Environmental Restoration Project
1333 East Dominick Street – ERP Site No. 633060

City of Rome, New York

Polychlorinated Biphenyl (PCB) Site Investigation Report

June 2010

Barton & Loguidice

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1.0 Introduction

The City of Rome is the current owner of the property at 1313-1333 East Dominick Street located in Rome, New York. This property (herein referred to as "1333ED" or "Site") is one of five (5) City-owned properties that is currently being investigated with funding provided by the New York State Department of Environmental Conservation (NYSDEC) through their Environmental Restoration Program (ERP) (Site No. E633060). As described in the May 2008 Site Investigation Work Plan, the Site consists primarily of a paved parking lot, limited landscaped areas, and a large two-story brick structure that was formerly used for the manufacturing of printing equipment and later sawmill machinery. The Site is currently vacant.

In accordance with the provisions of the NYSDEC-approved Site Investigation Work Plan, B&L is conducting a phased site investigation at 1333ED which, to date, has included the performance of a subsurface soil investigation, a groundwater investigation, a geophysical investigation, and the completion of two (2) interim remedial measures (IRM). As will be described in greater detail in Sections 4.1 and 4.2 of this report, the intent of the initial IRM (referred to as IRM II) was to remove waste materials and aboveground storage tanks (ASTs) stored inside the building structure, while the second IRM was performed for the purpose of removing underground storage tanks (USTs), and to conduct a limited test pit investigation of previously identified suspect areas (IRM III) based on the results of the geophysical survey.

During the site investigation at 1333ED, a recessed, concrete-lined machine pit located in the Machine Room (see Figure 1) on the first floor of the Site structure was observed to contain a sludge-like material. Due to the nature of former operations at the building, a representative sample of the sludge-like material was submitted for laboratory analysis, and elevated concentrations of polychlorinated biphenyls (PCBs) were detected. This finding resulted in the performance of additional PCB investigation activities inside the building structure which consisted of the sampling and testing of the concrete floors, wood flooring, floor drains, and sub-slab soil, as described below. Please note that this report has been prepared solely for the purpose of discussing PCB related issues at the Site, and that the findings of the remaining site investigation activities will be presented in the overall Site Investigation Report for 1333ED.

The goal of the PCB site investigation is to determine the magnitude and extent of PCB impacts within the building structure, and to identify a cost effective remedial method whose successful implementation will return the Site to a useable state for future occupancy and use. The City's ultimate goal is to market the Site to a commercial or manufacturing buyer in order to return the property to the City tax roll and create jobs.

2.0 PCB Site Investigation

2.1 Sample Media and Methodology

Upon the initial discovery of elevated concentrations of PCBs at 1333ED, a work plan was developed for the continuation of the PCB site investigation (see Appendix A). Sampling was conducted in all non-office spaces within the first floor and basement of the building structure. Substrates of concern for PCB contamination included the following: machine pit sludge, unpainted concrete floor slab, painted concrete floor slab, wood flooring, floor drain sediment, and sub-slab soil. The sampling methodology for each media is described below. All samples were submitted to TestAmerica Laboratories for the analysis of PCBs using EPA Method 8082.

2.1.1 Machine Pit Sludge

The material sampled from the concrete machine pit in the Machine Room had a thick semi-liquid consistency and was sampled by scooping the sample with a disposable scoop into the sample jars. Two (2) sludge samples (designated as 1313ED-SED-02A and 1313ED-SED-02B) were collected from the machine pit and submitted to the project laboratory.

2.1.2 Concrete Floor

Wipe sampling of the concrete floor in two (2) areas of the building - the Boiler Room and adjacent to the machine pit - was initially conducted to provide preliminary information on the need to conduct a broader based investigation of the presence of PCB contamination on the concrete floor surface. The project laboratory provided wipe sampling kits which consisted of a 100 square centimeter template and a jar that contained a hexane soaked cloth. The template was placed on the concrete floor, and the entire 100 square centimeter area was swabbed along two (2) axes using the hexane soaked cloth. A total of three (3) wipe samples (designated as 1313ED_WP-01, 1313ED_WP-02, and 1313ED_WP-03, respectively) were submitted to the project laboratory for the analysis of PCBs.

In addition to the collection of wipe samples as described above, concrete dust samples were also collected and submitted for the analysis of PCBs. Specifically, concrete dust samples were collected from the concrete floors in the shop areas (non-office space) following the EPA Region I Draft Guidance "Standard Operating Procedure for Sampling Concrete in the Field." This methodology consists of removing surface debris from the concrete floor and utilizing a ½-inch diameter drill bit in a hammer drill to advance holes to approximately ½-inch deep. Due to the amount of concrete dust sample required for laboratory analysis, 8-10 holes were drilled within an approximate 18-inch square area, and a single composite concrete dust sample was prepared by thoroughly mixing and combining all of the dust from the completed drill holes. The concrete dust was then scooped into the sample jars with a decontaminated stainless steel scoop. At least two (2) concrete dust samples were collected from each shop area containing porous flooring (see Figure 1). A total of fifteen (15) concrete dust samples (not including field duplicate and MS/MSD samples) were collected from the Basement (1333ED_CONC_BASEMENT-X), the Machine Room (1333ED_CONC_MACHROOM-X and 1313ED_CONC_01COMP), Storage (1333ED_CONC_STORAGE-X), the Boiler Room (1333ED_CONC_BOILERROOM-X), and Shops A, B, and C (1333ED_CONC_SHOPX-X). All of the composite concrete dust samples were submitted to the project laboratory for analysis.

2.1.3 Painted Concrete Floor

One area of the building, Shop D, has a painted concrete floor. As described in the November 2005 EPA publication "Polychlorinated Biphenyl (PCB) Site Revitalization Guidance Under the Toxic Substances Control Act (TSCA)," painted concrete is considered a non-porous surface. Therefore, wipe samples were collected in this area. The wipe samples were collected using the procedures described above in Section 2.1.2. A total of two (2) wipe samples (designated as 1333ED_WIPE_SHOPD-1 and 1333ED_WIPE_SHOPD-2) were collected and submitted to the project laboratory for the analysis of PCBs.

2.1.4 Wood Floor

Portions of the basement area floor consisted of concrete overlain with wood plank flooring. The wood flooring in the basement was sampled by utilizing a decontaminated wood chisel to chip off small pieces of wood. The wood chips were collected, jarred, and submitted to the project laboratory for the analysis of PCBs.

2.1.5 Floor Drain Sediment

Two (2) floor drains were identified in the site structure. One (1) floor drain is located in Shop A, and the other floor drain is located in the Boiler Room. Sediment from these drains were scooped out with a decontaminated stainless steel scoop, thoroughly mixed in a decontaminated stainless steel mixing bowl, jarred, and submitted to the project laboratory for the analysis of PCBs. The discharge location of the floor drains was also investigated by conducting a small scale geophysical investigation (using ground penetrating radar (GPR)) and hand-excavating the sediment from the floor drain.

2.1.6 Sub-Slab Soil

A limited sub-surface soil boring investigation was conducted within the building to determine the possible presence of PCBs in the sub-surface soil below the concrete floor slabs. In particular, soil borings were advanced in areas of the building structure presumed to have a higher risk of the presence of PCBs below the concrete floor slab (e.g. areas of higher PCB concentrations detected in the concrete dust, and at locations where PCBs were detected in previously completed soil borings performed as part of the overall site investigation). In total, twelve (12) soil borings consisting of six (6) soil borings that were advanced as part of the PCB site investigation (designated as 1333ED_PCB_BORING-X), and six (6) soil borings from the overall site investigation (designated as 1313ED_SB-X), were advanced in or near the building in areas that were known or perceived to be contaminated with PCBs.

All interior soil borings were advanced to a depth of 4 feet below ground surface (bgs), with the exception of PCB Boring 3, which encountered refusal at approximately 3 feet bgs, and PCB Boring 6, which was advanced to 8 feet bgs. PCB Boring 6 was sampled at both the 0-4 feet and 4-8 feet depth intervals. The boring cuttings from the interval sampled were composited for each sample and mixed in a decontaminated stainless steel mixing bowl with a decontaminated stainless steel scoop. All sub-slab soil samples were submitted to the project laboratory for the analysis of PCBs.

2.2 Quality Assurance/Quality Control

Several steps were taken in the field by B&L staff to ensure the integrity of the various media samples collected during the performance of the site investigation. These procedures are outlined below.

2.2.1 Decontamination Procedures

The decontamination of non-dedicated equipment and tools used during the collection of the concrete dust samples, wood flooring samples, floor drain sediment samples, and subsurface soil samples was performed using an Alconox wash/scrub, distilled water rinse, and air dry.

2.2.2 Field/Method Blanks

Field/method blank samples were collected during the subsurface and concrete floor slab investigation to document the decontamination procedures for the non-dedicated, non-disposable sampling equipment. There was no detection of PCBs in the field/method blank samples collected.

2.2.3 Documentation

The samples were delivered to the laboratory with appropriate chain-of-custody records. Relevant information regarding the sampling activities was provided on these records, including sampling date and time, sample identification, number of bottles filled at each sampling location, preservatives used, bottle size, sampling method, date and time of shipment, field/method blanks included, and release signature.

3.0 PCB Site Investigation Results and Discussion

3.1 Regulatory Governance and Standards

The storage, use, cleanup, and disposal of PCBs are regulated by both Federal and New York State mandated statues as follows: the EPA Toxic Substances Control Act (TSCA) (40 CFR Part 761), and NYSDEC regulations under 6 NYCRR Parts 371 and 375. The November 2005 EPA publication "Polychlorinated Biphenyl (PCB) Site Revitalization Guidance Under the Toxic Substances Control Act (TSCA)," addresses the cleanup of PCBs at contaminated sites by means of "self-implementing cleanup procedures."

The EPA guidance and TSCA regulations outline PCB cleanup criterion for porous surfaces such as unpainted concrete and wood, non-porous surfaces such as painted concrete, and "bulk PCB remediation waste" such as floor drain sediment and soil. The cleanup criteria for each media classification is separated into the following two (2) categories:

High-occupancy Use: Annual occupancy for any individual not wearing dermal and respiratory protection is 335 hours or more per year (840 hours per year for non-porous surfaces).

Low-occupancy Use: Annual occupancy for any individual not wearing dermal and respiratory protection is less than 335 hours per year (840 hours per year for non-porous surfaces).

