenylamine	U
4 6-Dinitro-2-methylphenol	U
Phenanthrene	1.3 J
Anthracene	0.65 J
Carbazole	0.43 J
Di-n-butyl phthalate	2.7 J
Fluoranthene	5.9
Pyrene	5.3
Butyl benzyl phthalate	2.7 J
Benzo(a)anthracene	4.2 J
Chrysene	5
3 3-Dichlorobenzidine	U
Bis(2-ethylhexyl)phthalate	19 B
Di-n-octyl phthalate	0.76 J
Benzo(b)fluoranthene	4.6
Benzo(k)fluoranthene	3.8 J
Benzo(a)pyrene	3.5 J
Indeno(1 2 3-cd)pyrene	3.2 J
Dibenzo(a h)anthracene	1.4 J
Benzo(ghi)perylene	3.7 J
Total	69

Units in milligrams per liter (mg/Kg)

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

B - Indicated that the sample was detected in the method blank.

Table 3-15. Warehouse Drain Sample - PCBs. Salvation Army Parcel Investigation

Analyte	SA-DS-1
Aroclor 1016	U
Aroclor 1221	U
Aroclor 1232	U
Aroclor 1242	U
Aroclor 1248	U
Aroclor 1254	1.6
Aroclor 1260	0.45
Total	2.05

Units in milligrams per liter (mg/L)

U - indicates analyte was not detected at or above the reporting limit.

J- Result is an estimated value, below the reporting limit, or tentatively identified compound.

Table 3-16. Warehouse Drain Sample - Target Analyte.
List Metals. Salvation Army Parcel Investigation. October 2003.

Analyte	SA-DS-1
% Solids	74.2
% Moisture	25.8
Mercury	11.4 B
Aluminum	2,510
Antimony	3.4 B
Arsenic	26.3
Barium	331
Beryllium	2.4 U
Cadmium	20.9
Calcium	39,700
Chromium	65.7
Cobalt	17.2
Copper	630
Iron	118,000
Lead	833
Magnesium	3,660
Manganese	692
Nickel	86.6
Potassium	1,060
Selenium	19.3 U
Silver	4.2
Sodium	902
Thallium	26.5 U
Vanadium	16.8
Zinc	1,180

Units are in milligrams per kilogram (mg/Kg).

U - indicates analyte was not detected at or above the reporting limit.

B - Results is less than the CRDL, but greater than or equal to the MDL.

Table 4-1. Surface Soil Screening - Target Compound List Semi-Volatile Organic Compounds. Salvation Army Parcel Investigation. October2003

COMPOUND	Number of Detections	Maximum Value	Minumum Value	Average Value	US EPA Health Based Cleanup Objective ¹		Retained? Y/N
					Carcinogenic	Systemic Toxicant	
Phenol	0 of 8				NA	50,000	N
Bis(2-chloroethyl)ether	0 of 8				NA	NA	N
1 3-Dichlorobenzene	0 of 8				NA	NA	N
1 4-Dichlorobenzene	0 of 8				NA	NA	N
1 2-Dichlorobenzene	0 of 8				NA	NA	N
Benzyl alcohol	0 of 8				NA	NA	N
2-Methylphenol	0 of 8				NA	NA	N
2 2-oxybis (1-chloropropane)	0 of 8				NA	NA	N
n-Nitroso-di-n-propylamine	0 of 8				NA	NA	N
Hexachloroethane	0 of 8				NA	NA	N
4-Methylphenol	0 of 8				NA	4,000	N
2-Chlorophenol	0 of 8				NA	400	N
Nitrobenzene	0 of 8				NA	40	N
Bis(2-chloroethoxy)methane	0 of 8				NA	NA	N
1 2 4-Trichlorobenzene	0 of 8				NA	NA	N
Benzoic acid	0 of 8				NA	NA	N
Isophorone	1 of 8	19	nd	19	1,707	20,000	N
2 4-Dimethylphenol	0 of 8				NA	NA	N
Hexachlorobutadiene	0 of 8				NA	NA	N
Naphthalene	4 of 8	5	nd	2	NA	300	N
2 4-Dichlorophenol	0 of 8				NA	200	N
4-Chloroaniline	0 of 8				200	300	N
2 4 6-Trichlorophenol	0 of 8				NA	NA	N
2 4 5-Trichlorophenol	0 of 8				NA	8,000	N
Hexachlorocyclopentadiene	0 of 8				NA	NA	N
2-Methylnaphthalene	3 of 8	2	nd	1	NA	NA	N
2-Nitroaniline	0 of 8				NA	NA	N
2-Chloronaphthalene	0 of 8				NA	NA	N
4-Chloro-3-methylphenol	0 of 8				NA	NA	N
2 6-Dinitrotoluene	0 of 8				1.03	NA	N
2-Nitrophenol	0 of 8				NA	NA	N
3-Nitroaniline	0 of 8				NA	NA	N
Dimethyl phthalate	1 of 8	0.44	nd	0.44	NA	80,000	N
2 4-Dinitrophenol	0 of 8				NA	200	N
Acenaphthylene	6 of 8	1	0	0	NA	NA	N
2 4-Dinitrotoluene	1 of 8	0	nd	0	NA	NA	N
Acenaphthene	6 of 8	4	nd	1	NA	5,000	N
Dibenzofuran	6 of 8	4	nd	1	NA	NA	N
4-Nitrophenol	0 of 8				NA	NA	N
Fluorene	6 of 8	7	nd	2	NA	3,000	N
4-Nitroaniline	0 of 8				NA	NA	N
4-Bromophenyl phenyl ether	0 of 8				NA	NA	N
Hexachlorobenzene	0 of 8				0.41	60	N
Diethyl phthalate	0 of 8				NA	60,000	N
4-Chlorophenyl phenyl ether	0 of 8				NA	NA	N
Pentachlorophenol	0 of 8				NA	2,000	N
n-Nitrosodiphenylamine	2 of 8	1	nd	1	NA	NA	N
4 6-Dinitro-2-methylphenol	0 of 8				NA	NA	N
Phenanthrene	8 of 8	40	0	8	NA	NA	N
Anthracene	8 of 8	13	0	3	NA	20,000	N
Carbazole	7 of 8	5	nd	1	NA	NA	N
Di-n-butyl phthalate	5 of 8	0	nd	0	NA	8,000	N
Fluoranthene	8 of 8	53	0	14	NA	3,000	N
Pyrene	8 of 8	45	0	9	NA	2,000	N
Butyl benzyl phthalate	4 of 8	0	nd	0	NA	20,000	N
Benzo(e)anthracene	8 of 8	24	0	5	0.224	NA	Y
Chrysene	8 of 8	14	0	4	NA	NA	N
3 3-Dichlorobenzidine	0 of 8				NA	NA	N
Bis(2-ethylhexyl)phthalate	7 of 8	11	nd	3	50	2,000	N
Di-n-octyl phthalate	0 of 8				NA	2,000	N
Benzo(b)fluoranthene	8 of 8	16	0	4	NA	NA	N
Benzo(k)fluoranthene	8 of 8	12	0	3	NA	NA	N
Benzo(a)pyrene	8 of 8	21	0	4	0.0609	NA	Y
Indeno(1 2 3-cd)pyrene	8 of 8	7	0	2		NA	N
Dibenzo(a h)anthracene	8 of 8	4	0	1	0.0143	NA	Y
Benzo(ghi)perylene	8 of 8	8	0	2	NA	NA	N

Units in micrograms per kilopgram (ug/kg).

¹ US EPA Health Based Cleanup Objectives as reported in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 (January 1994).

Units in milligrams per kilopgram (mg/kg).

Table 4-2. Surface Soil Screening - PCBs, Salvation Army Parcel Investigation, October 2003

Aroclor	Number of Detections	Maximum Value	Minimum Value	Average Value	US EPA Health Based Carcinogenic	US EPA Health Based Cleanup Objective ¹ Systemic Toxicant	Retained? Y/N
Aroclor 1016	0 of 8						
Aroclor 1221	0 of 8						
Aroclor 1232	0 of 8						
Aroclor 1242	0 of 8						
Aroclor 1248	0 of 8						
Aroclor 1254	7 of 8	0.47	nd	0.23			
Aroclor 1260	5 of 8	0.69	nd	1.17			
Total PCBs	7 of 8	1.16	nd	0.22	1		Y

¹ US EPA Health Based Cleanup Objectives as reported in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 (January 1994).

nd - not detected

N/A Value is not available.

Units in milligrams per kilogram (mg/kg).

Table 4-4. Sub-surface Soil Screening - Target Compound List Volatile Organic Compounds.
 Salvation Army Parcel Investigation. October 2003.

Compound	Number of Detections	Maximum Value	Minimum Value	Average Value	US EPA Health Based Cleanup Objective ¹		Retained? Y/N
					Carcinogenic	Systemic Toxicant	
Chloromethane	0 of 3				NA	NA	N
Vinyl chloride	0 of 3				NA	NA	N
Bromomethane	0 of 3				NA	NA	N
Chloroethane	0 of 3				NA	NA	N
1 1-Dichloroethene	0 of 3				12	700	N
Carbon disulfide	0 of 3				NA	8,000	N
Acetone	0 of 3				NA	8,000	N
Methylene chloride	3 of 3	0.004	0.002	0	93	5,000	N
trans-1 2-Dichloroethene	0 of 3				NA	2,000	N
1 1-Dichloroethane	0 of 3				NA	NA	N
Vinyl acetate	0 of 3				NA	NA	N
cis-1 2-Dichloroethene	0 of 3				NA	NA	N
2-Butanone (MEK)	0 of 3				NA	4,000	N
Chloroform	0 of 3				114	800	N
1 1 1-Trichloroethane	0 of 3				NA	7,000	N
Carbon tetrachloride	0 of 3				5	60	N
Benzene	3 of 3	0.005	0.0007	0.00	24	NA	N
1 2-Dichloroethane	0 of 3				8	NA	N
Trichloroethene	0 of 3				64	NA	N
1 2-Dichloropropane	0 of 3				NA	NA	N
Bromodichloromethane	0 of 3				NA	NA	N
cis-1 3-Dichloropropene	0 of 3				NA	NA	N
4-Methyl-2-pentanone (MIBK)	0 of 3				NA	NA	N
Toluene	3 of 3	0.005	0.001	0.00	NA	20	N
trans-1 3-Dichloropropene	0 of 3				NA	NA	N
1 1 2-Trichloroethane	0 of 3				NA	NA	N
Tetrachloroethene	0 of 3				14	800	N
2-Hexanone	0 of 3				NA	NA	N
Dibromochloromethane	0 of 3				NA	NA	N
Chlorobenzene	0 of 3				NA	2,000	N
Ethylbenzene	2 of 3	0.5	ND	0.17	NA	8,000	N
Styrene	0 of 3				NA	NA	N
Bromoform	0 of 3				NA	NA	N
1 1 2 2-Tetrachloroethane	0 of 3				35	NA	N
Xylenes (total)	2 of 3	1	ND	0	NA	200,000	N

¹ US EPA Health Based Cleanup Objectives as reported in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 (January 1994).

nd - not detected

NA Value is not available.

Units in milligrams per kilogram (mg/kg).

Table 4-5. Sub-surface Soil Screening - Target Compound List Semi-Volatile Organic Compounds. Salvation Army Parcel Investigation. October 2003

COMPOUND	Number of Detections	Maximum Value	Minimum Value	Average Value	US EPA Health Based Cleanup Objective ¹		Retained? Y/N
					Carcinogenic	Systemic Toxicant	
Phenol	0 of 3	-	-	-	NA	50,000	N
Bis(2-chloroethyl)ether	0 of 3	-	-	-	NA	NA	N
1,3-Dichlorobenzene	0 of 3	-	-	-	NA	NA	N
1,4-Dichlorobenzene	0 of 3	-	-	-	NA	NA	N
2-Dichlorobenzene	0 of 3	-	-	-	NA	NA	N
Benzyl alcohol	0 of 3	-	-	-	NA	NA	N
2-Methylphenol	0 of 3	-	-	-	NA	NA	N
2,2-oxybis (1-chloropropane)	0 of 3	-	-	-	NA	NA	N
n-Nitroso-di-n-propylamine	0 of 3	-	-	-	NA	NA	N
Hexachloroethane	0 of 3	-	-	-	NA	NA	N
4-Methylphenol	0 of 3	-	-	-	NA	4,000	N
2-Chlorophenol	0 of 3	-	-	-	NA	400	N
Nitrobenzene	0 of 3	-	-	-	NA	40	N
Bis(2-chloroethoxy)methane	0 of 3	-	-	-	NA	NA	N
1,2,4-Trichlorobenzene	0 of 3	-	-	-	NA	NA	N
Benzoic acid	0 of 3	-	-	-	NA	NA	N
Isophorone	0 of 3	-	-	-	1,707	20,000	N
2,4-Dimethylphenol	0 of 3	-	-	-	NA	NA	N
Hexachlorobutadiene	0 of 3	-	-	-	NA	NA	N
Naphthalene	0 of 3	-	-	-	NA	300	N
2,4-Dichlorophenol	0 of 3	-	-	-	NA	200	N
4-Chloroaniline	0 of 3	-	-	-	200	300	N
2,4,6-Trichlorophenol	0 of 3	-	-	-	NA	NA	N
2,4,5-Trichlorophenol	0 of 3	-	-	-	NA	8,000	N
Hexachlorocyclopentadiene	0 of 3	-	-	-	NA	NA	N
2-Methylnaphthalene	1 of 3	35	nd	22.70	NA	NA	N
2-Nitroaniline	0 of 3	-	-	-	NA	NA	N
2-Chloronaphthalene	0 of 3	-	-	-	NA	NA	N
4-Chloro-3-methylphenol	0 of 3	-	-	-	NA	NA	N
2,6-Dinitrotoluene	0 of 3	-	-	-	1.03	NA	N
2-Nitrophenol	0 of 3	-	-	-	NA	NA	N
3-Nitroaniline	0 of 3	-	-	-	NA	NA	N
Dimethyl phthalate	0 of 3	-	-	-	NA	80,000	N
2,4-Dinitrophenol	0 of 3	-	-	-	NA	200	N
Acenaphthylene	0 of 3	-	-	-	NA	NA	N
2,4-Dinitrotoluene	0 of 3	-	-	-	NA	NA	N
Acenaphthene	1 of 3	19	nd	12.46	NA	5,000	N
Dibenzofuran	1 of 3	19	nd	12.40	NA	NA	N
4-Nitrophenol	0 of 3	-	-	-	NA	NA	N
Fluorene	1 of 3	25	nd	16.46	NA	3,000	N
4-Nitroaniline	0 of 3	-	-	-	NA	NA	N
4-Bromophenyl phenyl ether	0 of 3	-	-	-	NA	NA	N
Hexachlorobenzene	0 of 3	-	-	-	0.41	60	N
Diethyl phthalate	0 of 3	-	-	-	NA	60,000	N
4-Chlorophenyl phenyl ether	0 of 3	-	-	-	NA	NA	N
Pentachlorophenol	0 of 3	-	-	-	NA	2,000	N
n-Nitrosodiphenylamine	0 of 3	-	-	-	NA	NA	N
4,6-Dinitro-2-methylphenol	0 of 3	-	-	-	NA	NA	N
Phenanthrene	1 of 3	30	nd	20.20	NA	NA	N
Anthracene	1 of 3	15	nd	9.92	NA	20,000	N
Carbazole	1 of 3	28	nd	18.13	NA	NA	N
Di-n-butyl phthalate	0 of 3	-	-	-	NA	8,000	N
Fluoranthene	1 of 3	28	nd	19.13	NA	3,000	N
Pyrene	1 of 3	24	nd	16.13	NA	2,000	N
Butyl benzyl phthalate	0 of 3	-	-	-	NA	20,000	N
Benzo(a)anthracene	1 of 3	19	1.3	12.77	0.224	NA	Y
Chrysene	1 of 3	21	1.2	14.07	NA	NA	N
3,3-Dichlorobenzidine	0 of 3	-	-	-	NA	NA	N
Bis(2-ethylhexyl)phthalate	3 of 3	0.39	0.15	0.27	50	2,000	N
Di-n-octyl phthalate	0 of 3	-	-	-	NA	2,000	N
Benzo(b)fluoranthene	1 of 3	48	nd	31.40	NA	NA	N
Benzo(k)fluoranthene	1 of 3	49	nd	31.99	NA	NA	N
Benzo(e)pyrene	1 of 3	20	nd	13.37	0.0609	NA	Y
Indeno(1,2,3-cd)pyrene	1 of 3	23	nd	14.88	NA	NA	N
Dibenzo(a,h)anthracene	1 of 3	23	0.33	14.78	0.0143	NA	Y
Benzo(ghi)perylene	1 of 3	21	nd	13.88	NA	NA	N

¹ US EPA Health Based Cleanup Objectives as reported in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 (January 1994).

nd - not detected

N/A Value is not available.

Units in milligrams per kilogram (mg/kg).

Table 4-6. Sub-surface Soil Screening - Metals. Salvation Army Parcel Investigation, October 2003

Analyte	Number of Detections	Maximum Value	Minimum Value	Average Value	Recommended Soil Cleanup Objective*	Retained? Y/N
Mercury	0 of 3	-	-	-	0.1	N
Aluminum	3 of 3	11,800	7,680	9,310	SB	N
Antimony	1 of 3	1	nd	1	SB	N
Arsenic	3 of 3	4	3	4	7.5	N
Barium	3 of 3	134	47	99	300	N
Beryllium	1 of 3	1	nd	1	0.16	Y
Cadmium	0 of 3	-	-	-	1	N
Calcium	3 of 3	54,300	12,800	40,433	SB	N
Chromium	3 of 3	19	12	14	10	Y
Cobalt	3 of 3	12	8	9	30	N
Copper	3 of 3	27	18	22	25	Y
Iron	3 of 3	22,900	16,400	18,733	2000	Y
Lead	3 of 3	59	8	25	SB	N
Magnesium	3 of 3	21,000	4,640	15,113	SB	N
Manganese	3 of 3	517	328	413	SB	N
Nickel	3 of 3	28	19	22	13	Y
Potassium	3 of 3	2,070	1,820	1,917	SB	N
Selenium	0 of 3	-	-	-	2	N
Silver	0 of 3	-	-	-	SB	N
Sodium	3 of 3	934	615	807	SB	N
Thallium	0 of 3	-	-	-	SB	N
Vanadium	3 of 3	22	14	17	150	N
Zinc	3 of 3	56	37	44	20	Y

* Recommended Soil Cleanup Objectives as reported in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 (January 1994).

Table 4-7. Groundwater Screening - VOCs/SVOCs. Salvation Army Parcel Investigation. October 2003

Compound (ug/L)	Number of Detections	Maximum Value	Minimum Value	TOGS STD.*	Retained? Y/N
Methylene chloride	1 of 7	1	nd		N
Benzene	1 of 7	4	nd	1	Y
Tetrachloroethene	1 of 7	2	nd	5	N
Xylenes (total)	2 of 7	2	nd	5	N
Fluorene	1 of 7	0.4	nd	50G	N
Phenanthrene	1 of 7	0.3	nd	50G	N
Diethyl phthalate	1 of 7	0.9	nd		N
Di-n-butyl phthalate	2 of 7	0.7	nd	50G	N
Fluoranthene	1 of 7	0.6	nd	50G	N
Pyrene	1 of 7	2	nd	50G	N
Benzo(a)anthracene	1 of 7	1	nd	5	N
Chrysene	1 of 7	2	nd	0.002G	N
Bis(2-ethylhexyl)phthalate	2 of 7	2	nd	5	N

* Standards are from NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards & Guidance Values.
 nd - not detected.

Table 4-8. Groundwater Screening - Metals. Salvation Army Parcel Investigation. October 2003

Analyte (ug/L)	Number of Detections	Maximum Value	Minimum Value	Average Value	TOGS STD.*	Retained? Y/N
Mercury	2 of 7	5	nd	1	1	Y
Aluminum	7 of 7	5,160	60	2,566		N
Antimony	0 of 7		nd	4	3	N
Arsenic	1 of 7	4	nd	158	25	N
Barium	7 of 7	272	57		1,000	N
Beryllium	0 of 7				3G	N
Cadmium	0 of 7				5	N
Calcium	7 of 7	254,000	71,400	169,486		N
Chromium	5 of 7	7	nd	3	50	N
Cobalt	6 of 7	5	nd	4		N
Copper	6 of 7	20	nd	9	200	Y
Iron	7 of 7	16,100	1,640	7,293	300	Y
Lead	6 of 7	7	nd	5	25	N
Magnesium	7 of 7	69,400	15,400	38,543	35,000G	Y
Manganese	7 of 7	7,670	249	1,885	300	Y
Nickel	6 of 7	21	nd	9	100	N
Potassium	7 of 7	12,500	1,460	5,456		N
Selenium	1 of 7	11	nd	6	10	N
Silver	0 of 7				50	N
Sodium	7 of 7	226,000	26,400	75,186	20,000	Y
Thallium	0 of 7				0.5G	N
Vanadium	5 of 7	7	nd	4		N
Zinc	4 of 7	24	nd	17	2,000G	N

* Standards are from NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards & Guidance Values.
 nd - not detected.

APPENDIX A

Boring Logs



BORING LOG: B-5/MW-5

Total Boring Depth : 17.8' b.g.
 Drilling Method : Hollow-stem augers
 Drilling Equipment : Mobile B-57
 Hammer Wt./Drop : N/A
 Sampling Method : Split spoon, 1-7/8"
 Logged By : BMc
 Survey : Bryant Associates
 Boring Location : Salv. Army Prop., adjacent
 : to blding & Burt Street,
 : southeast portion of site.

Syracuse Housing Authority
 Salvation Army Property
 Burt Street & Oakwood Avenue
 Syracuse, New York

Date Started : 4/7/03
 Time : 12:40 pm
 Date Completed : 4/7/03
 Time : 3:15 pm
 Drilling Contractor : Parratt-Wolff
 Driller : M.Eaves

N2014.10

Depth (bgs)	Surf. Elev. 97.33	Blow Count	Recovery (Inches)	Sample	PID (Vppm)	Sample Type	Water Levels	REMARKS
						☒ Unrecovered ▨ SS Sample □ No Sample	▼ During Drilling ▽ After Completion (>24 hrs)	
DESCRIPTION								MW - 5 TOC Elev.: 96.75
0	97	4	3	☒	4.8	Fine to coarse gravel.		Begin drilling boring @ 12:40 pm 4/7/03. Boney conditions, auger to 4', restart sampling.
2	95	50/2	NS					
4	93	8	4	▨	0.1	Wet, very dark gray (5Y 3/1), (SM) SILTY SAND w/ GRAVEL, 50% fine to coarse sand, 30% fines, 20% fines.		
6	91	5	15	▨	0.3	SAA, SILTY SAND, brown (10YR 4/3), 60% fine sand, 40% nonplastic fines.		
8	89	3	16	▨	0.4	Moist, reddish brown (5Y 4/3), (CL) CLAY, 100% highly plastic fines, no dilatancy.		
10	87	6	16	▨	0.4	SAA, CLAY.		
12	85	10	18	▨	0.6	SAA, CLAY.		
14	83	6	10	▨	0.5	Wet, dark yellowish brown (10YR 4/4), (SM) SILTY SAND, 70% fine sand, 30% low plasticity fines.		
16	81	8	16	▨	0.5	-1" CLAY seam, SAA. Becomes banded w/ very dark gray (2.5Y 3/1). SAA, SILTY SAND, very dark gray (2.5Y 3/1), laminated 70-90% fine sand, 10-30% fines.		
18		10	18	▨	0.2	-2" CLAY seam, dark reddish gray (5Y 4/2). Wet, yellowish brown (10YR 4/4), (CL) CLAY, 100% highly plastic fines, no dilatancy.		
				☒		Wet, very dark gray (10YR 3/1), (SP) POORLY GRADED SAND 100% fine sand.		Sample to 16' b.g.
BOTTOM of BORING, 16.0' b.g.								1:45 pm 4/7/03 ream boring to 17.8' b.g.

01-12-2004 J:\PROJECTS\N-xxxx\N2000\N2014 - Syracuse Housing Multiple Parcels\Shared\Boring Logs\B-5.bor

PID utilized: MiniRae 2000 calibrated to 100 Vppm isobutylene.
 NR represents no sample recovery.
 NS represents no sample attempted for this interval.

BORING LOG: B-5/MW-5



BORING LOG: B-6/MW-6

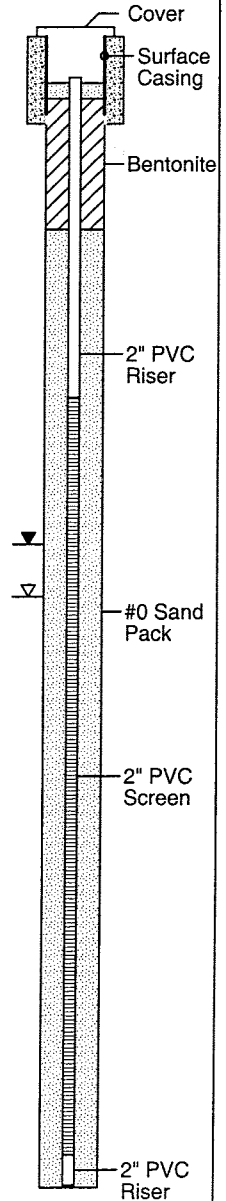
Total Boring Depth : 14.8' b.g.
 Drilling Method : Hollow-stem augers
 Drilling Equipment : Mobile B-55
 Hammer Wt./Drop : N/A
 Sampling Method : Split spoon, 1-7/8"
 Logged By : BMC
 Survey : Bryant Associates
 Boring Location : Salv. Army Prop., adjacent
 : to Oakwood Avenue,
 : southeast portion of site.

Syracuse Housing Authority
 Salvation Army Property
 Burt Street & Oakwood Avenue
 Syracuse, New York

Date Started : 4/9/03
 Time : 8:55 am
 Date Completed : 4/9/03
 Time : 11:30 am
 Drilling Contractor : Parratt-Wolff
 Driller : M.Eaves

N2014.10

Depth (bgs)	Surf. Elev. 99.76	Blow Count	Recovery (inches)	Sample	PID (Vppm)	Sample Type	Water Levels	REMARKS
						<input type="checkbox"/> Unrecovered <input type="checkbox"/> SS Sample <input type="checkbox"/> No Sample	<input checked="" type="checkbox"/> During Drilling <input type="checkbox"/> After Completion (>24 hrs)	
DESCRIPTION								
0		3	8		ND	Grass.		Begin drilling boring @ 8:55 am 4/9/03. Refusal on large subsurface structure @ 2' b.g., move 3' south & redrill to 4' and restart sampling. Sample to 14' b.g. 10:05 am 4/9/03 ream boring to 14.8' b.g.
99		10				Moist, very dark gray (2.5Y 3/1), (GM) SILTY GRAVEL w/ SILT 50% fine to coarse gravel, 30% fines, 20% fine to coarse sand.		
		15						
2		26				Concrete obstruction.		
97		50/0	NS					
4		33	4		ND	Wet, dark brown (10YR 3/3), (SC) CLAYEY SAND, 50-60% fine sand, 40-50% highly plastic fines, trace glass & brick.		
95		3						
		4						
6		3			ND	Wet, dark brown (10YR 3/3), (ML) SANDY SILT, 70-80% low plasticity fines, 20-30% fine sand.		
93		20				1/4-1/2" SAND layers, dark gray (10YR 4/1), 100% fine sand.		
		2				Wet, dark yellowish brown (10YR 3/4), (CL) CLAY, 100% highly plastic fines, no dilatency.		
8		4			ND	Wet, dark grayish brown (10YR 4/2), (ML) SILT w/ SAND, 80% low plasticity fines, 20% fine sand, rapid dilatency.		
91		19				1" SAND layer, yellowish brown (10YR 5/6)		
		2				Wet, dark grayish brown (10YR 4/2), (CL) CLAY, 100% highly plastic fines, no dilatency.		
10		3			ND	SAA, CLAY, very dark grayish brown (10YR 3/2).		
89		2						
		21						
12		2				SAA, CLAY.		
87		3			ND			
		18						
		4				Wet, very dark gray (10YR 3/1), (SM) SILTY SAND, 80% fine sand, 20% fines.		
14		3						
		4						



PID utilized: MiniRae 2000 calibrated to 100 Vppm isobutylene.
 NR represents no sample recovery.
 NS represents no sample attempted for this interval.

BORING LOG: B-6/MW-6

APPENDIX B

**Geophysical Survey Report
(Enviroscan, Inc, June 24, 2003)**



June 24, 2003

Mr. Donald Sorbello
S&W Redevelopment of North America, LLC
430 East Genesee Street
Suite 401
Syracuse, NY 13202

RE: Geophysical Survey
Unclassified Target Detection/Delineation
Salvation Army Site and Andrews Lumber Site
Syracuse, NY
Enviroscan Project Numbers 090232a and 090232b

Dear Mr. Sorbello:

Pursuant to our proposals dated November 21, 2002, Enviroscan completed a combined electromagnetic (EM) and ground penetrating radar (GPR) survey on the above-referenced sites on May 29, 2003. The purpose of both surveys was to detect and delineate targets (with one or more dimensions of a single target being five (5) feet or greater) up to 10 feet beneath each site.

The survey was performed on two sites. The first area scanned was a former Salvation Army building located on the 300 block of Burt Street, Syracuse, NY. The survey area of the Salvation Army Site was approximately 56,000 square feet. The ground cover consisted mainly of asphalt and high grass with few obstructions (see Figure 1). Please note that areas of thick vegetation or areas adjacent to surficial metal could not be surveyed. Also note that the client removed a small portion from the overall survey area on the western side of the property due to the presence of a reinforced concrete pad.

The second site was located at Andrews Lumber at 512 Burt Street, Syracuse NY. The survey area of the Andrews Lumber Site was approximately 61,000 square feet. The ground cover consisted of gravel and concrete with small areas of high grass. As noted above, areas of thick vegetation or areas adjacent to surficial metal could not be surveyed. The methods and results of both surveys are described below.



Mr. Sorbello
June 24, 2003
Page 2

Survey Methods

Fisher TW-6 Instrument

The survey areas were scanned with the Fisher TW-6 deep-focused metal detector (MD). All accessible areas of each site were scanned with the TW-6 MD in a rough 5-foot grid. The TW-6 identifies electrically conductive materials by creating an electromagnetic field with a transmitting coil. A receiving coil at a fixed separation from the transmitter measures the field strength. As the instrument is swept along the ground surface, subsurface conductive bodies distort the transmitted field. The change in field strength is sensed by the receiver, setting off an audible alarm. The TW-6 EM instrument employed for this survey can nominally detect a conductive mass equivalent to a ¾-inch pipe to a depth of 5 feet, and a 10-inch pipe to a depth of 15 feet.

GSSI SIR-2 GPR Instrument

The TW-6 anomalies were further defined using the GSSI SIR-2 GPR controller and 500-megaHertz scanning antenna (generally capable of scanning to a depth of 10 to 15 feet). GPR systems produce cross-sectional images of subsurface features and layers by continuously emitting pulses of radar frequency energy from a scanning antenna as it is towed along a survey profile. The radar pulses are reflected by interfaces between materials with differing dielectric properties. The reflections return to the antenna and are printed on a strip chart recorder or displayed on a video monitor as a continuous cross section in real time. Since the electrical properties of metals are dramatically different from soil and backfill materials, metallic USTs and piping produce distinct and characteristic reflections. Fiberglass, plastic, concrete, and terra-cotta targets as well as subsurface voids, rock surfaces, soil composition or moisture content variations, and concentrations of many types of metallic and non-metallic wastes also produce recognizable, but less dramatic reflections.

GPR scanning was performed by hand-towing the antenna along numerous and variously oriented profiles crossing the footprints of TW-6 anomalies. The GPR profiles were inspected in real time to identify high-amplitude reflections of the type commonly associated with targets such as tanks, drums, and debris.

Mr. Sorbello
June 24, 2003
Page 3

The resulting TW-6 EM and GPR anomaly footprints were marked on the ground in semi-permanent marking paint and digitally recorded using a backpack-mounted Trimble Pathfinder global positioning system (GPS) receiver in contact with six to eight position-fixing satellites. The GPS positions were differentially corrected to a community base station in Oswego, NY. The resulting differential GPS (DGPS) positions have a nominal accuracy of better than 2 feet (+/-).

Survey Results

Salvation Army Site

The TW-6 scanning results indicated the presence of six metallic anomalies (labeled SA1 through SA6, Figure 1). The descriptions and possible sources of each anomaly are included in Table 1. Selected GPR scan cross sections are included in Figure 1, and represent one or two passes (in orthogonal directions) across the TW-6 anomalies. GPR scanning of the anomalies for which two cross sections are displayed revealed a definable object that could be delineated. Note that in some cases, a record is not shown if GPR imaging revealed no discernable object, in which case the source was most likely near-surface scattered metallic debris. In general, GPR penetration was good across this site, with an average depth of investigation of approximately 7 to 8 feet below ground surface.

Andrews Lumber Site

The TW-6 scanning results within all accessible areas indicated the presence of seven metallic anomalies (labeled AN1 through AN7, Figure 2). The descriptions and possible sources of each anomaly are included in Table 1. Selected GPR images are included in Figure 2, and each represents a single pass across the TW-6 anomaly. GPR penetration at this site was very poor, resulting in reliance upon the TW-6 results for target delineation. At the client's request, selected examples of GPR data with poor signal penetration were recorded as representative site samples (AN2, AN5, AN6).

ENVIROSCAN, INC.

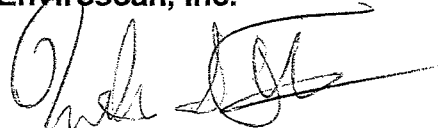
Mr. Sorbello
June 24, 2003
Page 4

Limitations

The geophysical survey described above was completed using standard and/or routinely accepted practices of the geophysical industry and equipment representing the best available technology. Enviroscan does not accept responsibility for survey limitations due to inherent technological limitations or unforeseen site-specific conditions. However, we make every effort to identify and notify the client of such limitations or conditions. In addition, note that the completion of this survey does not relieve any party of applicable legal obligation to notify the appropriate "one call" service prior to drilling or digging.

We have enjoyed and appreciated the opportunity to have worked with you. If you have any questions, please do not hesitate to contact me.

Sincerely,
Enviroscan, Inc.



William E. Steinhart III, M.Sc., P.G.
Geophysics Project Manager

Technical Review By:
Enviroscan, Inc.



Felicia Kegel Bechtel, M.Sc., P.G.
President

enc.: Figure 1: Geophysical Survey Results, Salvation Army Site
Figure 2: Geophysical Survey Results, Andrews Lumber Site
Table 1: Ground Penetrating and Metal Detection Follow-up Survey Results



General Notes

Coordinates in New York Central State Plane Grid, NAD 83 geodetic datum.
 Basemap "2003-04-08 Survey.dwg" supplied by S & W Redevelopment.
 Geophysical anomaly locations from DGPS survey by Enviroscan, Inc.
 GPR profiles from GSSI SIR-2000 instrument with a 500MHz transducer.

No.	Revision/Issue	Date

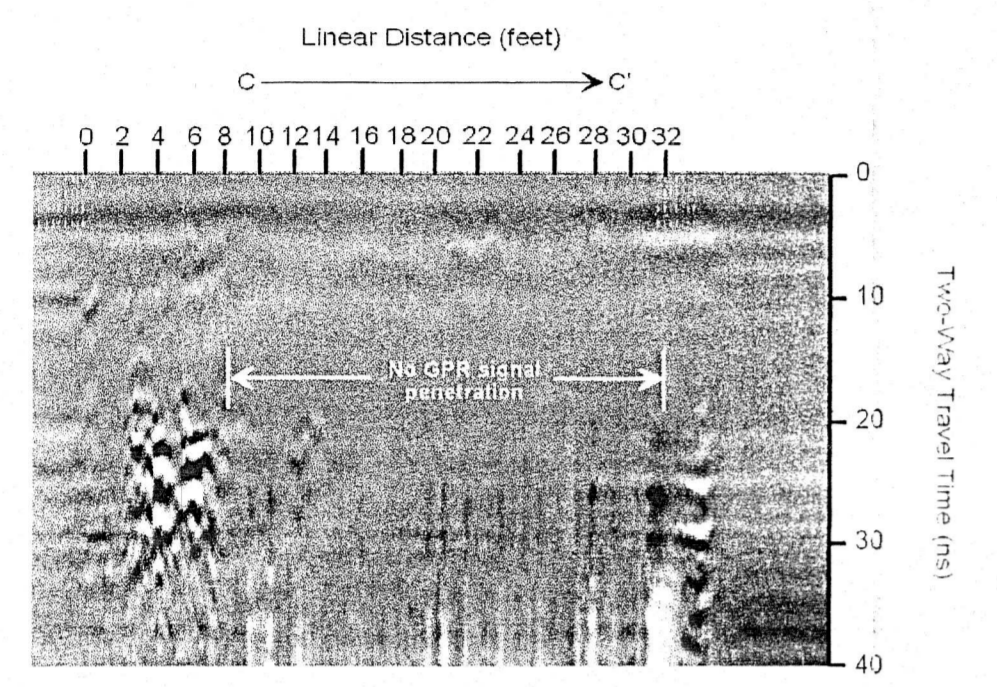
Prepared by:
Enviroscan, Inc.
 Lancaster, PA
 717-396-8922