A remediated building or site that satisfies the high-occupancy use standards for PCB cleanup can be utilized with no further restrictions, whereas a building or site that has been remediated to meet the low-occupancy standards for PCB cleanup is subject to deed restrictions and/or other institutional and engineering controls, in addition to the limitation of the allowable hours of annual occupancy as described above.

Based on our discussions with the City of Rome regarding the potential future use of this building, we understanding that the City would ideally like to see the building occupied by a manufacturing company that is either directly involved with, or supports, the alternative energy business (e.g. the manufacturing of solar panels). Therefore, we have assumed for the purposes of this report that the future building use will fall in the category of high-occupancy use.

NYSDEC Part 375 regulations contain soil cleanup objectives (SCOs) for PCBs. The SCOs are broken down into four (4) main land use categories. Two (2) of the categories are designated for the protection of public health (unrestricted use and restricted use), while the third category was created for the protection of ecological resources, and the fourth category was established for the protection of groundwater. The restricted use category is further broken down into the sub categories of residential, restricted-residential, commercial and industrial. A site that meets the unrestricted use SCOs can be utilized with no further restrictions, whereas a site meeting one of the restricted use standards is subject to deed restrictions and/or other institutional and engineering controls.

3.2 Nature and Extent of Contamination

The PCB analytical results for the various media samples collected at 1333 East Dominick Street are presented in attached Tables 1-3, and are also discussed below. The analytical results presented in each table have been compared to applicable thresholds and cleanup objectives as set forth by the EPA's TSCA Regulations presented in 40 CFR Part 761, and the NYSDEC

Regulations contained in 6 NYCRR Subpart 371 and 375. Please note that we have indicated on each table (immediately underneath the title) the applicable EPA or NYSDEC criteria used by B&L for data evaluation purposes, and in the discussion below we also state the applicable EPA or NYSDEC standard and the corresponding maximum concentration that is allowed for that particular media.

3.2.1 Machine Pit Sludge

The sludge material analyzed from the machine pit located within the Machine Room exhibited a maximum concentration of 200 parts per million (ppm) of PCB Aroclor 1254 (refer to Table 1). No other PCB congeners were detected. The sludge sample results have been compared to the EPA TSCA Regulations and the applicable 6 NYCRR Subpart 371 Regulations. These regulations stipulate that concentrations greater than or equal to 50 ppm total PCBs are considered “PCB bulk product waste” by EPA and a hazardous waste by the NYSDEC. As a result, the machine pit sludge was disposed of during the Interim Remedial Measures (IRM) II – Waste Disposal work at the Site, as described in Section 4.

3.2.2 Concrete Floor

The analytical results of the preliminary wipe samples collected from around the machine pit and in the Boiler Room are presented in attached Table 2. These samples indicated a maximum PCB concentration of 3.8 micrograms per 100 square centimeters (ug/100cm2) in the Boiler Room, and 2,000 ug/100cm2 adjacent to the machine pit. These results are compared to the applicable EPA TSCA cleanup criteria of 10 ug/100cm2 for non-porous surfaces in high-occupancy areas.

However, because the concrete floor surface that was tested is considered to be a porous material as defined by the EPA, this comparison is for references purposes only.

The total PCBs detected in the concrete floor dust samples ranged from a low concentration of 0.37 ppm in one of the Boiler Room samples, to a high concentration of 140.0 ppm in the Machine Room sample. These concrete dust sample results, which are presented in Table 3, are compared to the EPA TSCA cleanup criteria of 1.0 ppm total PCBs in porous surfaces for high occupancy areas. Every concrete dust sample collected from the floors of the structure at 1333ED exceeded the EPA TSCA standard of 1.0 ppm, with the exception of sample “1333ED_ CONC_BOILERROOM-1” and sample “1333ED_CONC_BASEMENT-1.” Generally, higher levels (20 ppm or greater) of PCBs were observed in the concrete dust samples collected from the Machine Room, Shop A, Shop B, and the Boiler Room. Concentrations were generally lower in the north western portion of the building.

3.2.3 Painted Concrete Floor

The analytical results of the wipe samples collected from the painted floor in Shop D are presented in Table 2, along with the results of the other wipe samples. These samples indicated a maximum PCB concentration of 3.39 ug/100cm2. As noted on Table 2, these results are compared to the EPA TSCA cleanup criteria of 10 ug/100cm2 for non-porous surfaces in high-occupancy areas.

3.2.4 Wood Floor

The total concentration of PCBs detected in the wood chip samples collected from the wood floor in the basement ranged from a low of 9.4 ppm to a high of 210.0 ppm. These results, which are presented in Table 3, are compared to the EPA TSCA standard of 1.0 ppm total PCBs in porous surfaces for high occupancy areas.

3.2.5 Floor Drain Sediment

Table 3 presents the analytical results of the floor drain sediment samples collected from the floor drains located in Shop A and the Boiler Room, respectively. These sediment samples exhibited a concentration of 14.0 ppm total PCBs in the Shop A floor drain, and a maximum PCB concentration of 10.4 ppm in the Boiler Room floor drain. These results are compared to the TSCA cleanup criteria of 1.0 ppm for bulk PCB remediation wastes in high-occupancy areas. As previously discussed, the NYSDEC has established SCOs for the cleanup of PCB contaminated sediment and soils, and the maximum allowable concentration for residential, restricted-residential, or commercial use is 1.0 ppm total PCBs. The unrestricted use SCO for PCBs is 0.1 ppm.

3.2.6 Sub-Surface Soil

The PCB test results of the subsurface soil samples collected from below the concrete floor slab of the site structure are presented in Table 3. The concentration of total PCBs in these samples ranged from non-detect to 25.0 ppm. These results are compared to the EPA TSCA Regulations and the applicable NYSDEC Part 375 SCOs for restricted use, both of which stipulate a maximum allowable concentration of 1.0 ppm total PCBs.

As indicated in Table 3, the analytical results for subsurface soil samples 1313ED_SB-04, 1333ED_PCBBORING-3, and 1333ED_PCBBORING-6 exceeded the above stated cleanup criteria of 1.0 ppm total PCBs. Each of these samples was collected adjacent to the Boiler Room. However, the analytical test results for all of the other subsurface soil samples that were collected from below the floor slab or adjacent to the site structure reported total PCB concentrations at or below the cleanup criteria of 1.0 ppm.

4.0 Interim Remedial Measures and Additional Investigation

4.1 IRM II – Waste Removal

As part of the overall site investigation, B&L recommended to the NYSDEC that IRMs be performed at the 1333 East Dominick Street site in order to address previously identified sources of contamination. The NYSDEC concurred, and therefore B&L prepared construction documents for IRM II (Waste Removal) that included tasks to remove oil, paints, and other chemicals stored inside the building structure, as well as to remove aboveground storage tanks (ASTs), and clean the Boiler Room floor and machine pit sump. The services of Op-Tech Environmental Services, Inc. (Op-Tech) were retained by the City of Rome to conduct the work at the site.

In performing IRM II, Op-Tech removed and disposed of the sludge material in the machine pit, cleaned the water and oil soaked debris and floor in the Boiler Room, and removed a 275-gallon AST from the Boiler Room, as well as a 1,000-gallon AST located outside of the building.

4.2 IRM III – UST/Lift Closure

Similar to the above, B&L prepared construction documents for IRM III (UST/Lift Closure) that included tasks to close and remove underground storage tanks (USTs), perform limited exploration through test pits, and excavate limited impacted soil, if encountered. Paragon Environmental Construction, Inc. (Paragon) was the low-bidder selected to conduct the work at the site.

Paragon closed and removed a 7,000 gallon UST from the courtyard of the building at 1333ED (see Figure 2). In addition, underground supply and return piping serviced this tank and appeared to be routed, under the floor slab of the building, to the Boiler Room. Therefore, the piping was removed to exterior wall of the building, but could not be completely removed due to the possibility that the structural integrity of the building could potentially be compromised in attempting to remove the entire length of piping.

Stained soil was observed during the removal of the UST, as well as during the removal of the piping in the area of the fill port and the supply and return piping. Accordingly, petroleum impacted soil was removed to the extent possible; however, it was not possible to remove all of the observed stained soil because the staining extended below the building where undermining would have potentially resulted in structural damage to the building.

Paragon obtained a composite soil sample of the excavated and stockpiled impacted soil from the tank excavation, and submitted the composite soil sample to Environmental Laboratory Services, Inc. in North Syracuse, New York for the analysis of PCBs, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and RCRA 7 metals plus mercury. The analytical results revealed a PCB concentration of 39 ppm in the form of Aroclor 1254. The detection of PCBs in the tank excavation soil is consistent with the subsequent detection of PCBs in the subsurface soil boring and Boiler Room concrete floor samples.

4.3 Floor Drain Investigation

As part of the overall site investigation, B&L conducted an investigation of the floor drains in Shop A and the Boiler Room. The investigation consisted of a limited geophysical investigation and hand excavating sediment from the drain to determine the presence of a discharge pipe.

Ground penetrating radar (GPR) was utilized to attempt to locate drain pipes connected to the floor drains. Upon conducting a real-time survey around all four (4) sides of both floor drain catch basins, no signal that would indicate the presence of an underground metallic pipe was observed.

The floor drain sediment was hand excavated in order to visually inspect and identify, if possible, discharge pipes leading from the drains. The grates over both floor drains were approximately 12 inches by 8 inches in dimension. The accumulated sediment in the Shop A floor drain was excavated to a depth of approximately 12-18 inches, at which point, the bottom of the drain appeared to have been filled with concrete. No obvious signs of a discharge outlet pipe were observed. Similar to the above, the sediment in the Boiler Room floor drain was excavated to a depth of approximately 12 inches. The fill in the drain was noted to be stained and appeared oily. No bottom or sidewalls were observed in the floor drain; rather it was filled with gravel, large cobbles, and sand/sediment. No drain pipe was observed exiting the floor drain, and it was concluded that the floor drain was a dry well.

The above noted observations regarding the Boiler Room floor drain lead us to believe that the Boiler Room floor drain potentially serves as a contributing source to the subsurface PCB contamination observed in the soil borings on the north side of the Boiler Room as previously discussed in Section 3.2.6 of this report.

5.0 Areas of Concern

Based on our evaluation of the laboratory test results for the various media types (concrete flooring, wood flooring, subsurface soil, and floor drain sediment) that were sampled at the 1333 East Dominick Street site (as discussed above), we have identified three (3) main areas of concern/media type as follows: 1) concrete floors, 2) wood flooring material, and 3) subsurface soil and floor drain sediment. Each area of concern is discussed below based on the data presented above.