Prepared for:
S & W Redevelopment
 Syracuse, NY

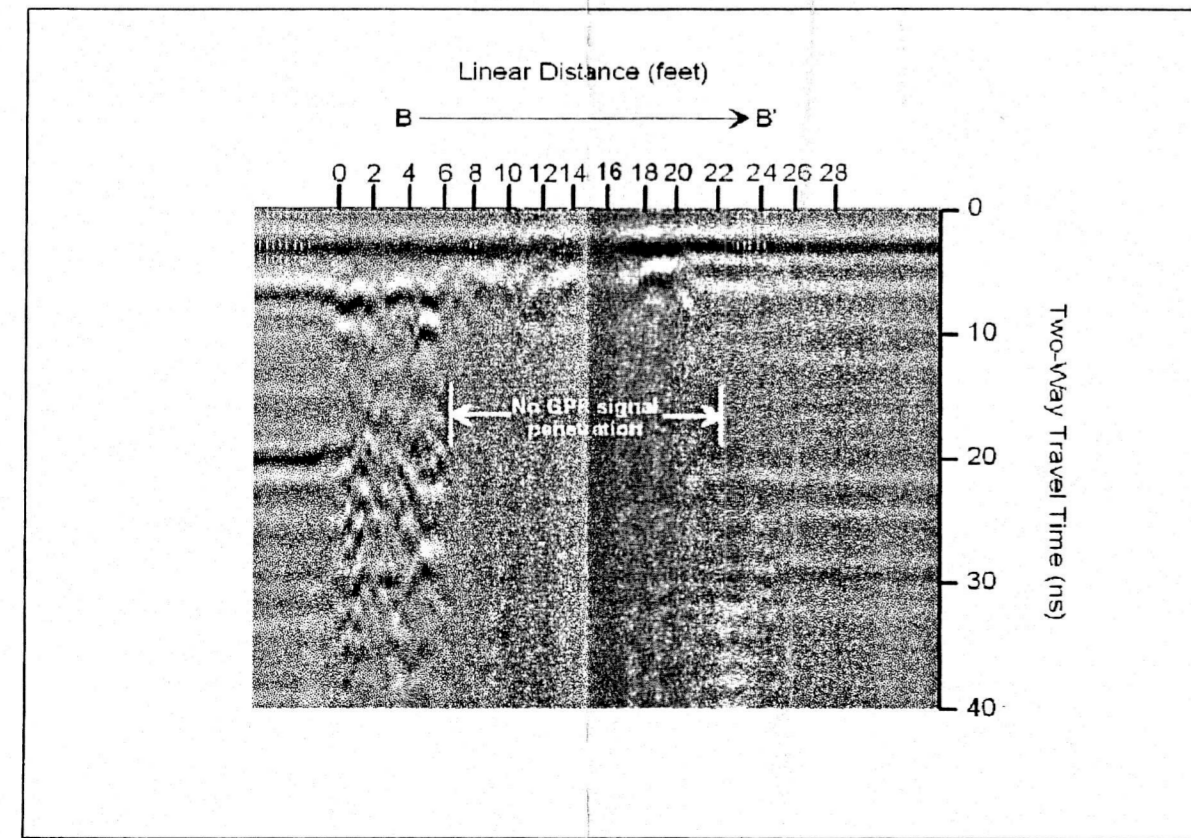
Project Name and Address
Geophysical Survey Results
 Andrews Lumber Site
 512 Burt Street
 Syracuse, NY

Project	090232b	Figure	2
Revision Date	6/23/03	Drawn by:	WES
Scale	1" = 30'	Approved by:	FKB

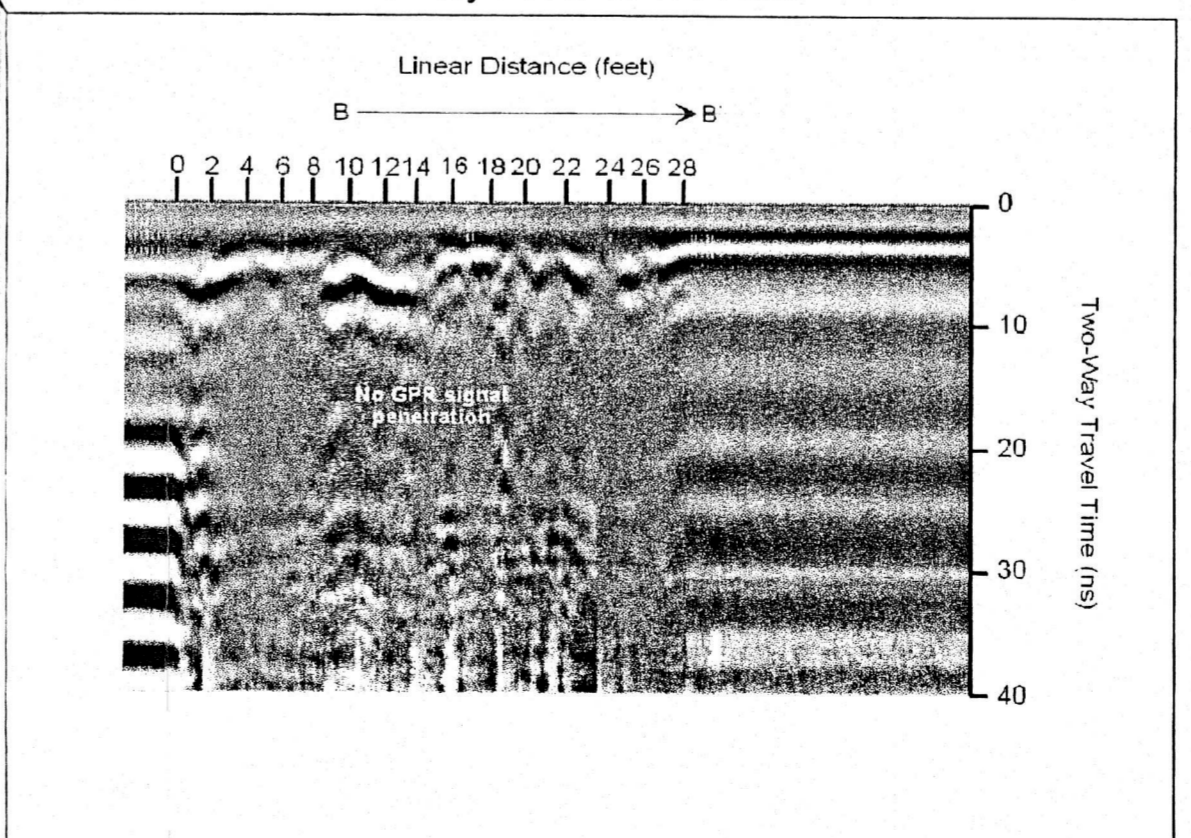
Anomaly AN 6 GPR Profile



Anomaly AN 5 GPR Profile



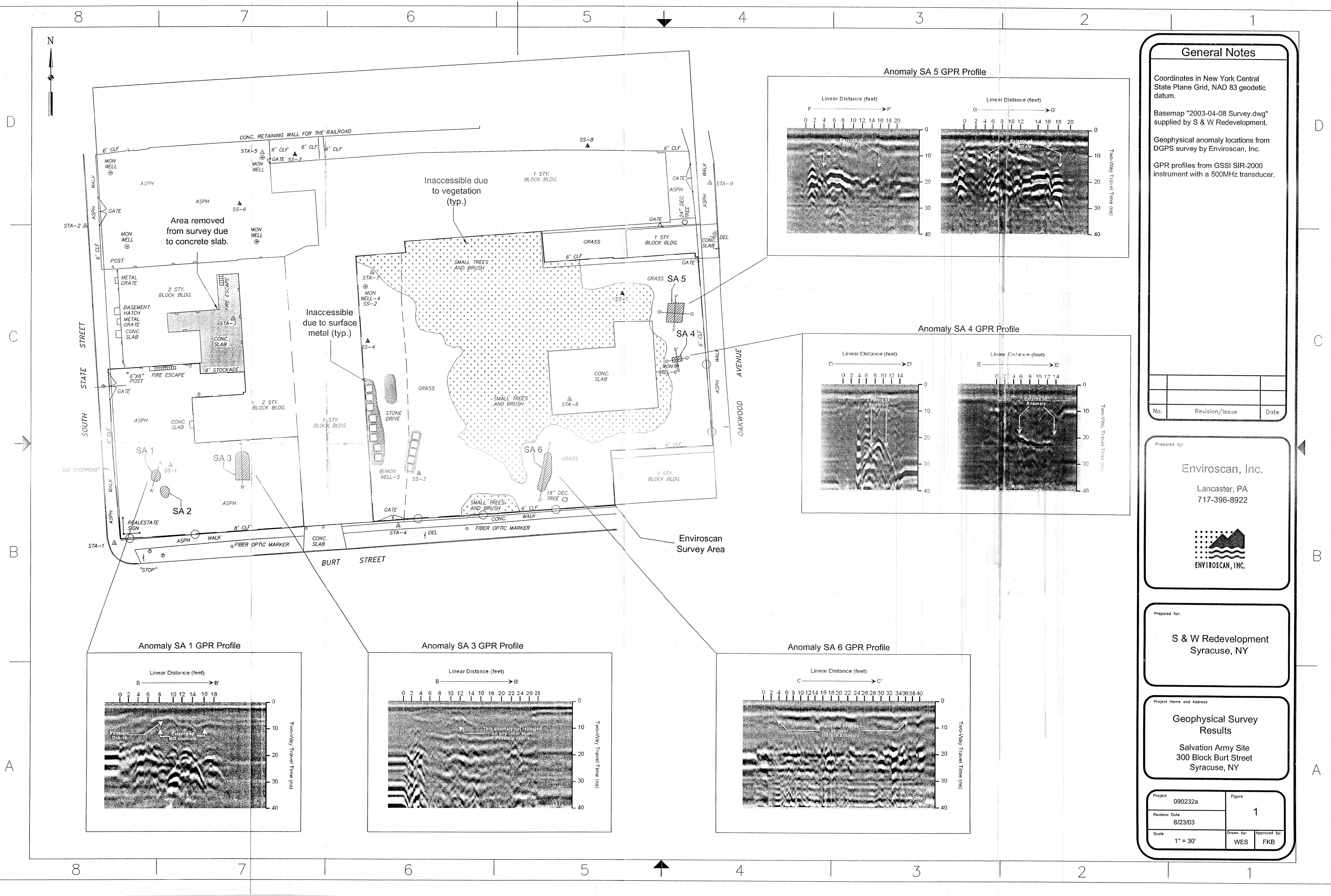
Anomaly AN 2 GPR Profile



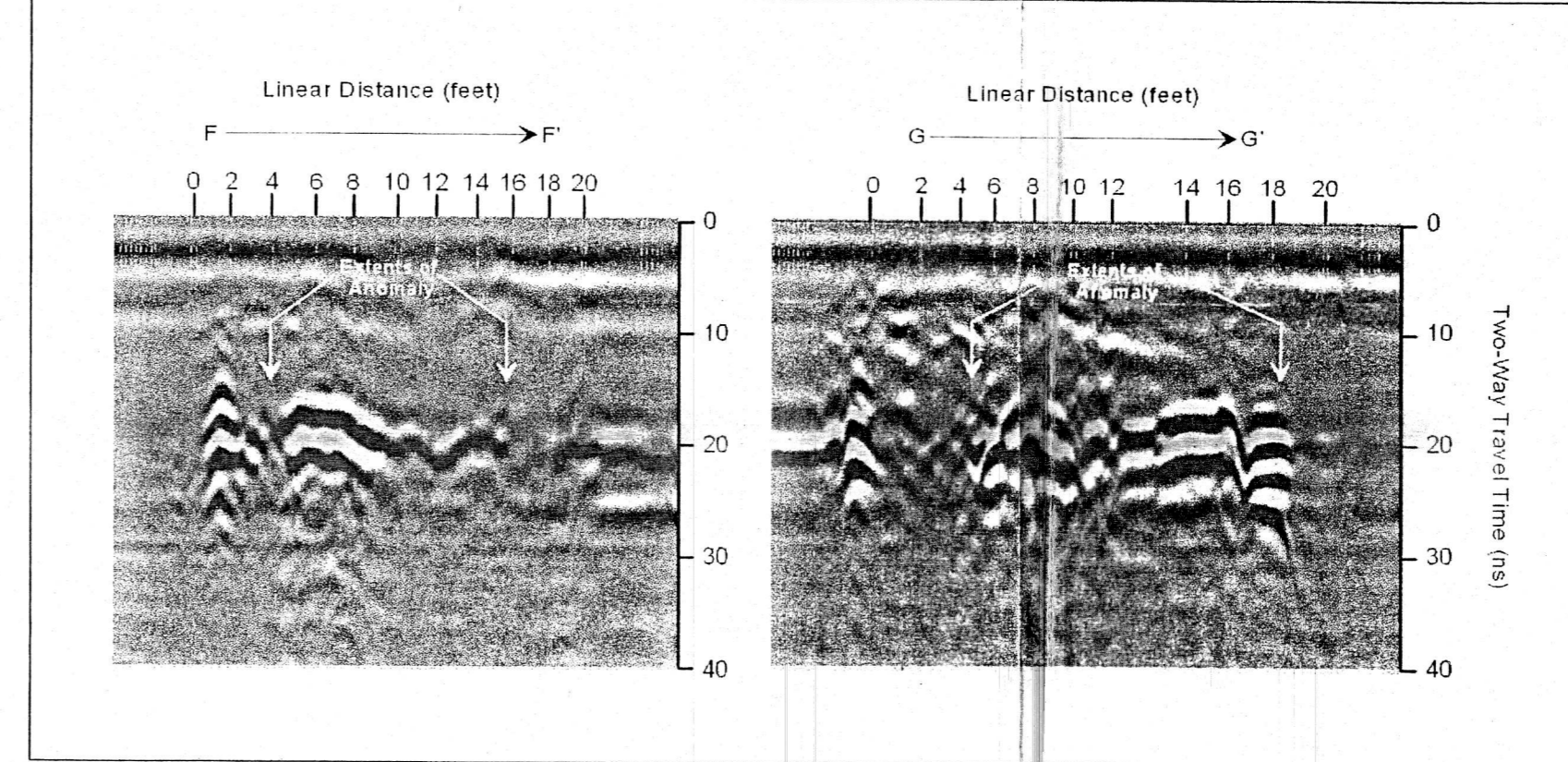
Inaccessible due to vegetation (typ.)

Inaccessible due to surface metal (typ.)

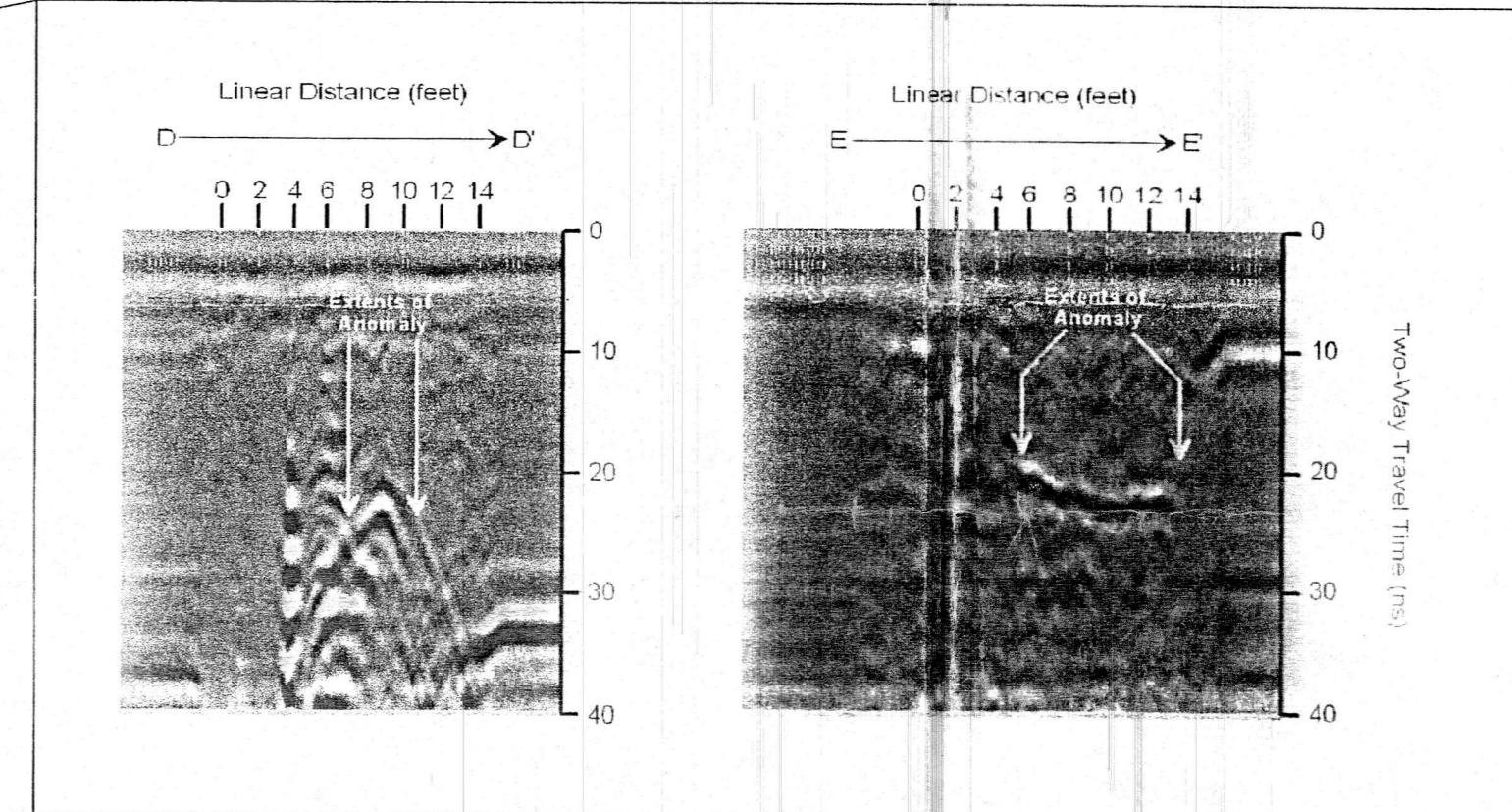
Enviroscan Survey Area



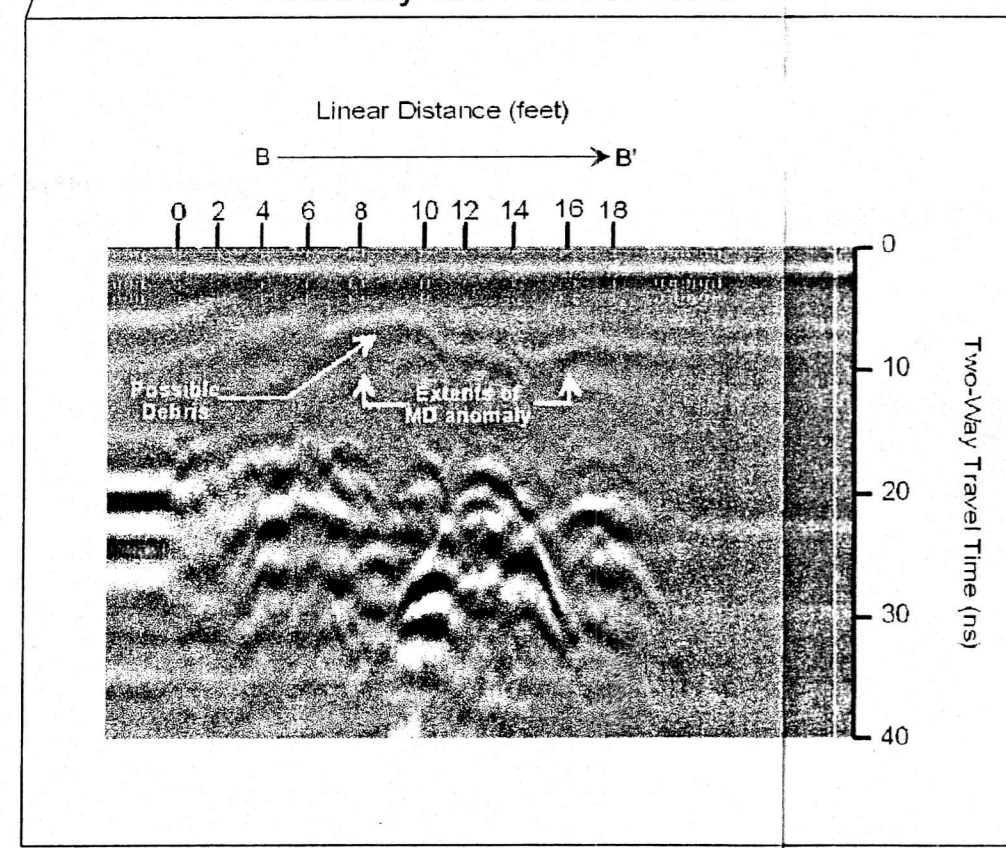
Anomaly SA 5 GPR Profile



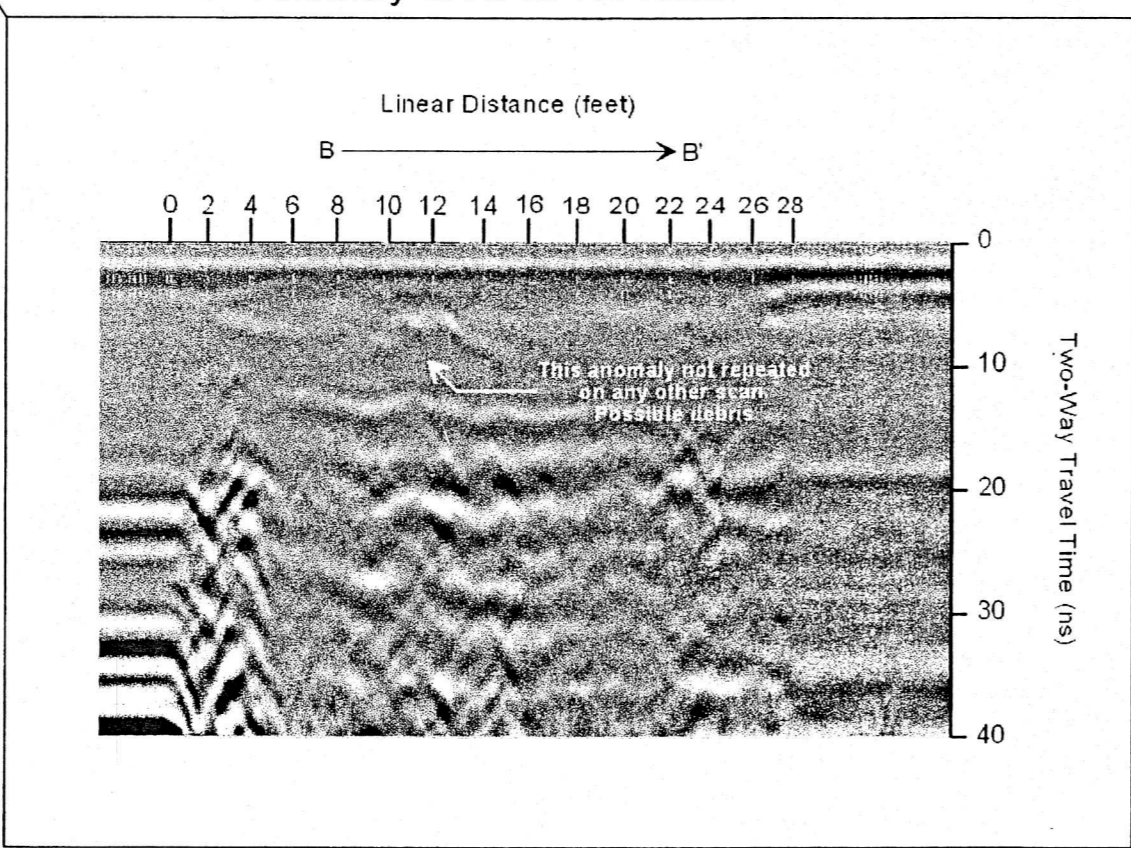
Anomaly SA 4 GPR Profile



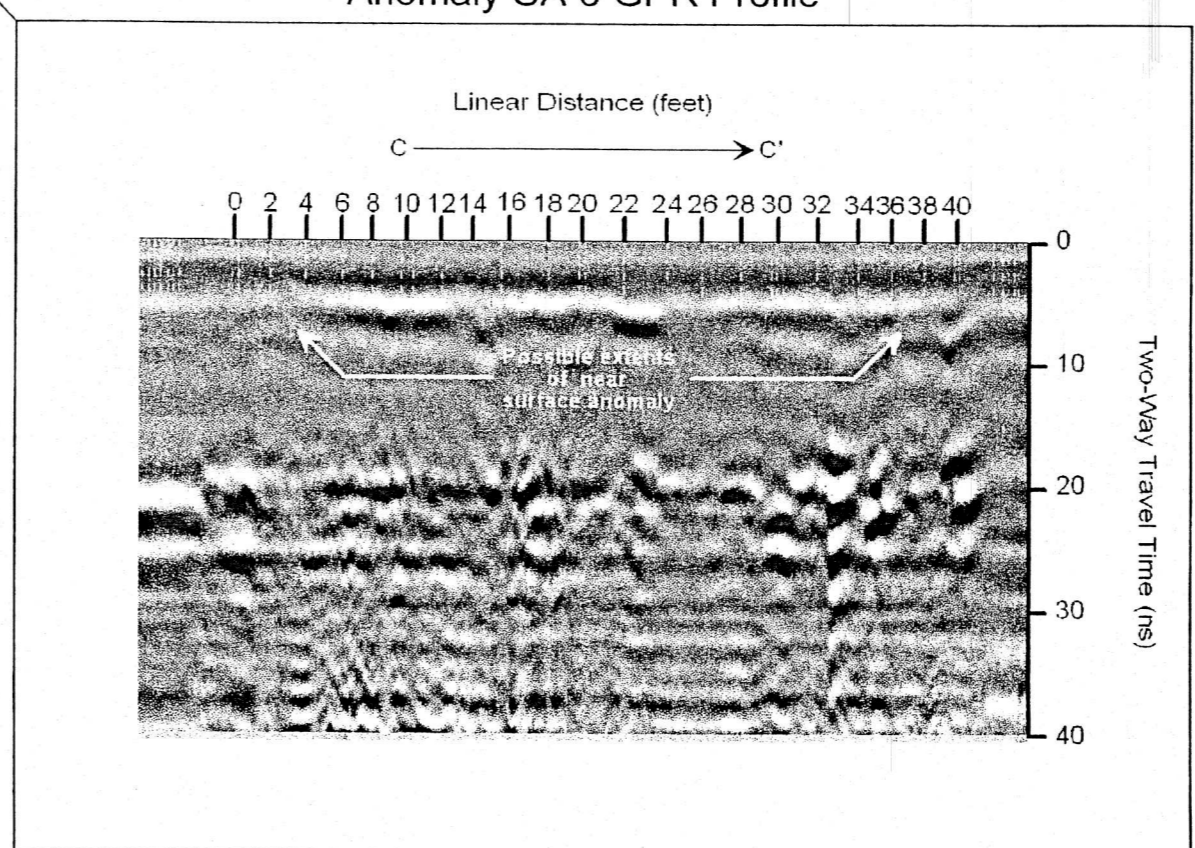
Anomaly SA 1 GPR Profile



Anomaly SA 3 GPR Profile



Anomaly SA 6 GPR Profile



General Notes

Coordinates in New York Central State Plane Grid, NAD 83 geodetic datum.
 Basemap "2003-04-08 Survey.dwg" supplied by S & W Redevelopment.
 Geophysical anomaly locations from DGPS survey by Enviroscan, Inc.
 GPR profiles from GSSI SIR-2000 instrument with a 500MHz transducer.

No.	Revision/Issue	Date

Prepared by:
Enviroscan, Inc.
 Lancaster, PA
 717-396-8922

Prepared for:
S & W Redevelopment
 Syracuse, NY

Project Name and Address
Geophysical Survey Results
 Salvation Army Site
 300 Block Burt Street
 Syracuse, NY

Project	090232a	Figure	1
Revision Date	6/23/03	Drawn by:	WES
Scale	1" = 30'	Approved by:	FKB

OUR ... are ... ng ... ar ... Metal Detection Follow-up Survey Results

Anomaly	Detected by TW-6 (MD)	Imaged with GPR	Metal Detection Anomaly Size (feet)	GPR Anomaly Size (feet)	Description
Salvation Army Site					
SA 1	YES	YES	8-foot diameter	same	Strong MD anomaly. GPR imaging showed disturbed subsurface with many small objects. Possible subsurface debris.
SA 2	YES	NO	6 X 8	N/A	No distinct GPR anomaly associated with MD anomaly. Possible subsurface debris.
SA 3	YES	NO	16 X 10	N/A	No distinct GPR anomaly associated with MD anomaly. Possible subsurface debris.
SA 4	YES	YES	7 x 3.5	same	Strong MD anomaly. GPR imaging showed anomaly with shape and amplitude consistent with e.g. a buried drum oriented with long axis vertical, or equidimensional debris.
SA 5	YES	YES	13 X 13	5 X 16	Strong MD anomaly. GPR imaging showed object with shape and amplitude consistent with UST.
SA 6	YES	NO	7 X 31	N/A	Weak MD anomaly. GPR imaging showed highly disturbed subsurface with no definable objects. Possible debris.
Andrews Lumber Site					
AN 1	YES	NO	9 X 9	N/A	Strong MD anomaly. GPR depth of investigation was effectively zero for this area, due to reinforced concrete pad above the anomaly.
AN 2	YES	YES	24 X 35 (approx.)	see notes	Moderately strong MD anomaly. GPR imaging showed highly disturbed subsurface with no definable objects. Possible debris pit.
AN 3	YES	YES	6 X 135	see notes	Strong MD anomaly. GPR imaging showed highly disturbed subsurface with no definable objects, and no distinction between anomalous areas and non-anomalous areas. Possible debris pit.
AN 4	YES	NO	90 X 10 (NW), 25 (SE)	see notes	Strong MD anomaly. GPR depth of investigation was effectively zero for this area, due to reinforced concrete pad above the anomaly.
AN 5	YES	NO	45 X 117	see notes	Entire parking area had highly elevated MD levels, and no GPR investigation depth. This is probably due to electrically conductive fill material used in the construction of the parking area.
AN 6	YES	NO	100 X 100	see notes	Entire parking area had highly elevated MD levels, and no GPR investigation depth. This is probably due electrically conductive fill material used in the construction of the parking area.
AN 7	YES	NO	15 X 30	see notes	Moderate to strong MD anomaly. GPR depth of investigation was effectively zero for this area, due to electrically conductive fill material used in construction of the driveway.

APPENDIX C

Site Survey

EAST TAYLOR STREET

EXISTING STREET BOUNDARY



N/F ONONDAGA COUNTY INDUSTRIAL DEVELOPMENT AGENCY (REPUTED OWNER) LIBER 3842, PAGE 257

S86°17'50"W
152.00'

S86°17'50"W
185.00'

N89°09'47"W
72.96'

S88°38'48"W
22.71'

N03°42'10"W
11.15'

N86°23'00"E
115.50'

N03°37'00"W
52.14'

N03°37'00"W
24.75'

S86°23'00"W
115.50'

N03°37'00"W
140.25'

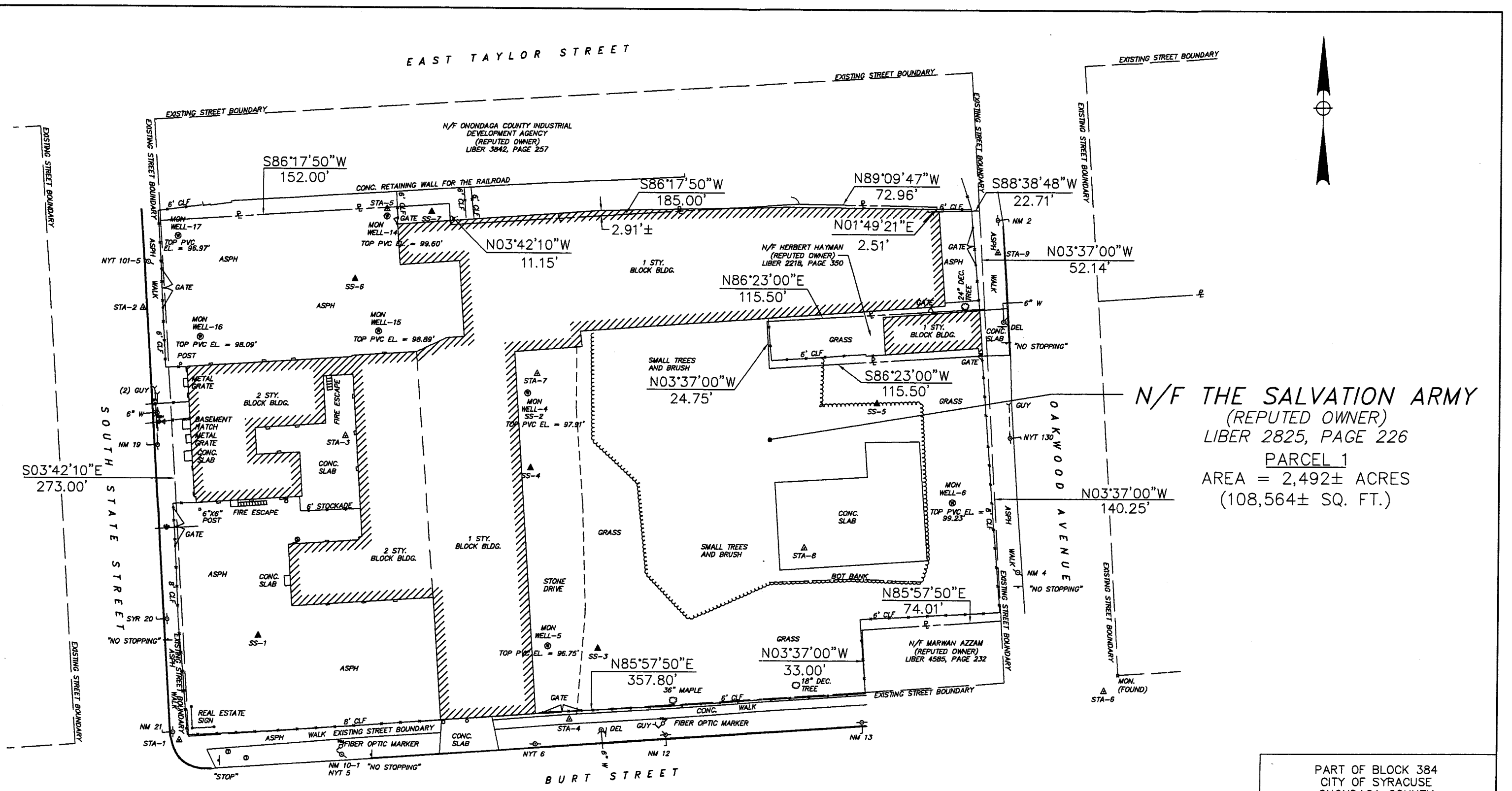
N85°57'50"E
357.80'

N03°37'00"W
33.00'

N85°57'50"E
74.01'

S03°42'10"E
273.00'

N/F THE SALVATION ARMY
(REPUTED OWNER)
LIBER 2825, PAGE 226
PARCEL 1
AREA = 2,492± ACRES
(108,564± SQ. FT.)

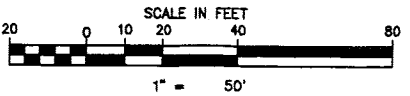


UTILITY NOTE
EXISTING UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE PLANS, RECORDS AND SURVEYS. THEIR LOCATION MUST THEREFORE BE CONSIDERED APPROXIMATE AND NO GUARANTEE IS MADE BY BRYANT ASSOCIATES, P.C. TO THE HORIZONTAL OR VERTICAL LOCATION OF SUCH FACILITIES, STRUCTURES AND UTILITIES. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY UNKNOWN. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL FACILITIES, STRUCTURES AND UTILITIES IN THE FIELD PRIOR TO COMMENCING WORK.

Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 7209, sub-division 2, of the New York State Education Law.

Only copies from the original of this survey marked with an original of the land surveyor's embossed seal shall be considered to be valid true copies.

SURVEY NOTE:
TOPOGRAPHIC SURVEY PERFORMED BY BRYANT ASSOCIATES, P.C. ON APRIL 7, 2003.



PART OF BLOCK 384
CITY OF SYRACUSE
ONONDAGA COUNTY

N/F THE SALVATION ARMY
(REPUTED OWNER)

FOR

SYRACUSE HOUSING AUTHORITY
REDEVELOPMENT

Bryant Associates
Engineers - Surveyors - Landscape Architects

APPENDIX D

**Asbestos Survey Report
(Envirologic, Inc, May 19, 2003)**



PRE-DEMOLITION ASBESTOS SURVEY REPORT

Former Salvation Army Building, Syracuse, NY



PREPARED FOR:

S & W Redevelopment of North America, LLC
430 East Genesee Street, Suite 401
Syracuse, NY 13202

PREPARED BY:

Envirologic of New York, Inc.
5858 East Molloy Road, Suite 146
Syracuse, New York 13211

Conducted: April 28-29, 2003
Submitted: May 19, 2003

Envirologic Project No. EL03B-47



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II	Methodologies	1
III	Summary of Findings	3
IV	Recommendations	6

APPENDIX A
Laboratory Analysis Reports & Sample Data Sheets

APPENDIX B
Certifications

APPENDIX C
Sample Locations

APPENDIX D
NYS DOL Building Demolition Survey – Minimum Sampling Guidelines

SECTION I – Project Overview

In accordance with a request made by S & W Redevelopment of North America, LLC, Envirologic of New York, Inc. completed a pre-demolition asbestos survey for the Former Salvation Army structure located on Burt Street, Syracuse, New York. The inspection was conducted in accordance with the requirements outlined in the New York State Department of Labor's (NYSDOL) asbestos standard (12 NYCRR Part 56) as specified in Subpart 56-1, Section 56-1.9 "Building Demolition Survey".

Inspection services were performed by Mr. Stephen J. Chalone (NYSDOL Certificate # AH 91-04967), Mr. David J. Wells (NYSDOL Certificate # AH 94-07554) and Mr. Brian Arlukiewicz (NYSDOL Certificate # AH 02-20087). Mr. Chalone and Mr. Wells are certified as Asbestos Inspectors by the New York State Department of Labor (NYSDOL).

Project services provided by Envirologic included the following:

1. Inspection of the subject structure by New York State Department of Labor (NYSDOL) certified asbestos inspectors;
2. Collection of bulk samples of suspect asbestos-containing materials and subsequent analysis by New York State Department of Health (NYSDOH) approved laboratories;
3. Preparation of this report.

SECTION II – Methodologies

Inspection Procedures:

The inspection was carried out in accordance with the requirements outlined in the New York State Department of Labor's (NYSDOL) asbestos standard (12 NYCRR Part 56) as specified in subpart 56-1.9(b)(2)(3) "Building Demolition Survey".

This section of the regulation states that in the absence of applicable building plans or records, the identification of asbestos or asbestos material shall be by the sampling and analysis of suspect material with analysis by a New York State Department of Health (NYSDOH) certified laboratory (see 56-1.9(b)(2)).