5.1 Concrete Floors

The levels of PCBs observed in the concrete floor are grouped into four categories (as shown on Figure 1): below applicable standards, greater than 1 ppm and less than or equal to 10 ppm (>1 ppm, ≤10 ppm), greater than 10 ppm and less than or equal to 50 ppm (>10 ppm, ≤50 ppm), and greater than 50 ppm (>50 ppm).

In areas that exhibit levels of PCBs below applicable standards, no remedial work is necessary. Shop D (approximately 1,200 square feet) is the only area that falls into this group.

The analytical result for the 1333ED_CONC_BASEMENT-1 sample revealed 1.0 ppm PCBs; however, PCBs were detected in the 1333ED_CONC_BASEMENT-2 and 1333ED_CONC_BASEMENT-3 samples at 1.5 ppm and 5.4 ppm, respectively. Based on these results and the concentration of PCBs detected in the wood flooring that is installed directly on top of the concrete floor (210.0 ppm, 73.0 ppm, 17.0 ppm and 9.4 ppm), the concrete floor in the basement area (see Figure 1) is considered an area of concern.

Approximately half of Shop A and all of Shop C, Storage, and Basement are classified in the >1 ppm, ≤10 ppm group (see Figure 1). This group consists of approximately 14,100 square feet of the site structure. The concrete in this area appears to be in relatively good condition with the exception of the basement, which appeared to have a considerably lower compressive strength and hardness when drilling to obtain samples.

The remaining area of Shop A, approximately half of Shop B, and the Boiler Room are classified in the >10 ppm, ≤50 ppm group. This group consists of approximately 7,800 square feet of the site structure. The concrete in this area appears to be in relatively good condition.

The remaining area of Shop B and the Machine Room are classified in the >50 ppm group. This group consists of approximately 4,400 square feet of the site structure. The concrete in Shop B appears to be in relatively good condition; however, the concrete in the Machine Room is very poor condition.

5.2 Wood Flooring

All of the wood flooring in the basement exhibited levels of PCBs that will require removal and disposal. Wood flooring covers approximately 2,400 square feet of the basement area (roughly 75% of the basement).

5.3 Subsurface Soil and Floor Drain Sediment

Based on our evaluation of the subsurface soil sample locations and their corresponding PCB concentrations, levels of PCBs greater than 1.0 ppm but less than 50 ppm were observed over a surface area of approximately 1,230 square feet (refer to Figure 3). The highest levels of PCBs were observed in the 0-foot to 4-foot depth bgs interval. However, based on the assumption that PCB impacted soil may extend slightly lower than the 4-foot depth, the overall depth of impacted soil is conservatively estimated to be 6 feet. This corresponds to an estimated 273 cubic yards of impacted soil.

The sediment present in the Boiler Room floor drain is included in the above stated volume of PCB impacted soil. In addition, the sediment in the floor drain of Shop A was observed to contain PCBs at levels greater than 1.0 ppm but less than 50 ppm. The volume of sediment within the catch basin is assumed to be a maximum of 4 cubic feet.

6.0 Remedial Alternatives

B&L has identified potential remedial alternatives for the cleanup of PCB contaminated media at the 1333 East Dominick Street site, and these remedial alternatives are grouped by the three (3) primary classifications of contaminated media of concern: concrete floor slab, subsurface soil and floor drain sediment, and wood flooring. The goal of each proposed remedial alternative is to achieve the cleanup criterion discussed above in Section 5.0 of this report, which is for high-occupancy use. It is important to note that the final proposed cleanup method must be reviewed and approved by the NYSDEC prior to implementation.

With regards to Federal approval and oversight of the PCB cleanup activities, current EPA Regulations allow the Site owner to conduct what is referred to as "a self-implementing cleanup procedure." This EPA procedure requires the owner to prepare a notification and certification for submission to the EPA in accordance with the provisions of 40 CFR Part 761.61. If no comments have been received from EPA within 30-days of receipt of the notification and certification submittal, the owner may commence cleanup operations as proposed.

6.1 Concrete Floor Slab Remedial Alternatives

6.1.1 Double Wash-Rinse

The aforementioned EPA regulations discuss an approved methodology for the decontamination of non-porous surfaces using the double wash-rinse method. Specifically, non-porous surfaces that have large amounts of dirt, debris, residual oil, etc. must be pre-cleaned to expose the surface of the concrete. The double wash-rinse method is outlined below as stated in 40 CFR 761.372:

(a) *First wash.* Cover the entire surface with organic solvent in which PCBs are soluble to at least 5 percent by weight. Contain and collect any runoff solvent for disposal. Scrub rough surfaces with a scrub brush or disposable scrubbing pad and solvent such that each 900 cm^2 (1 square foot) of the surface is always very wet for 1 minute. Wipe smooth surfaces with a solvent-soaked, disposable absorbent pad such that each 900 cm^2 (1 square foot) is wiped for 1 minute. Any surface <1 square foot shall also be wiped for 1 minute. Wipe, mop, and/or sorb the solvent onto absorbent material until no visible traces of the solvent remain.

(b) *First rinse.* Wet the surface with clean rinse solvent such that the entire surface is very wet for 1 minute. Drain and contain the solvent from the surface. Wipe the residual solvent off the drained surface using a clean, disposable absorbent pad until no liquid is visible on the surface.

(c) *Second wash.* Repeat the procedures in paragraph (a) of this section. The rinse solvent from the first rinse (paragraph (b) of this section) may be used.

(d) *Second rinse.* Repeat the procedures in paragraph (b) of this section.

As stated in 40 CFR Part 761, this procedure is intended for a spill on non-porous surfaces. As such, it is anticipated that this method will not be effective for removing higher concentrations of PCBs; however, it may be useful in remediating the sections of the building that exhibit levels of PCBs that are only slightly greater than the cleanup criteria.

6.1.2 Scarification

Scarifying the contaminated concrete surfaces mechanically removes PCB contaminated concrete to the depth of permeation. The depth of permeation may be determined by collecting discrete samples at specific depths of concrete, or by scarifying the top layer of concrete and then re-sampling. All concrete and dust generated during the scarification process is collected and properly disposed. After scarification is complete, a high-performing surface coat of concrete is used to return the flooring to the original elevation, if necessary.

6.1.3 Remove and Replace

The most effective method for completely removing all PCB contamination is to demolish the areas of concrete floor and poor new floor slabs. This method would involve saw-cutting, jack hammering, or utilizing other means to break up the concrete floor so that it can be removed from the building and properly disposed. New concrete floor would then be installed.

Care must be taken when using this method to ensure that structural concrete is not removed or adequate shoring is provided. This may prevent some potentially impacted concrete from being removed.

6.1.4 Capping

EPA regulations (40 CFR Part 761.61) allow capping of porous surfaces in high occupancy areas where the bulk PCB remediation waste exists at levels greater than 1 ppm and less than or equal to 10 ppm. The cap may be constructed of soil, asphalt, or concrete, and must be of sufficient strength to maintain its effectiveness and integrity during the use of the cap surface which is exposed to the environment. A soil cap must be at least 10 inches thick, and a concrete or asphalt cap must be at least 6 inches thick.

6.2 Wood Flooring Remedial Alternatives

PCB contaminated wood flooring (i.e. bulk PCB remediation waste) should be removed and properly disposed. Due to the more stringent (i.e. costly) disposal requirements for materials with greater than 50 ppm PCBs, additional analysis may be conducted in order to determine the quantity of material that is required to be disposed of at the higher cost disposal facility.

6.3 Subsurface Soil and Floor Drain Sediment Remedial Alternatives

6.3.1 Capping

EPA regulations (40 CFR Part 761.61) allow capping of bulk PCB remediation waste (including soil and sediment) in high occupancy areas where the bulk PCB remediation waste exists at levels greater than 1 ppm and less than or equal to 10 ppm. The cap may be constructed of soil, asphalt, or concrete, and must be of sufficient strength to maintain its effectiveness and integrity during the use of the cap surface which is exposed to the environment. A soil cap must be at least 10 inches thick and a concrete or asphalt cap must be at least 6 inches thick.

6.3.2 Excavation and Disposal

PCB contaminated subsurface soil may also be excavated, removed, and properly disposed. Because the contaminated soil is concentrated under the building, the concrete floor of the site structure must be demolished and removed prior to excavation. An excavation shoring plan must be also be generated prior to excavation in order to prevent undermining and/or compromising the structural stability of the building walls and foundations. Once all necessary flooring has been removed and shoring is in place, the soil can then be excavated and staged on and covered with plastic sheeting at the Site. The soil pile must be characterized and approved by the disposal facility prior to hauling offsite for disposal.

7.0 Remedial Action Selection

In consideration of the above described remedial alternatives, there are two (2) primary remedial strategies to be considered with regards to the intended future use of the building at 1333 East Dominick Street: 1) Perform remedial actions at the Site in order to meet NYSDEC's restricted-residential SCOs and EPA's high-occupancy use cleanup criteria; or 2) Perform remedial actions at the Site in order to meet NYSDEC's industrial SCO's and EPA's high-occupancy use cleanup criteria (utilizing a cap over porous surfaces and bulk PCB remediation waste where necessary), including the implementation of an institutional control in the form of a deed restriction to address the remaining bulk PCB remediation waste at the Site.

7.1 Option 1 – Interior: High-Occupancy with No Restrictions, Sub-Surface Soil: Restricted-Residential Standards

It is anticipated that the remedial actions necessary in order to meet the high-occupancy use criteria for the concrete floors and wood flooring material and restricted-residential use SCOs for the subsurface soil are as follows (as shown in Figure 3):

- Removal of all remaining debris and materials from inside the site structure that would inhibit PCB cleanup activities.
- Removal and disposal of the wood flooring in the basement.
- Saw-cut and demolish all concrete floor above the estimated area of subsurface soil contamination. Shore foundations of the building and excavate and remove contaminated soil.

- Excavation and removal of the floor drain in Shop A, verify that no outlet pipe exists, and pour new concrete floor.

- Scarification of all remaining concrete in Shops A, B, and C, Storage, Boiler Room, and basement. Conduct confirmatory sampling and pour a new concrete skim coat, if required.

- Demolition and removal of the concrete floor in the Machine Room. Replace with new concrete floor.

7.2 Option 2 – Interior: High-Occupancy Use with Cap, Sub-Surface Soil: Industrial Use Standards

It is anticipated that the remedial actions necessary in order to meet the high-occupancy use criteria with the use of capping systems where required for the concrete floors and wood flooring material and industrial use SCOs for the subsurface soil are as follows (as shown in Figure 4):

- Removal of all remaining debris and materials from inside the site structure that would inhibit PCB cleanup activities.

- Removal and disposal of the wood flooring in the basement.

- Utilize the existing concrete floor slab as a cap for the subsurface soil contamination.

- Excavation and removal of the floor drain in the Boiler Room, verify that no outlet pipe exists, and pour new concrete floor.

- Excavation and removal of the floor drain in Shop A, verify that no outlet pipe exists, and pour new concrete floor.

- Conduct the double wash-rinse method for cleaning the floors in Shops A, B, and C, Storage, Boiler Room, and basement.
- Conduct confirmatory sampling for all washed concrete floors to verify that the PCB levels are either at or below 1 ppm for no further action or at or below 10 ppm for capping.
- Scarification of all remaining concrete that is not at or below 10 ppm PCBs.
- Cap all concrete floors that continue to exhibit levels of PCBs greater than 1 ppm and less than or equal to 10 ppm with at least 6 inches of new concrete.
- Demolition and removal of the concrete floor in the Machine Room. Replace with new concrete floor.

7.3 Remedial Action Cost Comparison

Appendix B contains cost estimates for Options 1 and 2. The table below summarizes the opinion of probable costs.

Summary of Remedial Alternative Costs				
Remedial Alternative	**Capital Costs**	**Engineering and Laboratory**	**Contingency Costs**	**Total Opinion of Probable Costs**
Option 1	$455,000	$105,800	$84,200	**$645,000**
Option 2	$236,300	$68,500	$45,800	**$350,600**

As shown in the above table and Appendix B, the estimated cost of Option 2 is approximately $294,400 less than the estimated cost of Option 1, a savings of approximately 45%. Although Option 2 would likely result in a greater amount of PCB remediation waste remaining at the Site, it is not expected that any action, with the possible exception of razing the entire building structure, would ultimately result in the complete remediation of all PCB contamination at the Site. Furthermore, it is anticipated that the remedial actions proposed under Option 1 would not fully address the PCB contaminated soil that is assumed to exist below the foundations of the site structure. This assumption, coupled with the presence of an existing concrete cap over the area of assumed PCB contaminated soil, reduces the benefit that would be realized from excavating the PCB contaminated soil. As proposed, Option 2 would not result in an increased human exposure level due to additional concrete capping that would be installed in areas that continue to exhibit levels of PCBs greater than 1 ppm. Therefore, Option 2 is the recommended remedial strategy.

8.0 Conclusion

While the PCB contamination present in the concrete flooring at the 1333 East Dominick Street site is relatively widespread throughout the entire first floor shop area and the basement area of the multi-story portion of the structure, the PCB contamination detected in the subsurface soil beneath the floor slab appears to be localized and isolated. As previously discussed, the subsurface soil contamination is suspected to be the result of a drywell in the Boiler Room and a former UST in the courtyard area. Due to the apparent isolation of the PCB contaminated soil beneath the building, which provides a cap for the soil contamination, it is expected that the excavation, removal, and disposal of the subsurface soil is neither feasible nor necessary at this time. Although the remediation of the concrete flooring will be costly, it is expected that the recommended remedial strategy (Option 2) will prove to be effective in reducing the levels of PCBs such that the Site can be redeveloped for manufacturing use with minimal risk of human exposure to PCBs.

Table 1

Indoor PCB Sampling, Solid Samples

Rome ERP Site No. E633060, B&L 245.005

TABLE 1
INDOOR PCB SAMPLING
SOLID SAMPLES

TSCA (EPA) Applicability				SAMPLE ID:	1313ED-CONC-01COMP		
				LAB ORDER:	220-9351-3		
				SAMPLE DATE:	6/12/2009 12:30:00 PM		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment	LAB ID:	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	-	-	UG/KG	18000	U	1000
Aroclor 1221	11104-28-2	-	-	UG/KG	18000	U	1000
Aroclor 1232	11141-16-5	-	-	UG/KG	18000	U	1000
Aroclor 1242	53469-21-9	-	-	UG/KG	18000	U	1000
Aroclor 1248	12672-29-6	-	-	UG/KG	18000	U	1000
Aroclor 1254	11097-69-1	-	-	UG/KG	76000		1000
Aroclor 1260	11096-82-5	-	-	UG/KG	18000	U	1000
Aroclor 1262	37324-23-5	-	-	UG/KG	-		
Aroclor 1268	11100-14-4	-	-	UG/KG	-		
TOTAL DETECTABLE	**1336-36-3**	**50,000**	**-**	**UG/KG**	**76000**		

Standard:
TSCA Applicability

Notes:
Highlight indicates exceedance of standard:
Results are reported on a wet weight basis unless otherwise noted.

Qualifiers:
U - Compound not detected.

Abbreviations:
Qual - Qualifier
DF - Dilution factor
UG/KG - micrograms per kilogram
TSCA - Toxic Substances Control Act
EPA - Environmental Protection Agency
NYSDEC - New York State Department of Environmental Conservation

Table 2

Indoor PCB Sampling, Wipe Samples

TABLE 2
INDOOR PCB SAMPLING
WIPE SAMPLES

			SAMPLE ID:	1313ED-WP-01			1313ED-WP-02			1313ED-WP-03			1333ED-WIPE-SHOPD-1			1333ED-WIPE-SHOPD-2		
			LAB ORDER:	220-8178-10			220-9351-1			220-9351-2			RSK0820-17			RSK0820-18		
			SAMPLE DATE:	2/24/2009 11:25:00 AM			6/12/2009 11:20:00 AM			6/12/2009 11:22:00 AM			11/16/2009 16:10			11/16/2009 16:15		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment	LAB ID: RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	-	-	UG/WIPE 0.50	U		500	U	1000	50	U	100	0.00050	U	1	0.00050	U	1
Aroclor 1221	11104-28-2	-	-	UG/WIPE 0.50	U		500	U	1000	50	U	100	0.00050	U	1	0.00050	U	1
Aroclor 1232	11141-16-5	-	-	UG/WIPE 0.50	U		500	U	1000	50	U	100	0.00050	U	1	0.00050	U	1
Aroclor 1242	53469-21-9	-	-	UG/WIPE 0.50	U		500	U	1000	50	U	100	0.00050	U	1	0.00050	U	1
Aroclor 1248	12672-29-6	-	-	UG/WIPE 0.50	U		500	U	1000	50	U	100	0.00050	U	1	0.00050	U	1
Aroclor 1254	11097-69-1	-	-	UG/WIPE 3.8			2000		1000	520		100	1.8		1	2.8		1
Aroclor 1260	11096-82-5	-	-	UG/WIPE 0.50	U		500	U	1000	50	U	100	0.40		1	0.59		1
Aroclor 1262	37324-23-5	-	-	UG/WIPE -			-			-			0.00050	U	1	0.00050	U	1
Aroclor 1268	11100-14-4	-	-	UG/WIPE -			-			-			0.00050	U	1	0.00050	U	1
TOTAL DETECTABLE		**10**	**-**	**UG/WIPE 3.8**			**2000**			**520**			**2.2**			**3.39**		

Standards:
EPA High-Occupancy Use Cleanup Standard

Notes:
Highlight indicates exceedance of standard:
Results are reported on a wet weight basis unless otherwise noted.

Qualifiers:
U - Compound not detected.

Abbreviations:
Qual - Qualifier
DF - Dilution factor
UG/WIPE - micrograms per 100 square centimeter wipe area
TSCA - Toxic Substances Control Act
EPA - Environmental Protection Agency
NYSDEC - New York State Department of Environmental Conservation

Table 3

Indoor PCB Sampling, Solid/Soil Samples

TABLE 3
INDOOR PCB SAMPLING
SOLID/SOIL SAMPLES

				SAMPLE ID:	1333ED-WOOD-BASEMENT-1			1333ED-WOOD-BASEMENT-2			1333ED-CONC-SHOPA-1			1333ED-CONC-SHOPA-2			1333ED-SED-SHOPA DRAIN			1333ED-CONC-BOILERROOM-1		
				LAB ORDER:	RSK0820-01			RSK0820-02			RSK0820-03			RSK0820-04			RSK0820-05			RSK0820-08		
				SAMPLE DATE:	11/16/2009 11:32			11/16/2009 11:40			11/16/2009 12:10			11/16/2009 12:20			11/16/2009 12:40			11/16/2009 13:40		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment	LAB ID:	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	330	U	20	1800	U	100	21	U	1
Aroclor 1221	11104-28-2	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	330	U	20	1800	U	100	21	U	1
Aroclor 1232	11141-16-5	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	330	U	20	1800	U	100	21	U	1
Aroclor 1242	53469-21-9	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	330	U	20	1800	U	100	21	U	1
Aroclor 1248	12672-29-6	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	330	U	20	1800	U	100	21	U	1
Aroclor 1254	11097-69-1	-	-	UG/KG	73000		500	210000		500	21000		100	2000		20	14000		100	270		1
Aroclor 1260	11096-82-5	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	630		20	1800	U	100	100		1
Aroclor 1262	37324-23-5	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	330	U	20	1800	U	100	21	U	1
Aroclor 1268	11100-14-4	-	-	UG/KG	11000	U	500	17000	U	500	1700	U	100	330	U	20	1800	U	100	21	U	1
TOTAL DETECTABLE	**1336-36-3**	**1,000**	**-**	**UG/KG**	**73000**			**210000**			**21000**			**2630**			**14000**			**370**		

Standards:
EPA High-Occupancy Use Cleanup Standard and
NYSDEC Part 375 Commercial Use Soil Cleanup Objective

Notes:
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Results are reported on a wet weight basis unless otherwise noted.

Qualifiers:
U - Compound not detected.