SECTION II – Methodologies (Continued)

Each area was thoroughly inspected by visual means to identify potential asbestos-containing materials (ACM). Inspection personnel assessed each suspect material to determine whether it represented a friable, non-friable or non-friable organically bound (NOB) material. These materials were then identified, quantified and sampled for subsequent laboratory analysis. Estimated quantities of potential ACM were obtained using measurements made in the field by inspection personnel.

NOTE: *Quantities of ACM are estimates only. Actual quantities should be field verified by abatement personnel when bids or quotations are obtained for asbestos removal services.*

Analytical Services:

Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) analytical services were performed by Envirologic of New York, Inc. (NYSDOH ELAP # 11555) and EMSL Analytical, Inc. of New York City (NYSDOH ELAP # 11506) (NVLAP #101048-9).

Friable bulk samples were analyzed using the Stratified Point Count Method with Polarized Light Microscopy and Dispersion Staining (PLM/DS) techniques. Samples were first examined for homogeneity and preliminary fiber identification using a low powered stereoscopic binocular microscope. Afterwards, positive identification of any asbestos fibers present is made using the Polarized Light Microscope.

To comply with New York State Department of Health (NYS-DOH) regulations, Non-Friable Organically Bound (NOB) materials (i.e. roofing membranes and adhesives) that are initially found to be non-asbestos containing by the PLM/DS method must be re-analyzed by the TEM method to confirm the PLM/DS results. Non-friable Organically Bound materials were first analyzed using Polarized Light Microscopy with Gravimetric Matrix Reduction (GMR). If no asbestos was detected utilizing PLM/GMR, the sample was then analyzed by TEM methods.

SECTION III – Summary of Findings

A total of fifty-two (52) samples were collected and analyzed for asbestos content. Materials identified as a result of the inspection completed by Envirologic, as confirmed by analytical testing, that were found to be asbestos containing, included the following:

MATERIAL	LOCATION	QUANTITY	CONDITION	REFERENCE SAMPLE #	
SECTION A					
9" x 9" floor tiles, red & green checkered pattern (including black perimeter floor tile and associated felt paper/mastic)	Building Section A – 2nd Floor				
	♦ Map location 2-1.....	1,184 sq.ft.	Fair	EL03B47-1	
	♦ Map location 2-3.....	63 sq.ft.	Fair	EL03B47-2	
	♦ Map location 2-4.....	72 sq.ft.	Fair	EL03B47-3	
	♦ Map location 2-5.....	117 sq.ft.	Fair	EL03B47-8	
	♦ Map location 2-6.....	90 sq.ft.	Fair		
	♦ Map location 2-9.....	72 sq.ft.	Fair		
	♦ Map location 2-13.....	750 sq.ft.	Fair		
Ceiling Material	Building Section A – 2nd Floor				
	♦ Map location 2-13.....	750 sq.ft.	Fair	EL03B47-10	
12" x 12" floor tiles, brown & tan checkered pattern (floor tile only)	Building Section A – 1st Floor				
	♦ Map location 1-1.....	144 sq.ft.	Fair	EL03B47-13	
	♦ Map location 1-3.....	800 sq.ft.	Fair		
	♦ Map location 1-4.....	91 sq.ft.	Fair		
	♦ Map location 1-5.....	204 sq.ft.	Fair		
	♦ Map location 1-6.....	91 sq.ft.	Fair		
	♦ Map location 1-7.....	144 sq.ft.	Fair		
	♦ Map location 1-8.....	450 sq.ft.	Fair		
	♦ Map location 1-10.....	60 sq.ft.	Fair		
	♦ Map location 1-11.....	136 sq.ft.	Fair		
	♦ Map location 1-12.....	117 sq.ft.	Fair		
	♦ Map location 1-13.....	124 sq.ft.	Fair		
	9" x 9" floor tiles, brown & butterscotch checkered pattern (including associated mastic)	Building Section A – 1st Floor			
♦ Map location 1-18, under carpet.....		35 sq.ft.	Fair		EL03B47-20 EL03B47-21 EL03B47-22
♦ Map location 1-14, under carpet.....		680 sq.ft.	Fair		
Aircell type pipe insulation & associated fitting insulation	Building Section A – Bsmt & 1st Floor				
	♦ Map location 1-17, floor level.....	1 lf	Poor	Previously Sampled	
	♦ Basement, throughout.....	120 lf	Poor		
Tank Insulation (3' x 8')	Building Section A – 1st Floor				
	♦ Basement, center room.....	~100 sq.ft.	Poor	Previously Sampled	
SECTION B					
Felt Paper, black	Building Section B – 2nd Floor				
	♦ Throughout entire floor, (under hardwood floor) Map locations 2-1 to 2-8.....	2,868 sq.ft.	Fair	EL03B47-24	
9" x 9" floor tiles, dark brown & mastic	Building Section B – 1st Floor				
	♦ Map location 1-3.....	25 sq.ft.	Poor	EL03B47-28 EL03B47-29	
Mastic, black (under 12" x 12" white floor tiles)	Building Section B – 1st Floor				
	♦ Map location 1-2.....	60 sq.ft.	Fair	EL03B47-27	

Note: lf = linear feet ea = each sq.ft. = square feet

SECTION III – Summary of Findings (Continued)

MATERIAL	LOCATION	QUANTITY	CONDITION	REFERENCE SAMPLE #
SECTION C				
Linoleum, brown & tan checkered pattern	<u>Building Section C – 2nd Floor</u>			
	♦ Map location 2-10.....	247 sq.ft.	Fair	EL03B47-23
	♦ Map location 2-11.....	264 sq.ft.	Fair	
	♦ Map location 2-12.....	256 sq.ft.	Fair	
	♦ Map location 2-13.....	272 sq.ft.	Fair	
	♦ Map location 2-17.....	276 sq.ft.	Fair	
SECTION G				
9" x 9" floor tiles, dark brown & light brown checkered pattern (including black perimeter floor tile and associated mastic & a layer of tile under a wood layer found under the above mentioned materials)	<u>Building Section G – 1st Floor</u>			
	♦ Map location 1-26.....	160 sq.ft.	Fair	EL03B47-32 EL03B47-33 EL03B47-34 EL03B47-35
♦ Map location 1-27.....	225 sq.ft.	Fair		
Mastic (from under 12" x 12" tan floor tiles)	<u>Building Section G – 1st Floor (hall)</u>			
	♦ Map location 1-28.....	230 sq.ft.	Fair	EL0347-38
♦ Map location 1-33.....	105 sq.ft.	Fair		
Mastic Pucks (associated w/1' x 1' ceiling tiles) * The quantities reported are for the amount of ceiling tiles in each area. The actual mastic pucks are ~ ¼ of these measurements.	<u>Building Section C – 1st Floor</u>			
	♦ Map location 1-26.....	160 sq.ft.	Poor	EL03B47-39
	♦ Map location 1-27.....	225 sq.ft.	Poor	
	♦ Map location 1-28.....	230 sq.ft.	Poor	
	♦ Map location 1-30.....	127 sq.ft.	Poor	
	♦ Map location 1-31.....	46 sq.ft.	Poor	
	♦ Map location 1-33.....	105 sq.ft.	Poor	
	♦ Map location 1-35.....	124 sq.ft.	Poor	
♦ Map location 1-36.....	185 sq.ft.	Poor		
12" x 12" dark tan floor tiles (tiles only)	<u>Building Section G – 1st Floor</u>			
	♦ Map location 1-28a.....	56 sq.ft.	Fair	EL03B47-45
Transite Vent Pipe *penetrates the roof	<u>Building Section G – attic</u>			
	♦ Map location 1-23.....	3 lf	Fair	EL03B47-58

Note: lf = linear feet ea = each sq.ft. = square feet

SECTION III – Summary of Findings (Continued)

MATERIAL	LOCATION	QUANTITY	CONDITION	REFERENCE SAMPLE #
ROOFING MATERIALS				
Roof Flashing Material	Building Section A – Breezeway Roof ♦ Map location R-4.....	55 sq.ft.	Fair	EL03B47-66
Roofing Materials (rolled roofing and associated felt paper)	Building Section A – Courtyard Roof ♦ Map location R-3.....	135 sq.ft.	Fair	EL03B47-61 EL03B47-62
Roofing Material	Building Section B – roof (R5 & R6) ♦ Throughout, found under a rubber membrane roof.....	3,325 sq.ft.	Fair	EL03B47-47 EL03B47-49
Roof Flashing Material	Building Section B – roof (R5 & R6) ♦ Throughout, found under a rubber membrane roof.....	1,040 sq.ft.	Fair	EL03B47-51
Roofing Material	Building Section C – roof (R7) ♦ Throughout, found under a rubber membrane roof.....	2,625 sq.ft.	Fair	EL03B47-47 EL03B47-49
Roof Flashing Material	Building Section C – roof (R7) ♦ Throughout, found under a rubber membrane roof.....	880 sq.ft.	Fair	EL03B47-51
Roof Flashing Material	Building Section D – roof (R8) ♦ Throughout, perimeter of roof.....	500 sq.ft.	Fair	EL03B47-57
Roofing Material	Building Section F – roof (R11) ♦ Loading Dock Roof, throughout.....	525 sq.ft.	Fair	EL03B47-59
* Transite Vent Pipe	Building Section F – on roof (R12) ♦ NW area.....	4 lf	Fair	EL03B47-58

Note: lf = linear feet ea = each sq.ft. = square feet

The numbers in parentheses in the above tables are the area locations found on the project drawings.

Additional materials identified as a result of the inspection completed by Envirologic, as confirmed by analytical testing, that were found to be *non-asbestos containing*, included the following:

- ♦ Plaster
- ♦ Mastic on Ceramic Tiles
- ♦ Various Linoleum
- ♦ Various Roofing Materials
- ♦ Window Caulk/Glazing
- ♦ Drywall
- ♦ Various Ceiling Tiles
- ♦ Various Adhesives

Note: Non-Friable Organically Bound (NOB) materials listed above were confirmed to be non-asbestos containing as by means of Transmission Electron Microscopy (TEM) testing.

SECTION III – Summary of Findings (Continued)

All asbestos-containing materials identified as a result of inspection services, provided by Envirologic, can be found in the tables above. All materials were observed to be in poor to good condition at the time of the inspection.

The pipe insulation and associated fitting insulation were in poor condition at the time of the inspection. Primarily, this material was found in the basement of Section A, but a small piece was located on the first floor in space ID# 1-17. Additional insulation may be present in the walls or floors of the structure that was not accessed during the survey. The insulation was not sampled as part of this inspection, because it was previously sampled and found to be asbestos containing. Asbestos containing felt paper was found under the wood floor throughout the second floor of Section B. This material was not found in the stairwell or in the elevator area. The 9" x 9" dark brown & light brown checkered pattern floor tiles found in Section G are situated on black mastic which is in turn on a layer of wood. Under this layer of wood is an additional layer of the same floor tile and non-asbestos containing felt paper under that.

If, in the event that suspect materials are identified during demolition, and these materials were not recognized in the survey, additional samples should be collected and analyzed for asbestos content.

SECTION IV - Recommendations

Introduction:

Asbestos-containing materials (ACM) are divided into three (3) categories by the Environmental Protection Agency (EPA) under the Asbestos Hazard Emergency Response Act (AHERA). Although this legislation only pertains to primary and secondary schools, it is widely referenced when organizing a management plan for the maintenance of ACM in buildings. The three categories of ACM used in buildings are as follows:

Thermal System Insulation

As the name suggests, these materials are limited to thermal applications. Examples of these materials include pipe insulation, pipe fitting insulation, boiler or furnace insulation and various gasket materials.

SECTION IV – Recommendations (Continued)

Surfacing Materials

Surfacing materials refers to those materials, which are either sprayed or troweled onto a surface. Examples of surfacing materials include wall or ceiling plaster and fireproofing insulation.

Miscellaneous

All asbestos-containing materials found in buildings, which do not fall into the categories above, are considered to be miscellaneous materials. These materials include, but are not limited to, floor covering, adhesives, ceiling tiles and certain types of paneling (i.e. transite or galbestos panels). In addition, ACM can also be divided into two other classifications based on the likelihood of fiber release into the surrounding atmosphere (Friable vs. Non-Friable).

Friable Materials:

The materials that pose the greatest risk of airborne fiber release are friable materials. Friable materials are those materials, which can be crushed or pulverized, when dry, by hand pressure. These materials include, but are not limited to, pipe and pipe fitting insulation, boiler and hot water insulation, sprayed-on insulation (such as fireproofing) and troweled-on materials (such as decorative ceiling plaster). Particular attention should be paid to those materials that have been identified as in fair or poor condition. Since these materials are most likely to generate fiber release, and therefore pose the greatest risk of worker contamination, it is highly recommended that remedial action be implemented.

Non-friable Materials:

Non-friable materials are those materials that do not readily release fibers into the atmosphere since the fibers are locked within the matrix of the material. Examples of non-friable materials include floor tiles, linoleum, and adhesive-like materials such as mastics and roofing materials. Although these materials pose less of a risk to worker safety, they should still be taken seriously and properly maintained. It is important to realize that any ACM, when improperly or carelessly treated, poses a potential health risk.

SECTION IV – Recommendations (Continued)

Typical Remedial Measures:

Listed below are the four (4) most common remedial actions generally available to prevent or limit the release of asbestos fibers from ACM.

- 1) **Implementation of an Operations & Maintenance (O&M) program:** Under this response action, a set of standard operating procedures is developed for use by in-house maintenance personnel. These procedures are developed to assist designated personnel in the clean-up of fibers previously released and to limit the potential for future asbestos exposure by instituting preventative measures (i.e. personnel training, material repairs, special clean-up procedures, etc.).
- 2) **Encapsulation:** Utilization of this remedial action is intended to limit potential fiber release by chemical means. This is accomplished by creating an impermeable barrier between the material and the environment with a bridging encapsulant, or by using a penetrating encapsulant which binds the material and its fibers together in a hard matrix.
- 3) **Enclosure:** Enclosure of asbestos consists of constructing a permanent, physical, airtight impermeable barrier between the ACM and the environment. This is accomplished using material such as cement block, gypsum board, tongue and groove or spline jointed plywood, etc.
- 4) **Removal:** Removal of asbestos is the process by which ACM is stripped from its underlying substrate. Removal must be completed in a controlled manner to prevent building contamination. When completed properly, removal of ACM offers a permanent solution to the ACM problem by eliminating the material. However, removal can be very costly and time consuming. When done improperly, removal can result in significant contamination of a building or area and dramatically increase the potential for building occupants exposure to airborne asbestos fibers.

Determining an appropriate remedial action is typically based on a hazard assessment which is prepared for ACM identified as a result of a completed building survey. These hazard assessments are generally based on several factors including the following:

- Whether or not the material is friable
- The condition of the material (e.g. poor, fair, good)
- The potential for disturbance of the material
- Activity in the area of the material (e.g. manufacturing processes, air current, etc.)
- Whether or not the area where the material is located is occupied

SECTION IV – Recommendations (Continued)

In the present case, because the subject property is scheduled for demolition, acceptable remedial response actions are limited to removal, unless a site specific variance is obtained from the New York State Department of Labor. Section 56-1.9(e) of 12 NYCRR Part 56 requires that in the event a building to be demolished contains asbestos or asbestos material, no bids shall be advertised nor contracts awarded nor demolition work commenced by any owner or agent prior to completion of an asbestos remediation performed by a licensed asbestos contractor.

Section 56-1.9(d) requires that the information derived from the building survey shall be immediately transmitted to the commissioner through the Department's Division of Safety and Health, Asbestos Control Bureau, and to the local government entity charged with issuing a permit for such demolition under applicable state or local laws, or if no permit is required, to the town or city clerk where the building is located.

A copy of the survey report should be forwarded to the commissioner at the following address:

Commissioner
State of New York
Department of Labor
Division of Safety and Health
450 South Salina Street
Syracuse, New York 13202-2402

Attn: Mr. Daniel Coyle
Sr. Industrial Hygienist

Phone #: (315) 479-3215

It will be necessary to retain a NYSDOL Licensed Asbestos Abatement Contractor to perform the remedial activities in accordance with applicable local, state and federal regulations.

Any questions regarding the information contained in this report should be directed to Mr. Stephen J. Chalone at **(315) 455-2714**.

Sincerely,

ENVIROLOGIC OF NEW YORK, INC.


Stephen J. Chalone
Technical Services Manager

attachments

Appendix A
**Laboratory Analysis Reports &
Sample Data Sheets**



Asbestos Bulk Sampling Analysis Report
Analyzed in accordance with
N.Y. State ELAP 198.1 & 198.4 Methods
NYSDOH ELAP #11555

Client: S & W Redevelopment, 430 East Genesee St. Ste 401, Syracuse, NY 13202
Project Location: Former Salvation Army
Project Number: EL03B-47
Client Contact: Don Sorbello
Phone Number: 315-422-4949

Report Number: 70
Date Sampled: 4-28-03
Date Received: 4-28-5-1-03
Date Analyzed: 4-30-5-1-03
Date Reported: 5-2-03

Summary: On April 28, 2003, our representative, David Wells, collected the following samples in accordance with all applicable state and federal regulations.

Sample ID	Sample Location	Asbestos Type	Percent Asbestos	Total Asbestos	Organic/Fibrous	Percent	Inorganic/Non-Fibrous	Percent	Color	Uniformity Friable/Non	Lab Id
1	Room 2-1 Red 9x9 Floor tile	<i>Chrysotile</i>	<i>14.29%</i>	<i>14.29%</i>	<i>Organic Material</i>	<i>28.57%</i>	<i>Inorganic Material</i>	<i>47.14%</i>	<i>Red</i>	<i>Uniform NOB</i>	<i>378 PLM ONLY</i>
2	Room 2-1 Green 9x9 Floor tile	<i>Chrysotile</i>	<i>12.50%</i>	<i>12.50%</i>	<i>Organic Material</i>	<i>25.00%</i>	<i>Inorganic Material</i>	<i>62.50%</i>	<i>Green</i>	<i>Uniform NOB</i>	<i>379 PLM ONLY</i>
3	Room 2-1 Black Felt Paper Mastic under 9x9 tile	<i>Chrysotile</i>	<i>10.61%</i>	<i>10.61%</i>	<i>Organic Material</i>	<i>57.58%</i>	<i>Inorganic Material</i>	<i>31.81%</i>	<i>Black</i>	<i>Uniform NOB</i>	<i>380 PLM ONLY</i>
4A	Room 2-1 Wall Plaster Skim Coat	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	White	Uniform Friable	381A
5A	Room 2-1 Wall Plaster Brown Coat	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	Brown	Uniform Friable	382A
6A	Room 2-1 Ceiling Plaster Skim Coat	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	White	Uniform Friable	383A
7A	Room 2-7 Ceiling Plaster Brown Coat	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	Brown	Uniform Friable	384A
8	Room 2-1 Black Floor Tile Border	<i>Chrysotile</i>	<i>6.74%</i>	<i>6.74%</i>	<i>Organic Material</i>	<i>30.23%</i>	<i>Inorganic Material</i>	<i>63.03%</i>	<i>Black</i>	<i>Uniform NOB</i>	<i>385 PLM ONLY</i>
9	Room 2-7 Brown Mastic Behind Black Ceramic Tile on Wall	Chrysotile	Trace	Trace	Organic Material	50.00%	Inorganic Material	50.00%	Brown	Uniform NOB	386 PLM & TEM
10	Room 2-13 Textured Paint on Ceiling	<i>Chrysotile</i>	<i>5.00%</i>	<i>5.00%</i>	<i>Fibrous Material</i>	<i>None Detected</i>	<i>Non-Fibrous Material</i>	<i>95.00%</i>	<i>White</i>	<i>Uniform Wavy Friable</i>	<i>387</i>
11	Room 2-10 Sheetrock Wall	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	White	Uniform Friable	388

bold and italic font are used to denote asbestos quantities of over 1.00%.