Abbreviations:
Qual - Qualifier
DF - Dilution factor
UG/KG - micrograms per kilogram
TSCA - Toxic Substances Control Act
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NYSDEC - New York State Department of Environmental Conservation

TABLE 3
INDOOR PCB SAMPLING
SOLID/SOIL SAMPLES

				SAMPLE ID:	1333ED-CONC-BOILERROOM-2			1333ED-CONC-SHOPB-1			1333ED-CONC-SHOPB-2			1333ED-CONC-STORAGE-1			1333ED-CONC-STORAGE-2			1333ED-CONC-SHOPC-1		
				LAB ORDER:	RSK0820-09			RSK0820-10			RSK0820-11			RSK0820-12			RSK0820-13			RSK0820-14		
				SAMPLE DATE:	11/16/2009 13:50			11/16/2009 14:15			11/16/2009 14:25			11/16/2009 15:00			11/16/2009 15:10			11/16/2009 15:30		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment	LAB ID:	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	-	-	UG/KG	1700	U	100	1700	U	100	8300	U	500	850	U	50	170	U	10	2200	U	100
Aroclor 1221	11104-28-2	-	-	UG/KG	1700	U	100	1700	U	100	8300	U	500	850	U	50	170	U	10	2200	U	100
Aroclor 1232	11141-16-5	-	-	UG/KG	1700	U	100	1700	U	100	8300	U	500	850	U	50	170	U	10	2200	U	100
Aroclor 1242	53469-21-9	-	-	UG/KG	1700	U	100	1700	U	100	8300	U	500	850	U	50	170	U	10	2200	U	100
Aroclor 1248	12672-29-6	-	-	UG/KG	1700	U	100	1700	U	100	8300	U	500	850	U	50	170	U	10	2200	U	100
Aroclor 1254	11097-69-1	-	-	UG/KG	17000		100	25000		100	70000		500	1900		50	870		10	8600		100
Aroclor 1260	11096-82-5	-	-	UG/KG	3000		100	5100		100	8300	U	500	850	U	50	230		10	2200	U	100
Aroclor 1262	37324-23-5	-	-	UG/KG	1700	U	100	1700	U	100	8300	U	500	850	U	50	170	U	10	2200	U	100
Aroclor 1268	11100-14-4	-	-	UG/KG	1700	U	100	1700	U	100	8300	U	500	850	U	50	170	U	10	2200	U	100
TOTAL DETECTABLE	**1336-36-3**	**1,000**	**-**	**UG/KG**	**20000**			**30100**			**70000**			**1900**			**1100**			**8600**		

Standards:
EPA High-Occupancy Use Cleanup Standard and
NYSDEC Part 375 Commercial Use Soil Cleanup Objective

Notes:
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Abbreviations:
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DF - Dilution factor
UG/KG - micrograms per kilogram
TSCA - Toxic Substances Control Act
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TABLE 3
INDOOR PCB SAMPLING
SOLID/SOIL SAMPLES

				SAMPLE ID:	**1333ED-CONC-FIELD DUPE**			**1333ED-CONC-SHOPC-2**			**1333ED-CONC-MACHROOM-1**			**1333ED-CONC-BASEMENT-2**			**1333ED-WOOD-BASEMENT-3**			**1333ED-WOOD-BASEMENT-4**		
				LAB ORDER:	RSK0820-19			RSK0820-20			RTA0949-01			RTA0949-03			RTA0949-04			RTA0949-05		
				SAMPLE DATE:	11/16/2009 00:00			11/16/2009 15:50			01/21/2010 13:24			01/21/2010 14:26			01/21/2010 14:00			01/21/2010 14:30		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment	LAB ID:	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	-	-	UG/KG	1700	U	100	1700	U	100	6800	U	2000	180	U	50	380	U	100	330	U	100
Aroclor 1221	11104-28-2	-	-	UG/KG	1700	U	100	1700	U	100	6800	U	2000	180	U	50	380	U	100	330	U	100
Aroclor 1232	11141-16-5	-	-	UG/KG	1700	U	100	1700	U	100	6800	U	2000	180	U	50	380	U	100	330	U	100
Aroclor 1242	53469-21-9	-	-	UG/KG	1700	U	100	1700	U	100	7500	U	2000	200	U	50	420	U	100	360	U	100
Aroclor 1248	12672-29-6	-	-	UG/KG	1700	U	100	1700	U	100	6800	U	2000	180	U	50	380	U	100	330	U	100
Aroclor 1254	11097-69-1	-	-	UG/KG	3800		100	5100		100	140000		2000	1500		50	17000		100	9400		100
Aroclor 1260	11096-82-5	-	-	UG/KG	1700	U	100	1700	U	100	7300	U	2000	190	U	50	410	U	100	350	U	100
Aroclor 1262	37324-23-5	-	-	UG/KG	1700	U	100	1700	U	100	7300	U	2000	190	U	50	410	U	100	350	U	100
Aroclor 1268	11100-14-4	-	-	UG/KG	1700	U	100	1700	U	100	7300	U	2000	190	U	50	410	U	100	350	U	100
TOTAL DETECTABLE	**1336-36-3**	**1,000**	**-**	**UG/KG**	**3800**			**5100**			**140000**			**1500**			**17000**			**9400**		

Standards:
EPA High-Occupancy Use Cleanup Standard and
NYSDEC Part 375 Commercial Use Soil Cleanup Objective

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TABLE 3
INDOOR PCB SAMPLING SOLID/SOIL SAMPLES

			SAMPLE ID:	1333ED-CONC-BASEMENT-3			1333ED-CONC-FIELDDUP-2			1333ED-CONC-BASEMENT-1			1333ED-PCBBORING-1 (0'-4')			1333ED-PCBBORING-2 (0'-4')			1333ED-PCBBORING-3 (0'-3')		
			LAB ORDER:	RTA0949-06			RTA0949-07			RTA0949-08			RTB0895-01			RTB0895-02			RTB0895-03		
			SAMPLE DATE:	01/21/2010 14:35			01/21/2010 00:00			01/21/2010 14:02			02/19/2010 10:45			02/19/2010 11:10			02/19/2010 14:00		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment LAB ID:	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	- -	UG/KG	180	U	50	170	U	50	34	U	10	7.6	U	2	3.8	U	1	39	U	10
Aroclor 1221	11104-28-2	- -	UG/KG	180	U	50	170	U	50	34	U	10	7.6	U	2	3.8	U	1	39	U	10
Aroclor 1232	11141-16-5	- -	UG/KG	180	U	50	170	U	50	34	U	10	7.6	U	2	3.8	U	1	39	U	10
Aroclor 1242	53469-21-9	- -	UG/KG	200	U	50	190	U	50	38	U	10	8.5	U	2	4.3	U	1	43	U	10
Aroclor 1248	12672-29-6	- -	UG/KG	180	U	50	170	U	50	34	U	10	7.6	U	2	3.8	U	1	39	U	10
Aroclor 1254	11097-69-1	- -	UG/KG	5400		50	1500		50	1000		10	320		2	4.8	J	1	1400		10
Aroclor 1260	11096-82-5	- -	UG/KG	190	U	50	180	U	50	37	U	10	8.2	U	2	4.1	U	1	42	U	10
Aroclor 1262	37324-23-5	- -	UG/KG	190	U	50	180	U	50	37	U	10	8.3	U	2	4.1	U	1	42	U	10
Aroclor 1268	11100-14-4	- -	UG/KG	190	U	50	180	U	50	37	U	10	8.2	U	2	4.1	U	1	42	U	10
TOTAL DETECTABLE	**1336-36-3**	**1,000 -**	**UG/KG**	**5400**			**1500**			**1000**			**320**			**4.8**			**1400**		

Standards:
EPA High-Occupancy Use Cleanup Standard and
NYSDEC Part 375 Commercial Use Soil Cleanup Objective

Notes:
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Abbreviations:
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UG/KG - micrograms per kilogram
TSCA - Toxic Substances Control Act
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NYSDEC - New York State Department of Environmental Conservation

TABLE 3
INDOOR PCB SAMPLING
SOLID/SOIL SAMPLES

				SAMPLE ID:	1333ED-PCBBORING-4 (0'-4')			1333ED-PCBBORING-5 (0'-4')			1333ED-PCBBORING-6 (0'-4')			1333ED-PCBBORING-6 DEEP (4'-8')			1333ED-PCBBORING-FIELD DUP (BORING 6 DEEP)			1313ED-SB-01 (0'-8')		
				LAB ORDER:	RTB0895-04			RTB0895-05			RTB0895-06			RTB0895-09			RTB0895-10			RSJ0969-01		
				SAMPLE DATE:	02/19/2010 16:30			02/19/2010 16:45			02/19/2010 16:55			02/19/2010 17:00			02/19/2010 00:00			10/15/2009 09:15		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment	LAB ID:	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	-	-	UG/KG	3.7	U	1	39	U	10	200	U	50	3.8	U	1	3.8	U	1	19	U	1
Aroclor 1221	11104-28-2	-	-	UG/KG	3.7	U	1	39	U	10	200	U	50	3.8	U	1	3.8	U	1	19	U	1
Aroclor 1232	11141-16-5	-	-	UG/KG	3.7	U	1	39	U	10	200	U	50	3.8	U	1	3.8	U	1	19	U	1
Aroclor 1242	53469-21-9	-	-	UG/KG	4.1	U	1	43	U	10	220	U	50	4.2	U	1	4.2	U	1	19	U	1
Aroclor 1248	12672-29-6	-	-	UG/KG	3.7	U	1	39	U	10	200	U	50	3.8	U	1	3.8	U	1	19	U	1
Aroclor 1254	11097-69-1	-	-	UG/KG	690		1	610		10	19000		50	420		1	140		1	19	U	1
Aroclor 1260	11096-82-5	-	-	UG/KG	4	U	1	42	U	10	210	U	50	4.1	U	1	4.1	U	1	19	U	1
Aroclor 1262	37324-23-5	-	-	UG/KG	4	U	1	42	U	10	210	U	50	4.1	U	1	4.1	U	1	19	U	1
Aroclor 1268	11100-14-4	-	-	UG/KG	4	U	1	42	U	10	210	U	50	4.1	U	1	4.1	U	1	19	U	1
TOTAL DETECTABLE	**1336-36-3**	**1,000**	**-**	**UG/KG**	**690**			**610**			**19000**			**420**			**140**			**0**		

Standards:
EPA High-Occupancy Use Cleanup Standard and
NYSDEC Part 375 Commercial Use Soil Cleanup Objective

Notes:
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Qualifiers:
U - Compound not detected.

Abbreviations:
Qual - Qualifier
DF - Dilution factor
UG/KG - micrograms per kilogram
TSCA - Toxic Substances Control Act
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NYSDEC - New York State Department of Environmental Conservation

TABLE 3
INDOOR PCB SAMPLING
SOLID/SOIL SAMPLES

				SAMPLE ID:	1313ED-SB-04 (0'-4')			1313ED-SB-06 (8'-13')			1313ED-SB-13 (16'-20')			1313ED-SB-14 (12'-16')			1313ED-SB-15 (8'-12')		
				LAB ORDER:	RSJ0969-02			RSJ1025-02			RSJ0969-03			RSJ1025-01			RSJ0969-04		
				SAMPLE DATE:	10/15/2009 11:15			10/16/2009 10:15			10/15/2009 14:15			10/16/2009 09:15			10/15/2009 15:30		
PCBs (EPA METHOD 8080)	CAS	Standard	Comment	LAB ID:	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF	RESULT	QUAL	DF
Aroclor 1016	12674-11-2	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
Aroclor 1221	11104-28-2	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
Aroclor 1232	11141-16-5	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
Aroclor 1242	53469-21-9	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
Aroclor 1248	12672-29-6	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
Aroclor 1254	11097-69-1	-	-	UG/KG	25000		100	1000		10	260		1	42		1	17		1
Aroclor 1260	11096-82-5	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
Aroclor 1262	37324-23-5	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
Aroclor 1268	11100-14-4	-	-	UG/KG	1900	U	100	170	U	10	18	U	1	18	U	1	17	U	1
TOTAL DETECTABLE	**1336-36-3**	**1,000**	**-**	**UG/KG**	**25000**			**1000**			**260**			**42**			**17**		

Standards:
EPA High-Occupancy Use Cleanup Standard and
NYSDEC Part 375 Commercial Use Soil Cleanup Objective

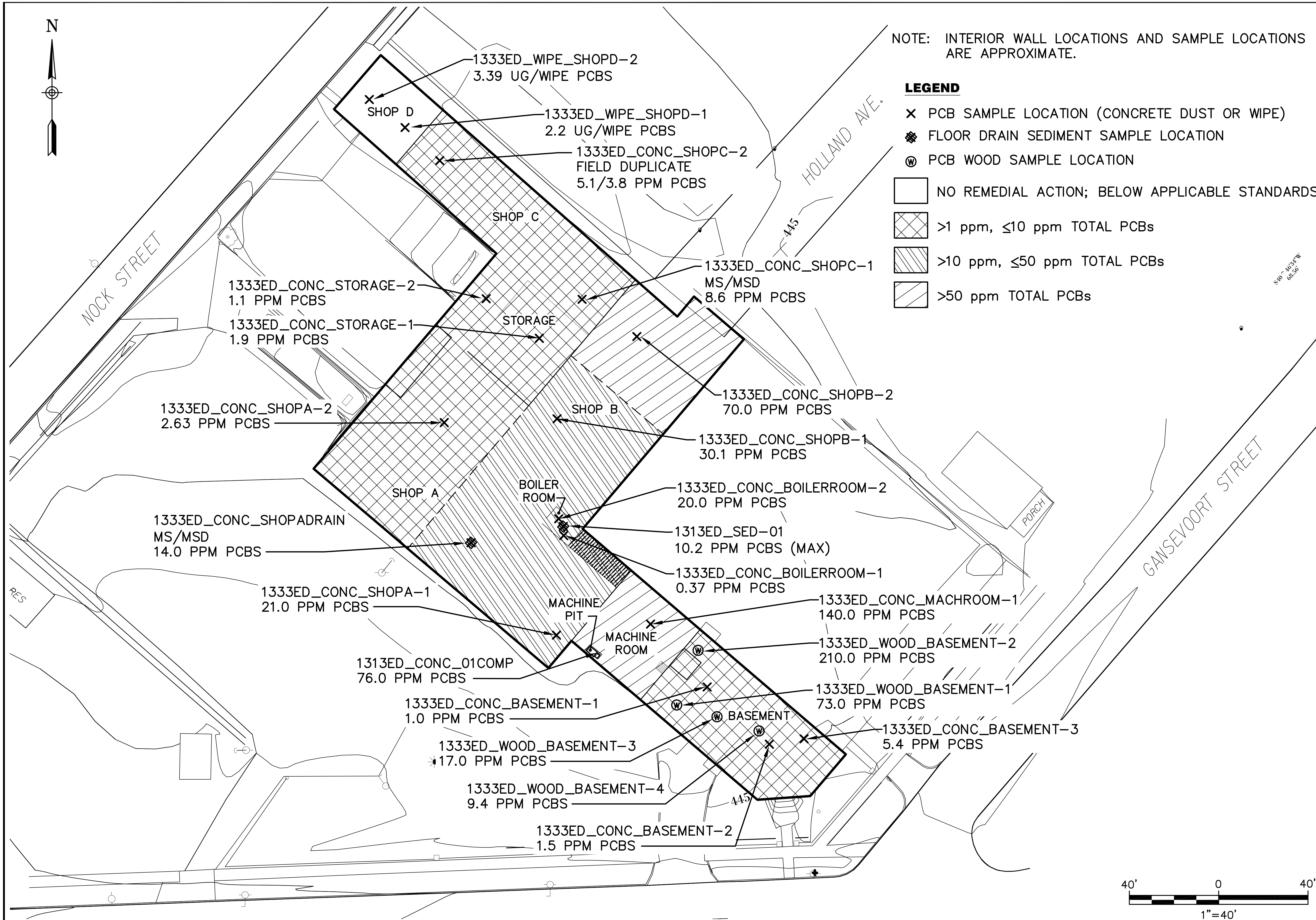
Notes:
Highlight indicates exceedance of standard:
Results are reported on a wet weight basis unless otherwise noted.

Qualifiers:
U - Compound not detected.

Abbreviations:
Qual - Qualifier
DF - Dilution factor
UG/KG - micrograms per kilogram
TSCA - Toxic Substances Control Act
EPA - Environmental Protection Agency
NYSDEC - New York State Department of Environmental Conservation

Figure 1

Floor PCB Sample Locations and Results



CITY OF ROME
PCB INTERIM REMEDIAL WORK PLAN

1333 EAST DOMINICK STREET
FLOOR PCB SAMPLE LOCATIONS AND RESULTS

CITY OF ROME ONEIDA COUNTY, NEW YORK

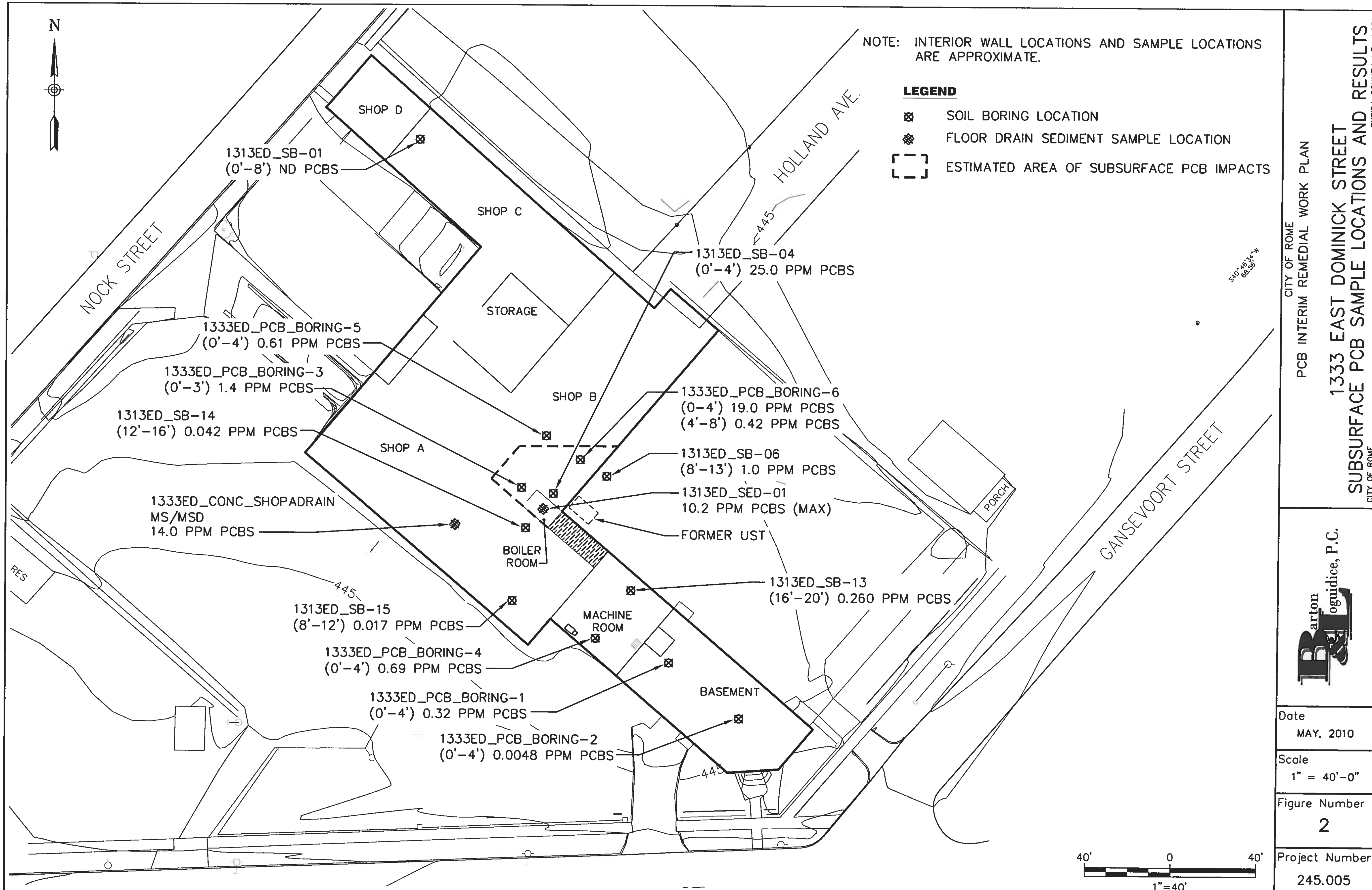
Barton & Loguidice, P.C.