EM analysis was performed by ELAP # 11506.
 Sample contains a paper backing that is 100% cellulose.
 *** Sample contains a layer of paint.

PLM = Polarized Light Microscopy
 TEM = Transmission Electron Microscopy
 NOB = Non-friable Organically Bound Material
 Trace = Less than 1.00%
 NA = Not Applicable

Envirologic of New York, Inc.
Asbestos Bulk Sample Analysis Report
NYS DOH ELAP #11555

Client: S & W Redevelopment
 Project Location: Former Salvation Army

Project #: EL03B-47
 Report # 70

Sample ID	Sample Location	Asbestos Type	Percent Asbestos	Total Asbestos	Organic/Fibrous	Percent	Inorganic/Non-Fibrous	Percent	Color	Uniformity Friable/Non	Lab ID
12	Room 1-1 12x12 Floor Tile	Chrysotile	Trace	Trace	Organic Material	22.22%	Inorganic Material	73.78%	Brown	Uniform NOB	389 PLM & TEM
13	Room 1-1 12x12 Floor Tile	Chrysotile	35.00%	35.00%	Organic Material	37.50%	Inorganic Material	27.50%	Tan	Uniform NOB	390 PLM & TEM
14	Room 1-1 Mastic Under 12x12 Tile	Chrysotile	Trace	Trace	Organic Material	84.85%	Inorganic Material	15.15%	Black	Uniform NOB	391 PLM & TEM
15	Room 1-1 2x4 Ceiling Tile Fissured	None Detected	None Detected	None Detected	Cellulose Fiberglass	55.00% 45.00%	Non-Fibrous Material	None Detected	White	Uniform St/Ribbon Friable	392
16	Room 1-3 2x4 Ceiling Tile Omni	None Detected	None Detected	None Detected	Cellulose Fiberglass	25.00% 75.00%	Non-Fibrous Material	None Detected	White	Uniform St/Ribbon Friable	393
17	Room 1-12 2x2 Ceiling Tile Fissured	None Detected	None Detected	None Detected	Cellulose Fiberglass	55.00% 45.00%	Non-Fibrous Material	None Detected	White	Uniform St/Ribbon Friable	394
4B	Room 1-6 Wall Plaster Skim Coat	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	White	Uniform Friable	381B
5B	Room 1-6 Wall Plaster Brown Coat	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	Brown	Uniform Friable	382B
18	Room 1-11 2x2 Ceiling Tile Smooth	None Detected	None Detected	None Detected	Cellulose Fiberglass	25.00% 75.00%	Non-Fibrous Material	None Detected	White	Uniform St/Ribbon Friable	395
19	Room 1-17 Linoleum Over Mesh	None Detected	None Detected	None Detected	Organic Material	68.97%	Inorganic Material	30.03%	Red/ Black	Uniform NOB	396 PLM & TEM
20	Room 1-18 9x9 Floor Tile	Chrysotile	19.00%	19.00%	Organic Material	24.00%	Inorganic Material	57.00%	Brown	Uniform NOB	397 PLM ONLY
21	Room 1-18 9x9 Floor Tile	Chrysotile	7.57%	7.57%	Organic Material	24.32%	Inorganic Material	68.11%	Butter- scotch	Uniform NOB	398 PLM ONLY
22	Room 1-18 Black Mastic Under 9x9 Tile	Chrysotile	1.60%	1.60%	Organic Material	72.00%	Inorganic Material	26.40%	Black	Uniform NOB	399 PLM ONLY
23	Room 2-12 Checked Linoleum	Chrysotile	10.00%	10.00%	Organic Material	40.00%	Inorganic Material	50.00%	Brown & Tan	Uniform NOB	400 PLM ONLY
4C	Room 2-12 Wall Plaster Skim Coat	None Detected	None Detected	None Detected	Cellulose	Trace	Non-Fibrous Material	100.00%	White	Uniform Ribbon Friable	381C
5C	Room 2-12 Wall Plaster Brown Coat	None Detected	None Detected	None Detected	Fibrous Material	None Detected	Non-Fibrous Material	100.00%	Brown	Uniform Friable	382C



Asbestos Bulk Sampling Analysis Report
Analyzed in accordance with
N.Y. State ELAP 198.1 & 198.4 Methods
NYSDOH ELAP #11555

Client: S & W Redevelopment, 430 East Genesee St. Ste 401, Syracuse, NY 13202
Project Location: Former Salvation Army
Project Number: EL03B-47
Client Contact: Don Sorbello
Phone Number: 315-422-4949

Report Number: 71
Date Sampled: 4-29-03
Date Received: 4-29-5-1-03
Date Analyzed: 4-30-5-1-03
Date Reported: 5-2-03

Summary: On April 29, 2003, our representative, David Wells, collected the following samples in accordance with all applicable state and federal regulations.

Sample ID	Sample Location	Asbestos Type	Percent Asbestos	Total Asbestos	Organic/Fibrous	Percent	Inorganic/Non-Fibrous	Percent	Color	Uniformity Friable/Non	Lab Id
47	South Section Field-Under Rubber Roof Top Layer Built Up	Chrysotile	4.46%	3.46%	Organic Material	82.14%	Inorganic Material	13.40%	Black	Uniform NOB	424 PLM ONLY
48	South Section Roof Field-Under Rubber Roof 2nd Layer - Insulation	None Detected	None Detected	None Detected	Cellulose	95.00%	Non-Fibrous Material	5.00%	Brown	Uniform Ribbon Friable	425
49	South Section Field-Under Rubber Roof 3rd Layer Built-up	Chrysotile	3.20%	3.20%	Organic Material	77.42%	Inorganic Material	19.38%	Black	Uniform NOB	426 PLM & TEM
50	South Section Roof Field-Under Rubber Roof Bottom Layer - Paper Ins.	None Detected	None Detected	None Detected	Cellulose	100.00%	Non-Fibrous Material	100.00%	Brown	Uniform Ribbon Friable	427
51	South Section Roof Field-Under Rubber Roof Roof Flashing	Chrysotile	10.24%	10.24%	Organic Material	63.41%	Inorganic Material	26.35%	Black	Uniform NOB	428 PLM ONLY
52	Warehouse Roof - South Built-up Top Layer Built Up	None Detected	None Detected	None Detected	Organic Material	87.50%	Inorganic Material	12.50%	Black	Uniform NOB	429 PLM & TEM
53	Warehouse roof - South Bottom Layer Felt Tape	Chrysotile	Trace	Trace	Organic Material	72.22%	Inorganic Material	27.78%	Black	Uniform NOB	430 PLM & TEM
54	Warehouse Roof - South Roof Flashing	Chrysotile	Trace	Trace	Organic Material	65.22%	Inorganic Material	34.78%	Black	Uniform NOB	431 PLM & TEM
55	Center Roof Top Layer Rolled Roofing	Chrysotile	Trace	Trace	Organic Material	90.48%	Inorganic Material	9.52%	Black	Uniform NOB	432 PLM & TEM
56	Center Roof Bottom Layer Insulation	None Detected	None Detected	None Detected	Cellulose	100.00%	Non-Fibrous Material	None Detected	Brown	Uniform Ribbon Friable	433
57	Center Roof Roof Flashing	Chrysotile	7.00%	7.00%	Organic Material	76.67%	Inorganic Material	16.33%	Black	Uniform NOB	434 PLM ONLY

Bold and italic font are used to denote asbestos quantities of over 1.00%.

EM analysis was performed by ELAP # 11480.
 Sample contains a paper backing that is 100% cellulose.
 --- Sample contains a layer of paint.

PLM = Polarized Light Microscopy
 TEM = Transmission Electron Microscopy
 NOB = Non-friable Organically Bound Material
 Trace = Less than 1.00%
 NA = Not Applicable

Envirologic of New York, Inc.
Asbestos Bulk Sample Analysis Report
NYS DOH ELAP #11555

Client: S & W Redevelopment
 Project Location: Former Salvation Army

Project #: EL03B-47
 Report # 71

Sample ID	Sample Location	Asbestos Type	Percent Asbestos	Total Asbestos	Organic/Fibrous	Percent	Inorganic/Non-Fibrous	Percent	Color	Uniformity Friable/Non-Friable	Lab ID
58	Warehouse Roof Northeast Transite - Attic Fan Vent	Chrysotile	30.00%	30.00%	Fibrous Material	None Detected	Non-Fibrous Material	70.00%	Gray	Uniform Wavy Friable	435
59	Loading Dock Roof Top Layer Rolled Roofing	Chrysotile	1.38%	1.38%	Organic Material	58.62%	Inorganic Material	40.00%	Black	Uniform NOB	436 PLM ONLY
60	Loading Dock Roof Bottom Layer Insulation	None Detected	None Detected	None Detected	Cellulose	100.00%	Non-Fibrous Material	None Detected	Brown	Uniform Ribbon Friable	437
61	NW office Section Courtyard Roof Top Layer-Rolled Roof	Chrysotile	1.28%	1.28%	Organic Material	76.92%	Inorganic Material	21.80%	Black	Uniform NOB	438 PLM ONLY
62	NW office Section Bottom Layer Felt paper	Chrysotile	1.03%	1.03%	Organic Material	93.10%	Inorganic Material	5.87%	Black	Uniform NOB	439 PLM ONLY
63	Breezeway Asphalt Shingle Siding	None Detected	None Detected	None Detected	Organic Material	50.00%	Inorganic Material	50.00%	Gray	Uniform NOB	440 PLM & TEM
64	Breezeway Felt Paper Under Shingle Siding	None Detected	None Detected	None Detected	Organic Material	95.00%	Inorganic Material	5.00%	Black	Uniform NOB	441 PLM ONLY
65	Breezeway Built-up Roof and Insulation	None Detected	None Detected	None Detected	Organic Material	100.00%	Inorganic Material	None Detected	Black	Uniform NOB	442 PLM ONLY
66	Breezeway Roof Flashing	Chrysotile	7.50%	7.50%	Organic Material	58.33%	Inorganic Material	34.17%	Black	Uniform NOB	443 PLM ONLY

Bold and italic font are used to denote asbestos quantities of over 1.00%.

* TEM analysis was performed by ELAP # 11480.

** Sample contains a paper backing that is 100% cellulose.

** Sample contains a layer of paint.

PLM = Polarized Light Microscopy

TEM = Transmission Electron Microscopy

NOB = Non-friable Organically Bound Material

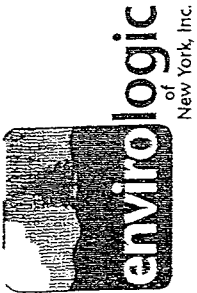
Trace = Less than 1.00%

NA = Not Applicable



Approved By: Valerie Lare
 Technical Director - Envirologic of New York, Inc.

Disclaimer: Polarized light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials (NOBs). Quantitative transmission electron microscopy is currently the only method that can be used to determine if materials can be considered or treated as non-asbestos containing. Thus, it is recommended that NOB samples found to be negative by polarized light microscopy are analyzed using transmission electron microscopy for definite results. The analytical results presented in this report and the laboratory procedures used are considered to be accurate and reliable for the samples analyzed. This report may not be duplicated without the approval of Envirologic of New York, Inc., and then only in full. Envirologic's liability is limited to the cost of the analysis.



Bulk Sample Log / Chain of Custody

PROJECT #: EL02B-47

LAB REPORT #: 70

5858 East Molloy Road, Suite 146 • Syracuse, New York 13211-2013 • Telephone (315) 455-2714 • Fax (315) 455-3022

Project Name/City/Project Info: Selveton Army Client Name: StW Redevelopment Contact: _____
 Date: 4-28-03 Client phone #: _____ Client fax #: _____
 Hygienist: D.Wells / S.Chelone

Sample Number	Lab ID	Sample Location	Sample Description	Sample Type	Quantity
1	378	RM 2-1 Red 9x9 Fl tile		NOB	+
2	379	" Green 9x9 Fl tile		"	+
3	380	" Black Felt Paper/Mastic under 9x9 tile		"	+
4A	381A	RM 2-1 Wall Plaster Skim Coat		F	-
5A	382A	" " Brown Coat		"	-
6A	383A	RM 2-1 Ceiling Plaster Skim Coat		"	-
7A	384A	" " Brown Coat		"	-
8	385	RM 2-1 Black Floor tile border Border		NOB	+
9	386	RM 2-7 BROWN MASTIC Behind Black Ceramic tile on Wall		"	-
10	387	RM 2-13 Textured Paint on ceiling		F	+
11	388	RM 2-10 Sheetrock - (Wall)		"	-
12	389	RM 1-1 Brown 12x12 Fl tile		NOB	-
13	390	" Tan 12x12 Fl tile		"	-
14	391	" Black Mastic under 12x12 tile		"	-

Sample Type: F = Friable NF = Non-Friable NOB = Non-Friable Organically Bound

Chain of Custody	Print Name	Sign Name	Date	Time
Sampled By:	D.Wells	<i>D.Wells</i>	4-28-03	3:45pm
Relinquished By:	D.Wells	<i>D.Wells</i>	4-28-03	3:45pm
Received at Lab By:	Vee / Leat	<i>Vee Jue</i>	4-28-03	1:10pm
Turnaround Time:	RUSH (Specify):	24 Hour	48 Hour	72 Hour

By signing above, I acknowledge that the data recorded on this form was collected by accurately following air-sampling procedures outlined in NYS/DOL Industrial Code Rule 56 (12 NYCRR Part 56, Subpart 56-17) and all other applicable state and federal regulations.



Bulk Sample Log / Chain of Custody

PROJECT #: EL02B-47

LAB REPORT #: 70

5858 East Molloy Road, Suite 146 • Syracuse, New York 13211-2013 • Telephone (315) 455-2714 • Fax (315) 455-3022

Project Name/City/Project Info: Salvation Army Client Name: S+W Redevelopment Contact: _____
 Date: 4-28-03 Hygienist: D. Wells / S. Chalone Client fax #: _____

Sample Number	Lab ID	Sample Location	Sample Description	Sample Type	Quantity
15	392	RM 1-1	2x4 white ceiling tile - fissured	F	
16	393	RM 1-3	2x4 white ceiling tile - OMNI	"	
17	394	RM 1-12	2x2 white ceiling tile - fissured	F	
18	395	RM 1-6	Wall plaster skim coat	F	
19	396	RM 1-17	Red/black linoleum over mesh	NOB	Count down
20	397	RM 1-18	9x9 brown fl tile	"	+
21	398	"	9x9 butterscotch fl tile	"	+
22	399	"	black mastic under 9x9 tile	"	+
23	400	RM 2-12	Brown + tan checked linoleum	NOB	+
44C	381C	"	Wall plaster skim coat	F	
5C	382C	"	Wall plaster brown coat	"	

Sample Type: F = Friable NF = Non-Friable NOB = Non-Friable Organically Bound

Chain of Custody	Print Name	Signature	Date	Time
Sampled By:	D. Wells	<i>[Signature]</i>	4-28-03	3:45pm
Relinquished By:	D. Wells	<i>[Signature]</i>	4-28-03	3:45pm
Received at Lab By:	Val Fair	<i>[Signature]</i>	4-28-03	4:00pm
Turnaround Time:	RUSH (Specify):	24 Hour	48 Hour	72 Hour

By signing above, I acknowledge that the data recorded on this form was collected by accurately following air-sampling procedures outlined in NYS/DOL Industrial Code Rule 56 (12 NYCRR Part 56, Subpart 56-17) and all other applicable state and federal regulations.



Bulk Sample Log / Chain of Custody

PROJECT #: EL02B-47

LAB REPORT #: 7C

5858 East Molloy Road, Suite 146 • Syracuse, New York 13211-2013 • Telephone (315) 455-2714 • Fax (315) 455-3022

Project Name/City/Project Info:

Salvation Army

Contact:

Client Name: S+W Redevelopment

Client phone #: _____ Client fax #: _____

Date: 4-28-03

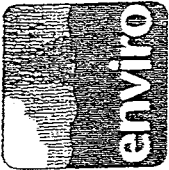
Hygienist: S. Chelone / D. Wells

Sample Number	Lab ID	Sample Location	Sample Description	Sample Type	Quantity
6B	382B	RM 2-3	Ceiling plaster skim coat	F	
7B	384B	" "	Ceiling plaster Brown coat	"	
24	401	RM 2-5	Black felt paper under wood floor	NOB	+
25	402	" "	Brown marbled Linoleum on shelves	"	
26	403	RM 1-2	White 12x12 Fl tile	"	TR count only
27	404	" "	Black mastic under 12x12 tile	"	
28	405	RM 1-3	DK Brown 9x9 Fl tile	"	+
29	406	" "	Black mastic under 9x9 tile	"	+
30	407	RM 1-5	White 2x4 ceiling tile	F	
31	408	RM 1-6	Grey window glass	F	
32	409	RM 1-26	DK Brown 9x9 Fl tile w/red + white streaks	NOB	+
33	410	" "	Lt Brown 9x9 Fl tile w/red + yellow streaks	"	+
34	411	" "	Black flooring strips on perimeter	"	+
35	412	" "	Black mastic under 9x9 tile	"	+

Sample Type: F = Friable NF = Non-Friable NOB = Non-Friable Organically Bound

Chain of Custody	Print Name	Sign Name	Date	Time
Sampled By:	D. Wells	<i>D. Wells</i>	4-28-03	3:45 pm
Relinquished By:	D. Wells	<i>D. Wells</i>	4-28-03	3:45 pm
Received at Lab By:	Valtara	<i>Valtara</i>	4/28/03	4:10 pm
Turnaround Time:	RUSH (Specify):		24 Hour 48 Hour 72 Hour Other:	

By signing above, I acknowledge that the data recorded on this form was collected by accurately following air-sampling procedures outlined in NYS/DOL Industrial Code Rule 56 (12 NYCRR Part 56, Subpart 56-17) and all other applicable state and federal regulations.



New York, Inc.