Date	MAY, 2010
Scale	1" = 40'-0"
Figure Number	1
Project Number	245.005

Plotted: Jun 09, 2010 – 12:03PM SYR By: ict
I:\Shared\200\245005-S\FIGURES\245005_EPA PCB_FIG01-R.dwg

Figure 2

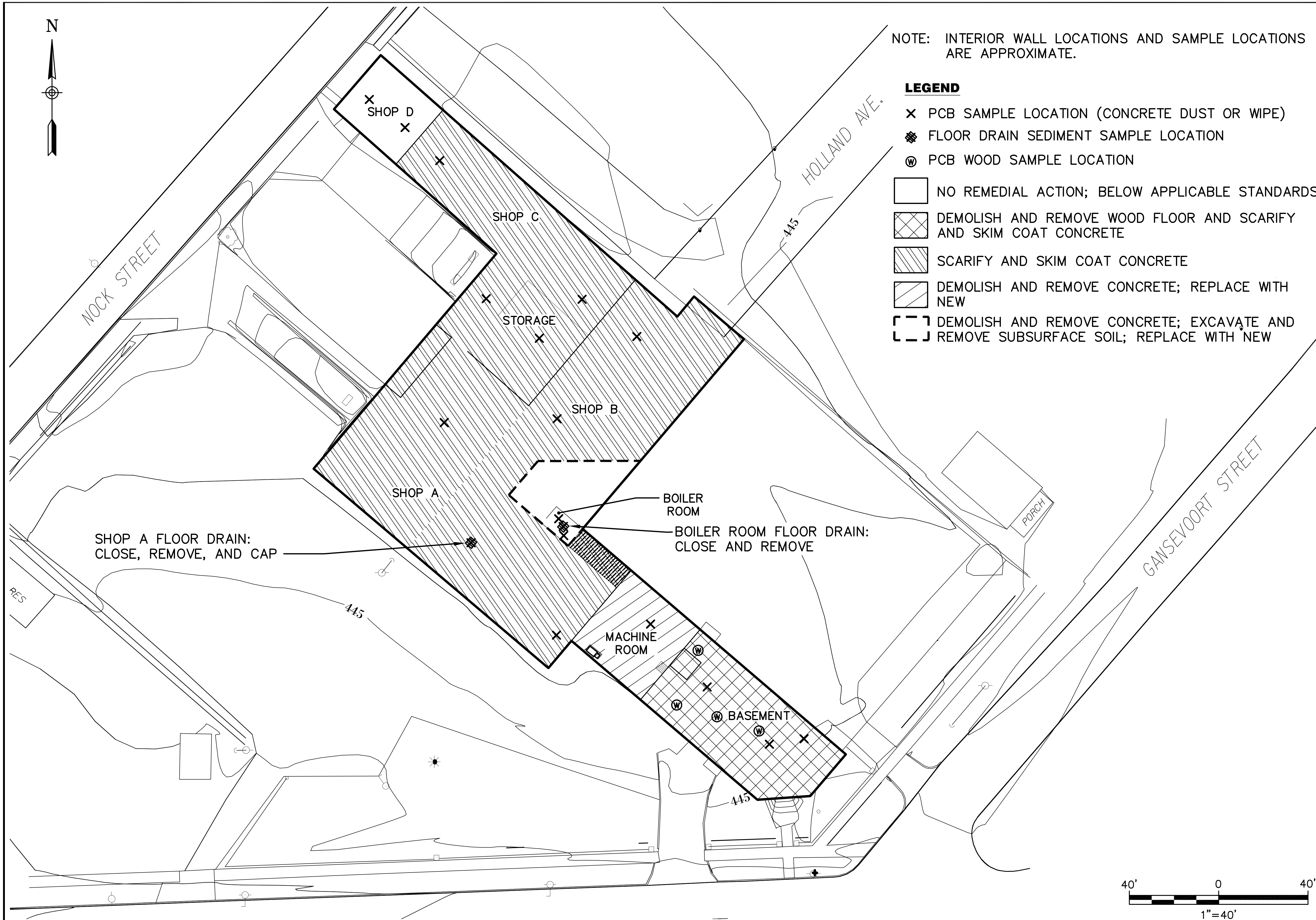
Subsurface PCB Sample Locations and Results



N
NOTE: INTERIOR WALL LOCATIONS AND SAMPLE LOCATIONS ARE APPROXIMATE.
LEGEND
SOIL BORING LOCATION
FLOOR DRAIN SEDIMENT SAMPLE LOCATION
ESTIMATED AREA OF SUBSURFACE PCB IMPACTS
NOCK STREET
HOLLAND AVE.
GANSEVOORT STREET
SHOP D
SHOP C
STORAGE
SHOP B
SHOP A
BOILER ROOM
MACHINE ROOM
BASEMENT
PORCH
RES
445
1313ED_SB-01
(0'-8') ND PCBS
1313ED_SB-04
(0'-4') 25.0 PPM PCBS
1333ED_PCB_BORING-5
(0'-4') 0.61 PPM PCBS
1333ED_PCB_BORING-3
(0'-3') 1.4 PPM PCBS
1313ED_SB-14
(12'-16') 0.042 PPM PCBS
1333ED_PCB_BORING-6
(0-4') 19.0 PPM PCBS
(4'-8') 0.42 PPM PCBS
1313ED_SB-06
(8'-13') 1.0 PPM PCBS
1313ED_SED-01
10.2 PPM PCBS (MAX)
1333ED_CONC_SHOPADRAIN
MS/MSD
14.0 PPM PCBS
FORMER UST
1313ED_SB-13
(16'-20') 0.260 PPM PCBS
1313ED_SB-15
(8'-12') 0.017 PPM PCBS
1333ED_PCB_BORING-4
(0'-4') 0.69 PPM PCBS
1333ED_PCB_BORING-1
(0'-4') 0.32 PPM PCBS
1333ED_PCB_BORING-2
(0'-4') 0.0048 PPM PCBS
S40°46'34"W
68.56'
40' 0 40'
1"=40'
CITY OF ROME
PCB INTERIM REMEDIAL WORK PLAN
1333 EAST DOMINICK STREET
SUBSURFACE PCB SAMPLE LOCATIONS AND RESULTS
CITY OF ROME
ONEIDA COUNTY, NEW YORK
Barton & Loguidice, P.C.
Date
MAY, 2010
Scale
1" = 40'-0"
Figure Number
2
Project Number
245.005
Plotted: May 07, 2010 - 8:46AM SYR By: jgs
I:\Shared\200\245005-S\245005_EPA PCB_FIG02-R.dwg

Figure 3

Remedial Option No. 1



Plotted: Jun 09, 2010 – 11:21AM SYR By: ict
I:\Shared\200\245005-S\FIGURES\245005_EPA PCB_FIG03.dwg

CITY OF ROME
PCB INTERIM REMEDIAL WORK PLAN

1333 EAST DOMINICK STREET
REMEDIAL OPTION NO. 1

ONEIDA COUNTY, NEW YORK

CITY OF ROME

Barton & Loguidice, P.C.

Date
MAY, 2010

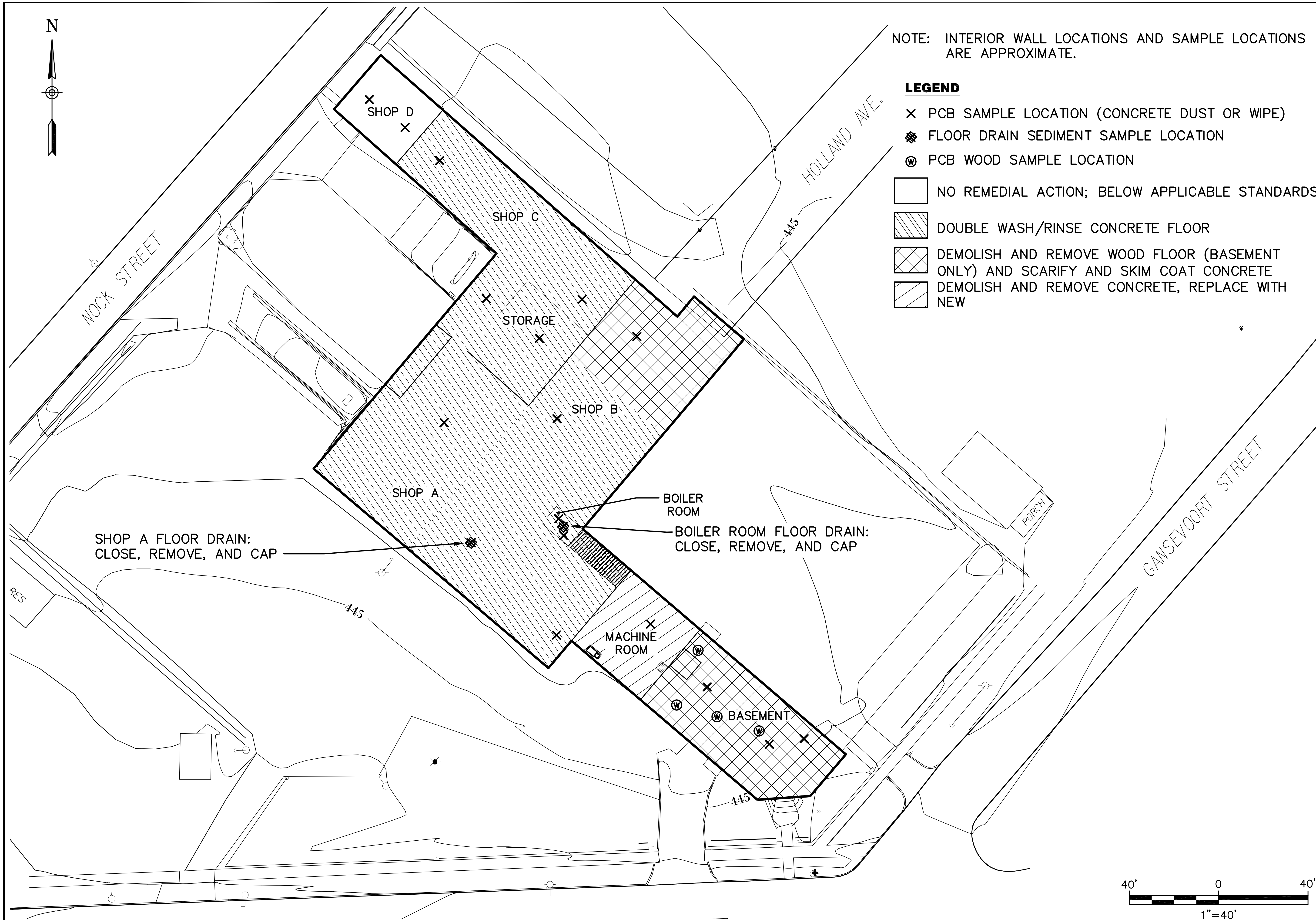
Scale
1" = 40'-0"

Figure Number
3

Project Number
245.005

Figure 4

Remedial Option No. 2



CITY OF ROME

PCB INTERIM REMEDIAL WORK PLAN

1333 EAST DOMINICK STREET
REMEDIAL OPTION NO. 2

ONEIDA COUNTY, NEW YORK

CITY OF ROME

Barton & Loguidice, P.C.