Bulk Sample Log / Chain of Custody

PROJECT #: EL02B-47

LAB REPORT #: 2

5858 East Molloy Road, Suite 146 • Syracuse, New York 13211-2013 • Telephone (315) 455-2714 • Fax (315) 455-3022

Project Name/City/Project Info: Salvation Army Client Name: StN Redevelopment Contact:

Date: 4-28-03 Client phone #: Client fax #:

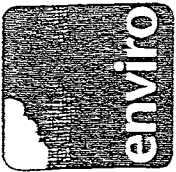
Hygienist: S. Chelone / D. Wells

Sample Number	Lab ID	Sample Location	Sample Description	Sample Type	Quantity
36	413	Rm 1-26	Black felt paper under wood floor (under tile)	NOB	same level
37	414	Rm 1-28	Floor 12x12 Fl Tile	"	
38	415	" "	Floor 12x12 Fl Tile	"	
39	416	Rm 1-33	Brown mastic pucks on 12x12 ceiling tile	"	+
40	417	Rm 1-33	White 12x12 ceiling tile w/ black specks	F	
41	418	Rm 1-36	White 2x4 ceiling tile w/ fissures	"	
42	419	" "	White ceiling shaft track	"	
43	420	Rm 1-31	Brown 12x12 Fl tile	NOB	
44	421	" "	Brown mastic on 12x12 tile	"	
45	422	Rm 1-28	OK Tan 12x12 Fl tile	"	
46	423	" "	Brown mastic under 12x12 tile	"	

Sample Type: F = Friable NF = Non-Friable NOB = Non-Friable Organically Bound

Chain of Custody	Print Name	Sign Name	Date	Time
Sampled By:	D. Wells	<i>D. Wells</i>	4-28-03	3:45 pm
Relinquished By:	D. Wells	<i>D. Wells</i>	4-28-03	3:45 pm
Received at Lab By:	Kal Fan	<i>Kal Fan</i>	4-28-03	4 pm
Turnaround Time:	RUSH (Specify):	24 Hour	48 Hour	72 Hour

By signing above, I acknowledge that the data recorded on this form was collected by accurately following air-sampling procedures outlined in NYS/DOL Industrial Code Rule 56 (12 NYCRR Part 56, Subpart 56-17) and all other applicable state and federal regulations.



Bulk Sample Log / Chain of Custody

PROJECT #: EL03B - 47

LAB REPORT #: 71

5858 East Molloy Road, Suite 146 • Syracuse, New York 13211-2013 • Telephone (315) 455-2714 • Fax (315) 455-3022

Project Name/City/Project Info:

Salvation Army

Contact:

Client Name: St W Redevelopment

Client fax #:

Client phone #:

Date: 4-29-03

Hygienist: S. Chelone / D. Wells

Sample Number	Lab ID	Sample Location	Sample Description	Sample Type	Quantity
47	424	South section Roof Field (under Rubber)	Rubber roof (Top layer) built-up	NOB	+
48	425	↓	Brown insulation (2nd layer)	F	
49	426	↓	(3rd layer) Built-up	NOB	
50	427	↓	Bottom layer paper ins.	F	
51	428	↓	Black Roof Flashing	NOB	+
52	429	Warehouse Roof - South	Built-up (Top layer)	NOB	-
53	430	↓	Felt paper (Bottom layer)	"	-
54	431	↓	Roof Flashing	NOB	
55	432	Contax Roof	(Top layer) Rolled Roofing	"	
56	433	↓	(Bottom layer) Brown insulation	F	
57	434	↓	Black Roof Flashing	NOB	+
58	435	Warehouse Roof - North East	Grey Transite AHC Fen vent.	F	+
59	436	Loading Dock Roof	(Top layer) Rolled Roofing	NOB	+
60	437	↓	(Bottom layer) Brown insulation	F	-

Sample Type: F = Friable NF = Non-Friable NOB = Non-Friable Organically Bound

Chain of Custody	Print Name	Sign Name	Date	Time
Sampled By:	D. Wells	<i>D. Wells</i>	4-29-03	3:25 pm
Relinquished By:	D. Wells	<i>D. Wells</i>	4-29-03	3:30 pm
Received at Lab By:	Val Fair	<i>V. Fair</i>	4-29-03	4:30 pm
Turnaround Time:	RUSH (Specify):	(24 Hour) 48 Hour 72 Hour Other:		

By signing above, I acknowledge that the data recorded on this form was collected by accurately following air-sampling procedures outlined in NYS/DOL Industrial Code Rule 56 (12 NYCRR Part 56, Subpart 56-17) and all other applicable state and federal regulations.



New York, Inc.

Bulk Sample Log / Chain of Custody

PROJECT #: EL03B - 47

LAB REPORT #: 71

5858 East Molloy Road, Suite 146 • Syracuse, New York 13211-2013 • Telephone (315) 455-2714 • Fax (315) 455-3022

Project Name/City/Project Info: Salvation Army Client Name: StW Redevelopment Contact:

Date: 4-29-03 Hygienist: D. Wells / S. Chelone Client phone #: Client fax #:

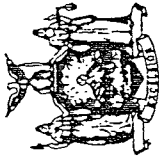
Sample Number	Lab ID	Sample Location	Sample Description	Sample Type	Quantity
61	438	NW Office Section Crtyrd. Roof	Roller Roofing (Top Layer)	NOB	+
62	439	↓	Felt Paper Bottom Layer	"	+
63	440	Braceway	Grey Asphalt Shingle siding	NOB	-
64	441	"	Black Felt paper under shingle siding	"	cannot find
65	442	" Roof	Black Built-up Roof + Insulation	NOB	cannot find
66	443	Braceway	Black Roof Flashing	NOB	+
67		NW Office Section Roof		+	
68					
69					

Sample Type: F = Friable NF = Non-Friable NOB = Non-Friable Organically Bound

Chain of Custody	Print Name	Sign Name	Date	Time
Sampled By:	D. Wells	<i>D. Wells</i>	4-29-03	3:25 PM
Relinquished By:	D. Wells	<i>D. Wells</i>	4-29-03	3:30 PM
Received at Lab By:	Val Lam	<i>Val Lam</i>	4-29-03	4:30 PM
Turnaround Time:	RUSH (Specify):		24 Hour 48 Hour 72 Hour Other:	

By signing above, I acknowledge that the data recorded on this form was collected by accurately following air-sampling procedures outlined in NYS/DOL Industrial Code Rule 56 (12 NYCRR Part 56, Subpart 56-17) and all other applicable state and federal regulations.

Appendix B
Certifications



STATE OF NEW YORK - DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
License and Certificate Unit
BUILDING 12, Room 161
STATE CAMPUS
ALBANY, NY 12240

ASBESTOS HANDLING LICENSE

LICENSE NUMBER: 99-0540
DATE OF ISSUE: 6/14/02
EXPIRATION DATE: 6/30/03

Contractor: Envirologic of New York, Inc.
Address: 5858 East Molloy Road, Suite 146
Syracuse, NY 13211

Duly Authorized Representative: George E. Hanover

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. The licensee verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Richard Cucolo, Director
FOR THE COMMISSIONER OF LABOR

SH 432 (10-00)



STATE OF NEW YORK
DEPARTMENT OF HEALTH

Wadsworth Center

The Governor Nelson A. Rockefeller Empire State Plaza

P.O. Box 509

Albany, New York 12201-0509

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

February 18, 2003

Dear Lead Technical Director:

Please note that although your ELAP Certificate(s) of Approval is/are scheduled to expire at 12:01 AM April 1, 2003, it/they will remain valid until June 16, 2003. This extension is being granted in advance due to the possibility that the New York State budget may not be approved by April 1, 2003. The only exceptions to this extension are laboratories who are notified in writing that their certification has been revoked for just cause.

If there are any questions, please feel free to contact me at 518-485-5570 or by email to jej02@health.state.ny.us.

Verification of your laboratory's approved ELAP status is available to you or your clients by calling the Program Office at (518) 485-5570 between 8:30 a.m. and 4:45 p.m. Monday through Friday.

Sincerely,

Joyce Reilly
Administrative Assistant
Environmental Laboratory Approval Program

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
Antonia C. Novello, M.D., M.P.H., Dr.P.H. Commissioner

Expires 12:01 AM April 01, 2003
Issued July 17, 2002



CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MS. VALERIE LARE
ENVIROLOGIC OF NEW YORK INC
5858 EAST MOLLOY ROAD
SYRACUSE NY 13211 USA

NY Lab Id No: 11555
EPA Lab Code: NY01263

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material EPA 600/M4/82/020

Serial No.: 16872

Property of the New York State Department of Health. Valid only at the address shown.
Must be conspicuously posted. Valid certificates have a raised seal and may be
verified by calling (518) 485-5570.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Antonia C. Novello, M.D., M.P.H., Dr.P.H. Commissioner

Expires 12:01 AM April 01, 2003
Issued July 17, 2002



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MS. VALÉRIE LARE
ENVIROLOGIC OF NEW YORK INC
5858 EAST MOLLOY ROAD
SYRACUSE NY 13211 USA

NY Lab Id No: 11555
EPA Lab Code: NY01263

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved subcategories and/or analytes are listed below:

Miscellaneous Air
Fibers

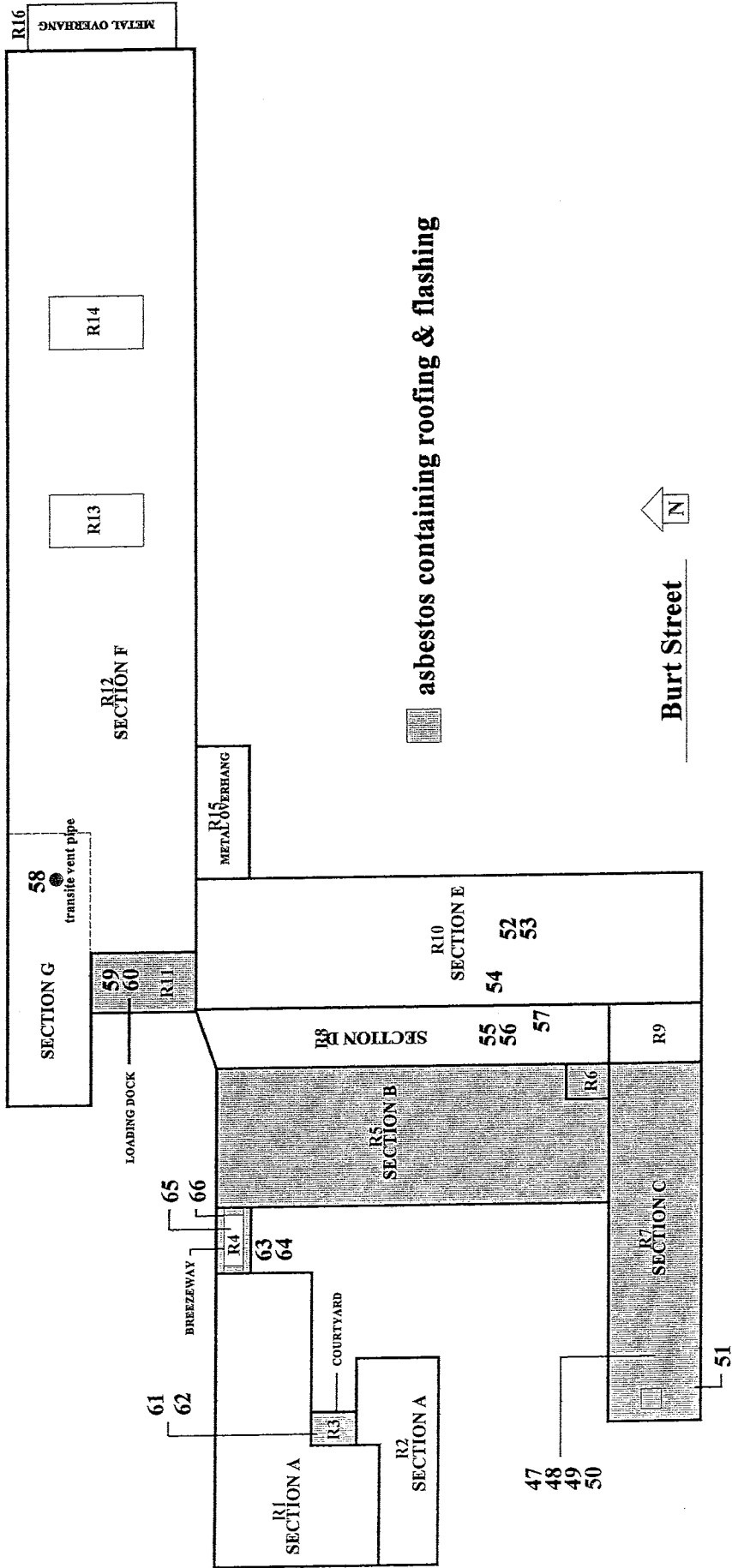
NIOSH 7400 A RULES

Serial No.: 16873

Property of the New York State Department of Health. Valid only at the address shown.
Must be conspicuously posted. Valid certificates have a raised seal and may be
verified by calling (518) 485-5570.

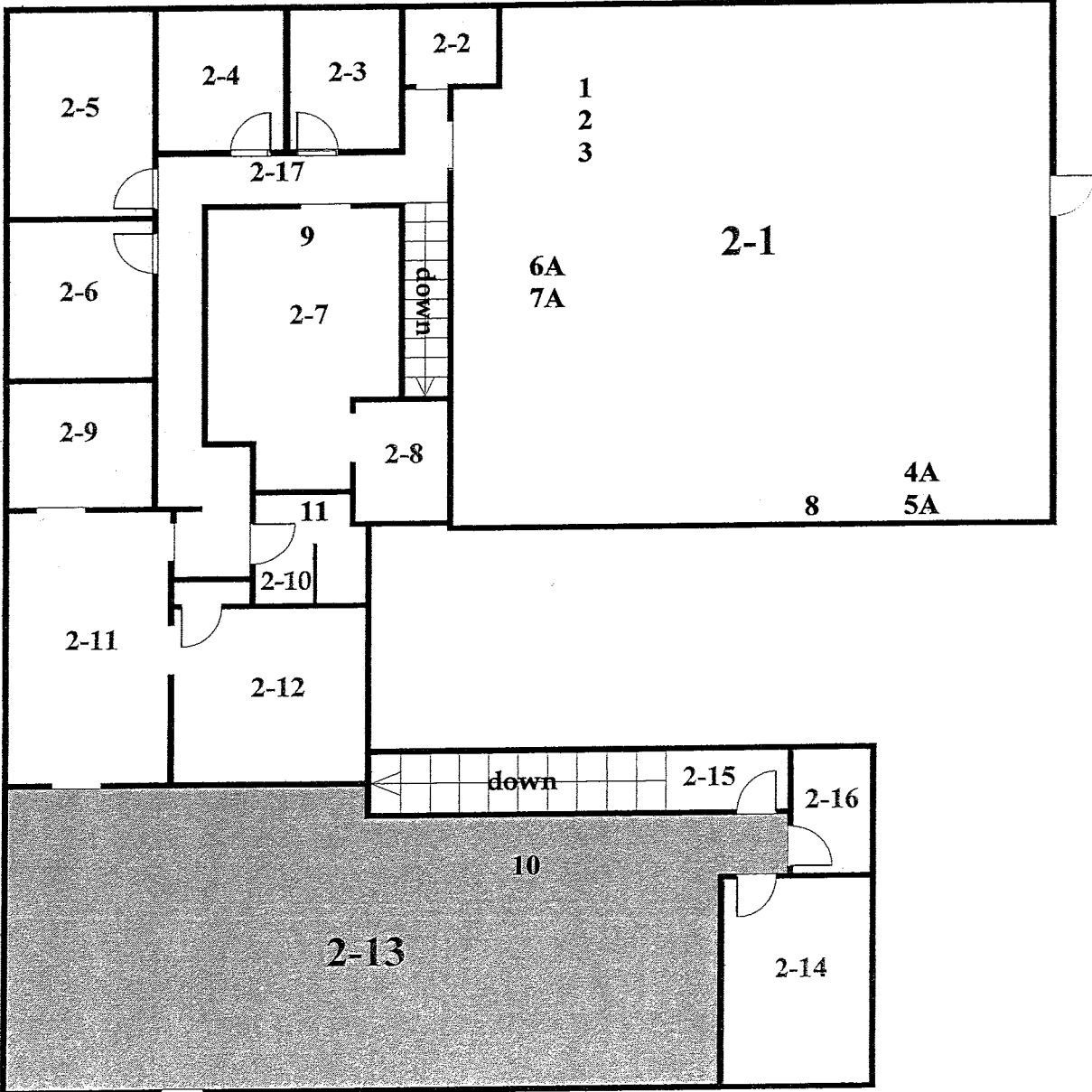
**FORMER SALVATION ARMY
SYRACUSE, NEW YORK**

ROOF PLAN



FORMER SALVATION ARMY SYRACUSE, NEW YORK

SECTION A - 2ND FLOOR



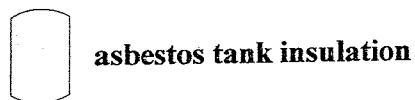
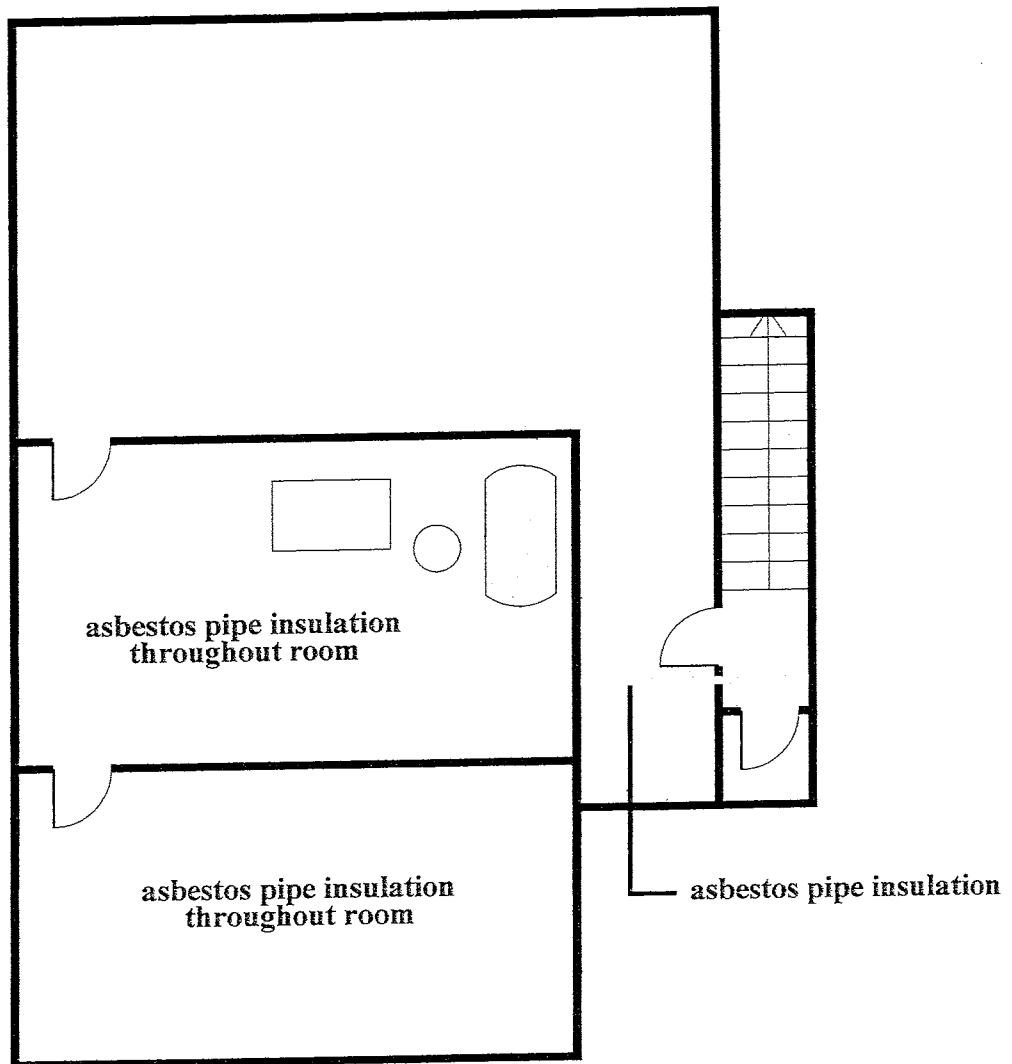
- asbestos containing floor tiles & mastic
- asbestos containing floor tiles & mastic
asbestos containing ceiling material

Burt Street



FORMER SALVATION ARMY SYRACUSE, NEW YORK

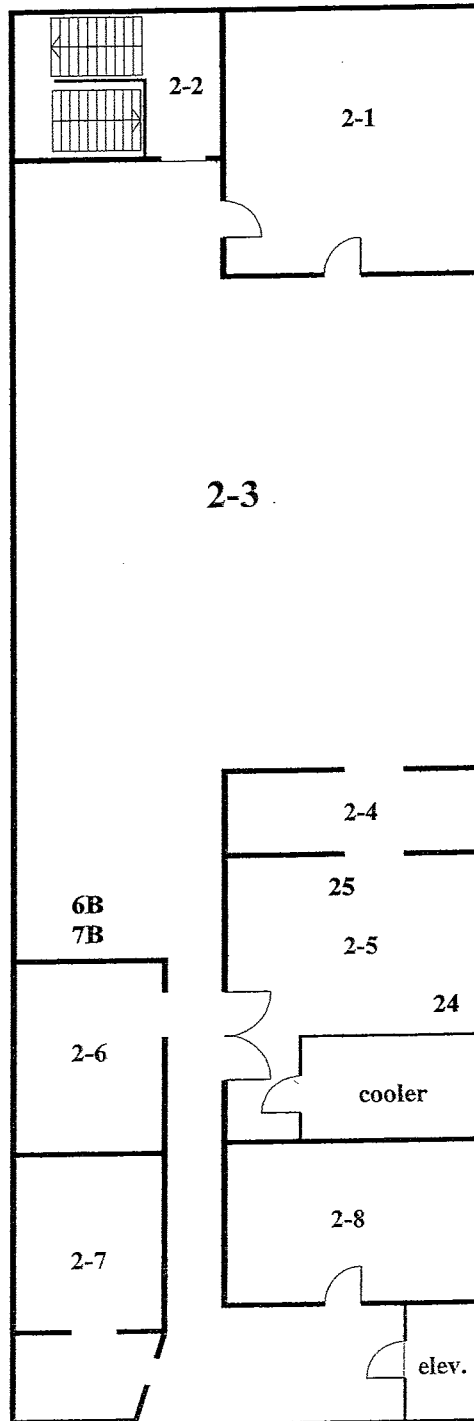
BASEMENT-NW OFFICES (SECTION A)



Burt Street

**FORMER SALVATION ARMY
SYRACUSE, NEW YORK**

2ND FLOOR-CENTER SECTION (SECTION B)



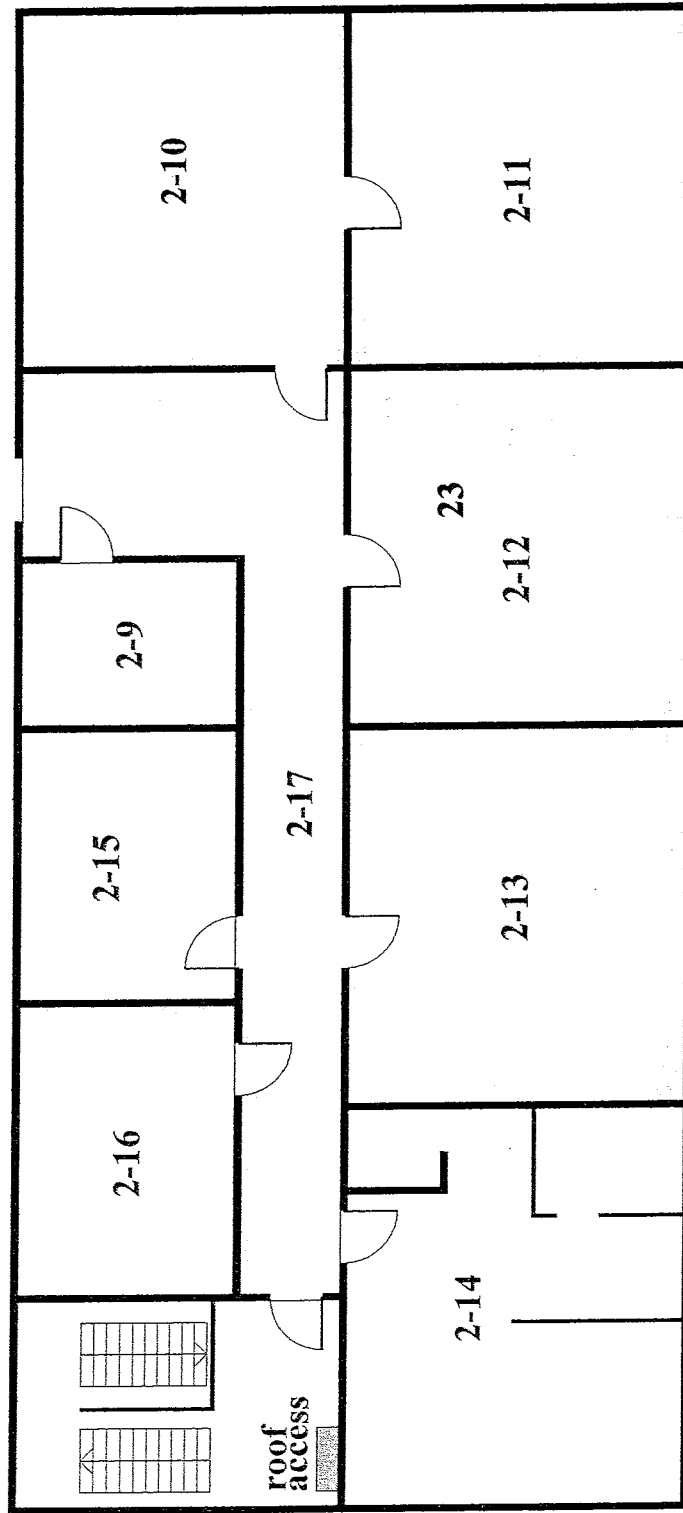
asbestos felt paper under wood floor

Burt Street



**FORMER SALVATION ARMY
SYRACUSE, NEW YORK**

2ND FLOOR-SOUTH SECTION (SECTION C)



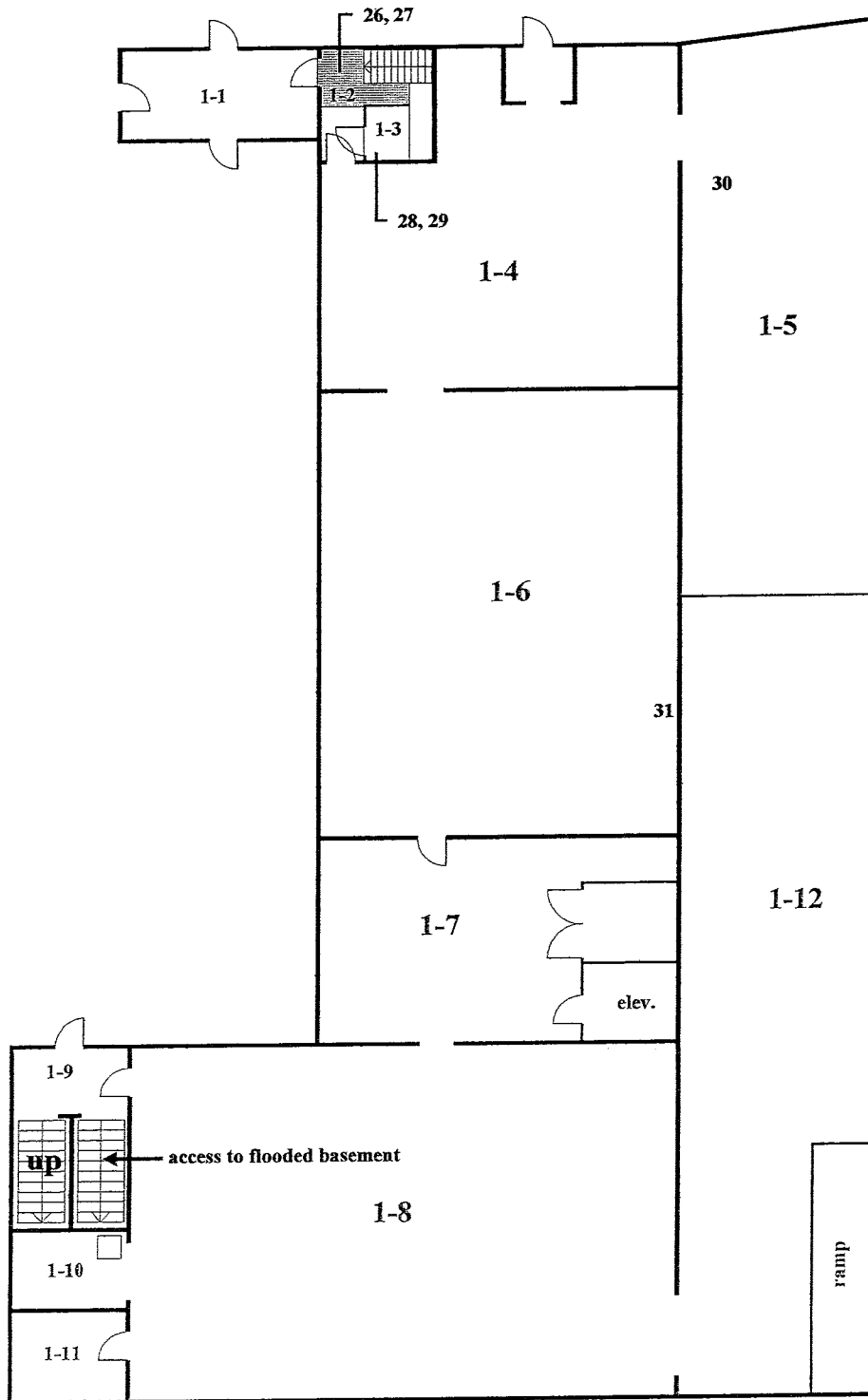
□ asbestos linoleum



Burt Street

**FORMER SALVATION ARMY
SYRACUSE, NEW YORK**

1ST FLOOR-CENTER SECTIONS (SECTIONS B, C & E)



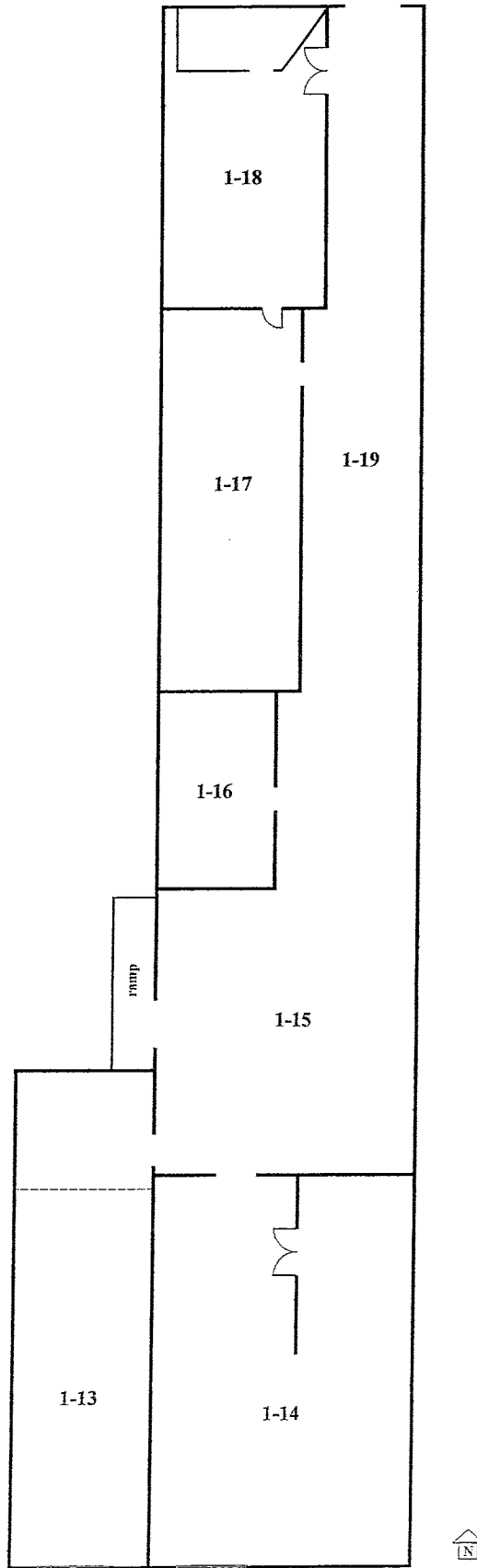
- asbestos floor tiles & mastic
- ▨ asbestos mastic (under floor tiles)



Burt Street

**FORMER SALVATION ARMY
SYRACUSE, NEW YORK**

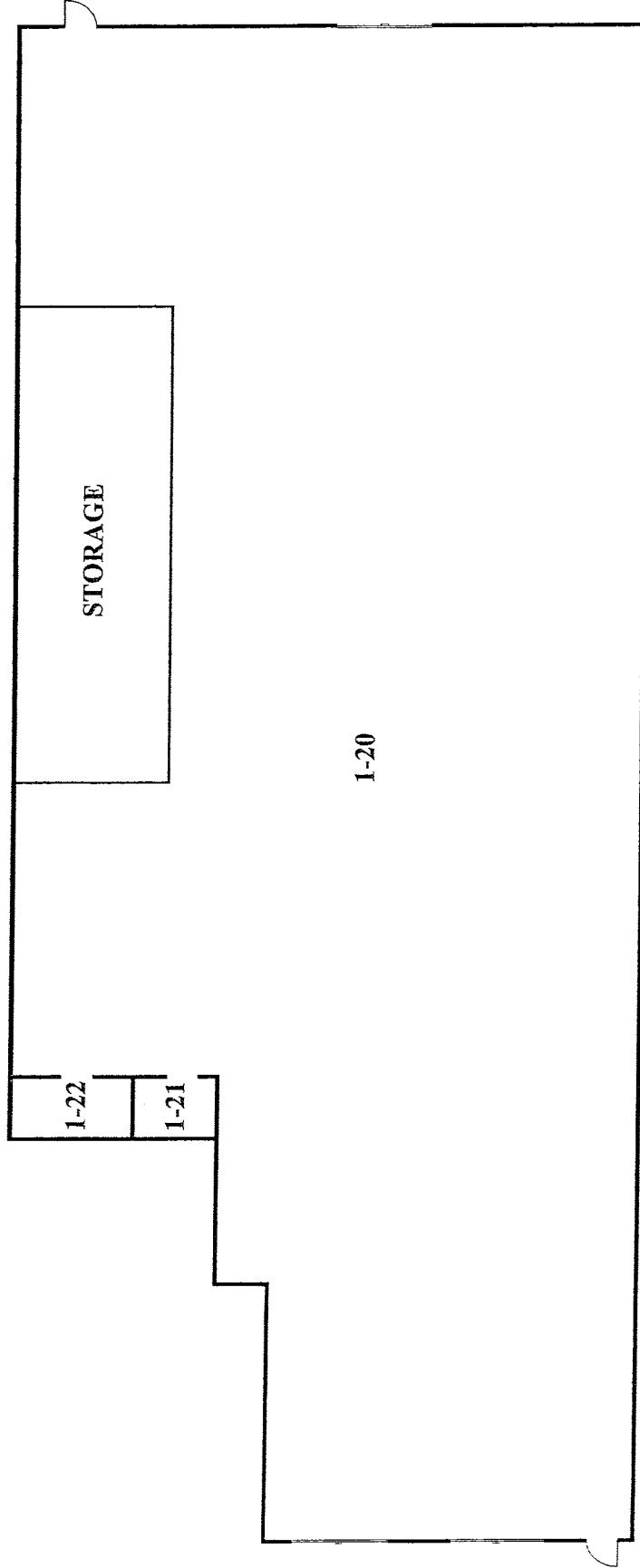
1ST FLOOR-SECTION E



Burt Street

**FORMER SALVATION ARMY
SYRACUSE, NEW YORK**

1ST FLOOR-NORTHEAST SECTION (SECTION F)

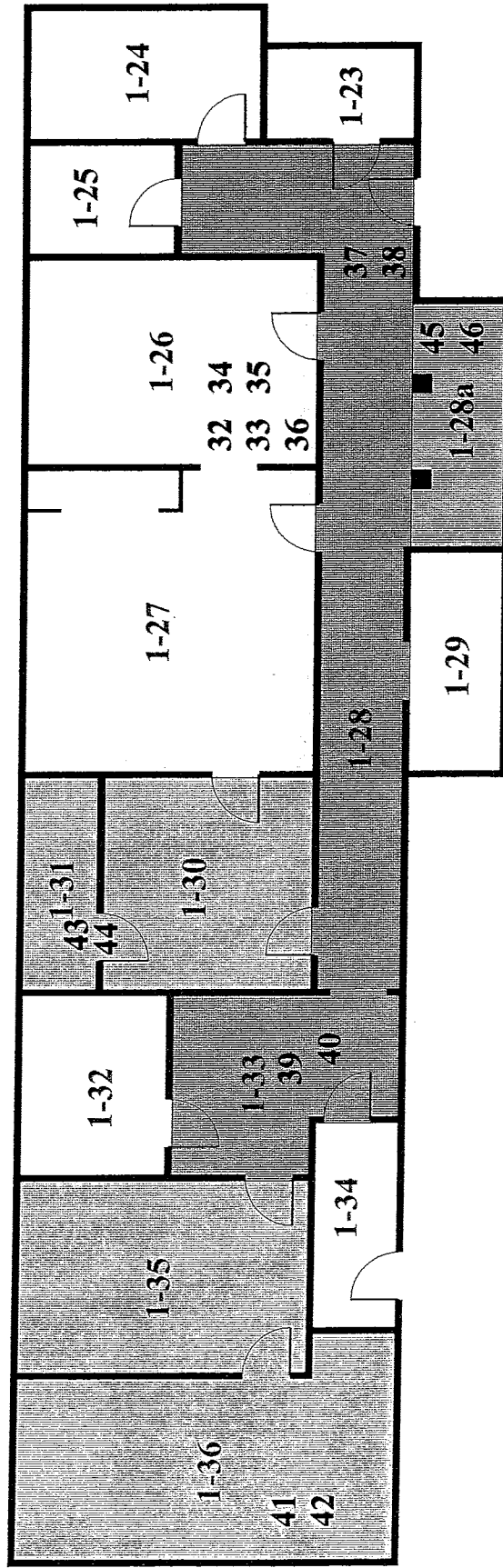






Burt Street



FORMER SALVATION ARMY SYRACUSE, NEW YORK

1ST FLOOR-NORTH SECTION (SECTION G)



-  asbestos floor tiles & mastic
(including glue dots on ceiling tiles)
-  asbestos glue dots on ceiling tiles
(** in other areas - see other asbestos materials)
-  asbestos mastic (under floor tiles)
(including glue dots on ceiling tiles)
-  asbestos floor tiles only



Burt Street

Appendix D
**NYSDOL Building Demolition
Survey - Minimum Sampling Guidelines**