Date: MAY, 2010

Scale: 1" = 40'-0"

Figure Number: 4

Project Number: 245.005

Plotted: Jun 09, 2010 – 11:19AM SYR By: lct
I:\Shared\200\245005-S\FIGURES\245005_EPA PCB_FIG04.dwg

Appendix A

PCB Site Investigation Work Plan

August 14, 2009

Philip G. Waite, P.E.
NYSDEC Region 6
Dulles State Office Building
317 Washington Street
Watertown, New York 13601-3787

Re: City of Rome Environmental Restoration Project
1333 East Dominick Street - Site No. E633060
PCB Site Investigation Work Plan – Revision 1

File: 245.005

Dear Mr. Waite:

As previously discussed, Barton & Loguidice, P.C. (B&L) conducted a preliminary site investigation of potential areas of concern existing within the building structure at 1333 East Dominick (1333ED or Site). This work, which was performed in accordance with the provisions of the NYSDEC-approved Site Investigation Work Plan, resulted in the discovery two (2) areas within the 28,000 square foot building structure that contain elevated PCB concentrations (as discussed in greater detail below). As a result, B&L has prepared this PCB Site Investigation Work Plan in order to further characterize and delineate the PCB-contaminated areas within the building.

The first area of the building with elevated PCB concentrations consists of an approximately 40-foot square room that is located between the office area and warehouse area. This portion of the building appears to have previously contained manufacturing equipment, as evidenced by the presence of a machine pit (aka concrete sump). The “machine room” is noted on Figure 1 (see attached). The concrete sump appears to have been incorporated into the floor of the building upon construction. This section of the building is characterized by an un-coated concrete floor slab (no basement), painted concrete block walls, glass block windows, and a brick exterior.

The second area of the building in which PCBs were detected is the boiler room. This portion of the building appears to previously have contained the heating equipment for the building. The boiler room is of similar construction to that of the machine room. Figure 1 depicts the boiler room location.

Description of Sample Collection Methods and Analysis

<u>Machine Room:</u>

The PCB screening level samples that were collected by B&L from the concrete sump in the machine room consisted of the following (refer to Figure 1 for sample locations):

2 Corporate Plaza • 264 Washington Avenue Extension
Telephone: 518-218-1801 • Facsimile: 518-218-1805 • www.BartonandLoguidice.com

Liquid/Sludge Samples

Two (2) samples (designated as 1313ED-SED-02A and 1313ED-SED-02B) were collected from the liquid and sludge within the sump. The samples were collected in February of 2009. Due to the cold ambient temperature, the material in the sump was semi-solid. As a result, the sample material was scooped into jars using disposable plastic scoops.

Concrete Dust Sample

One (1) composite concrete dust sample (designated as 1313ED-CONC-01-COMP) was collected in June 2009 from approximately thirty (30) small diameter drill holes that were advanced into the concrete floor area surrounding the sump in the machine room. The drill holes, which were ½-inch in diameter and roughly ½-inch deep, were performed using a hammer-drill. Matrix spike and matrix spike duplicate (MS/MSD) analysis were also performed on the composite concrete dust sample.

Wipe Samples

Also in June 2009, two (2) wipe samples (designated as 1313ED-WP-02 and 1313ED-WP-03) were collected from 100-square centimeter areas of the concrete floor. Specifically, a 10-centimeter by 10-centimeter template was placed on the concrete floor in two (2) separate locations, and the wipe samples were collected by wiping the floor with a hexane-saturated wipe using side to side motions along the x and y axis.

<u>Boiler Room</u>:

The PCB screening level samples collected by B&L from the boiler room consisted of the following (refer to Figure 1 for sample locations), all of which were collected during the February 2009 sampling event:

Floor Drain Sediment Samples

Two (2) sediment samples and a duplicate sediment sample (designated as 1313ED-SED-01A, 1313ED-SED-01B, and 1313ED-SED-01A-DUP, respectively) were collected from the sediment existing within the floor drain in the boiler room. The sample material was scooped into jars using disposable plastic scoops.

Wipe Samples

One (1) wipe sample (designated as 1313ED-WP-01) was collected from a 100-square centimeter area of the concrete floor using a 10-centimeter by 10-centimeter template and a wipe saturated with hexane. As previously noted, the wipe sample was collected by wiping the floor using side to side motions along the x and y axis.

PCB Sample Analysis

Each of the liquid/sludge, sediment, concrete dust, and wipe samples described above were analyzed by TestAmerica, the project laboratory, for the presence of PCBs using EPA Method 8082. Table 1 summarizes the findings of the various PCB samples collected from the concrete sump and surrounding area within the machine room.

PCB Sample Results

PCBs were detected in the liquid/sludge samples obtained from the concrete sump in the machine room at levels up to 200 parts per million (ppm); in the concrete floor dust samples at concentrations up to 76 ppm; and in the wipe samples at levels up to 2,000 micrograms per 100 square centimeters of wipe (ug/100 cm^2 wipe).

PCBs were detected in the floor drain sediment in the boiler room at levels up to 10.5 ppm, and at a concentration of 3.8 ug/100 cm^2 wipe in the wipe sample collected from the boiler room area.

The analytical results of the above-described samples are summarized in Table 1 (sediment and concrete dust samples) and Table 2 (wipe samples). The full laboratory reports are included in Attachment 1. It should be noted that these sample results have not been validated.

Interim Remedial Measure (IRM) Cleanup Activities

As part of the IRM activities being performed at 1333 East Dominick Street, the PCB contaminated sludge present in the concrete sump in the machine room was removed by OP-TECH Environmental Services, Inc. The floor in the boiler room was cleaned of oily water and debris and an approximately 275-gallon capacity basement style heating oil tank (which was found to be empty) was closed and removed. A second roughly 1,000-gallon capacity aboveground tank that was oriented vertically and plumbed into the boiler room was also closed and removed. This particular tank was found to contain a small amount of residual product that apparently consisted of used oil. Finally, it should be noted that an air compressor remains in the boiler room along the northwest wall.

The maximum level of PCBs detected in the characterization samples collected by the Contractor during the IRM work, aside from the material from the concrete sump, was 0.75 ppm in the solids and 5.9 ppm in the oil.

Proposed Phase II and Phase III PCB Investigations

Phase II PCB Screening Level Investigation

In accordance with applicable United States Environmental Protection Agency (EPA) Regulations, a supplemental PCB screening level sampling and analysis program (Phase II) will be performed by B&L at 1333 East Dominick Street in order to further characterize and evaluate the extent and magnitude of PCB contamination within the building structure. Specifically this Phase II investigation will consist of the collection of a minimum of two (2) PCB samples per room or area in the non-office space portions of the building (as shown in Figure 2). In addition, PCB samples will also be collected from the remainder of the floor drains, sumps, and pits existing within the building.

The two (2) PCB samples to be collected from each non-office room at 1333 East Dominick Street will consist of concrete dust samples for porous surfaces and wipe samples for non-porous surfaces. The PCB samples will be collected in accordance with the sampling procedures outlined in EPA's Standard Operating Procedures (SOP) publication number 2011 entitled "Chip, Wipe, and Sweep Sampling" (see Attachment 2).

Samples of the sediment/sludge/liquid in the floor drains, sumps, and pits will be collected using disposable scoops or bailers (depending on the matrix type).

<u>Phase III PCB Investigation</u>

Based on the findings of the Phase II screening level investigation, a targeted PCB sampling and analysis program (Phase III) will be conducted by B&L at 1333 East Dominick Street. The Phase III sample locations will be determined based on the previously referenced EPA recommended procedures as follows:

1. A three (3)-meter interval grid will be established within the areas of known PCB contamination based on the results of the Phase II screening level investigation.

2. Each grid line will be assigned a sequential number.

3. A random number generator (e.g., random.org) will be utilized to determine the grid coordinate sampling location by choosing an *x* coordinate and a *y* coordinate, respectively.

4. Surface debris will be removed from the sample area, and

   a. For porous surfaces: ½-inch deep holes will be drilled in the concrete floor in the selected sample location until a sufficient amount of concrete dust material (approximately 30 milligrams per sample) has been generated for sample analysis. The concrete dust will be scooped into the sample jar using a disposable scoop. Sampling will be conducted in accordance with EPA SOP No. 2011. A minimum of three (3) concrete dust samples will be collected from each discrete porous area of PCB contamination.

   b. For non-porous surfaces: wipe samples will be collected from a 100-square centimeter area of the surface using 10-centimeter by 10-centimeter template and a wipe saturated with hexane. The samples will be collected by wiping the floor using side to side motions along the x and y axis in accordance with SOP No. 2011. A minimum of three (3) wipe samples will be collected from each discrete non-porous area of PCB contamination.

Sample Analysis

All samples will be analyzed by the project laboratory (TestAmerica) using EPA Method 8082 for PCBs.

Self-Implementing PCB Cleanup Plan

Upon determination of the full extent of PCB contamination within the building structure at 1333 East Dominick Street, we will contact the Department to discuss the results of the Phase II and Phase III investigations. With the concurrence of the NYSDEC, B&L will then arrange for the remediation of the PCB-contaminated areas within the building structure in accordance with EPA Regulations. Specifically, an EPA Self-Implementing PCB Cleanup will be conducted for all Toxic Substance Control Act (TSCA) regulated materials discovered to exist within the building structure. Subsequent to the site characterization, but at least 30-days prior to the commencement of remediation work, B&L will prepare and submit a Self-Implementing Cleanup Notification (in accordance with 40 CFR Part 761.61) to alert the EPA of the extent of contamination and intended remediation work.

PCB Site Investigation Costs

B&L has prepared an estimate of the engineering and sub-consultant fees associated with the tasks described above. However, this estimate does not include costs associated with designing a remedial action, the implementation of this action by a contractor, and engineering oversight during this work.

It is anticipated that costs associated with Phases I and II of the PCB Site Investigation and the review, analysis, and reporting of the findings as well as the preparation of a Self-Implementing Cleanup Procedures Work Plan for the EPA will be approximately seven thousand five hundred dollars ($7,500). The laboratory fees for the associated work are anticipated to be two thousand dollars ($2,000).

The City intends to begin the above described site investigation and characterization activities as soon as possible upon receiving written Department approval. Should you have any questions, comments, or concerns regarding the information presented herein, please do not hesitate to contact me at (518) 218-1801.

Very truly yours,

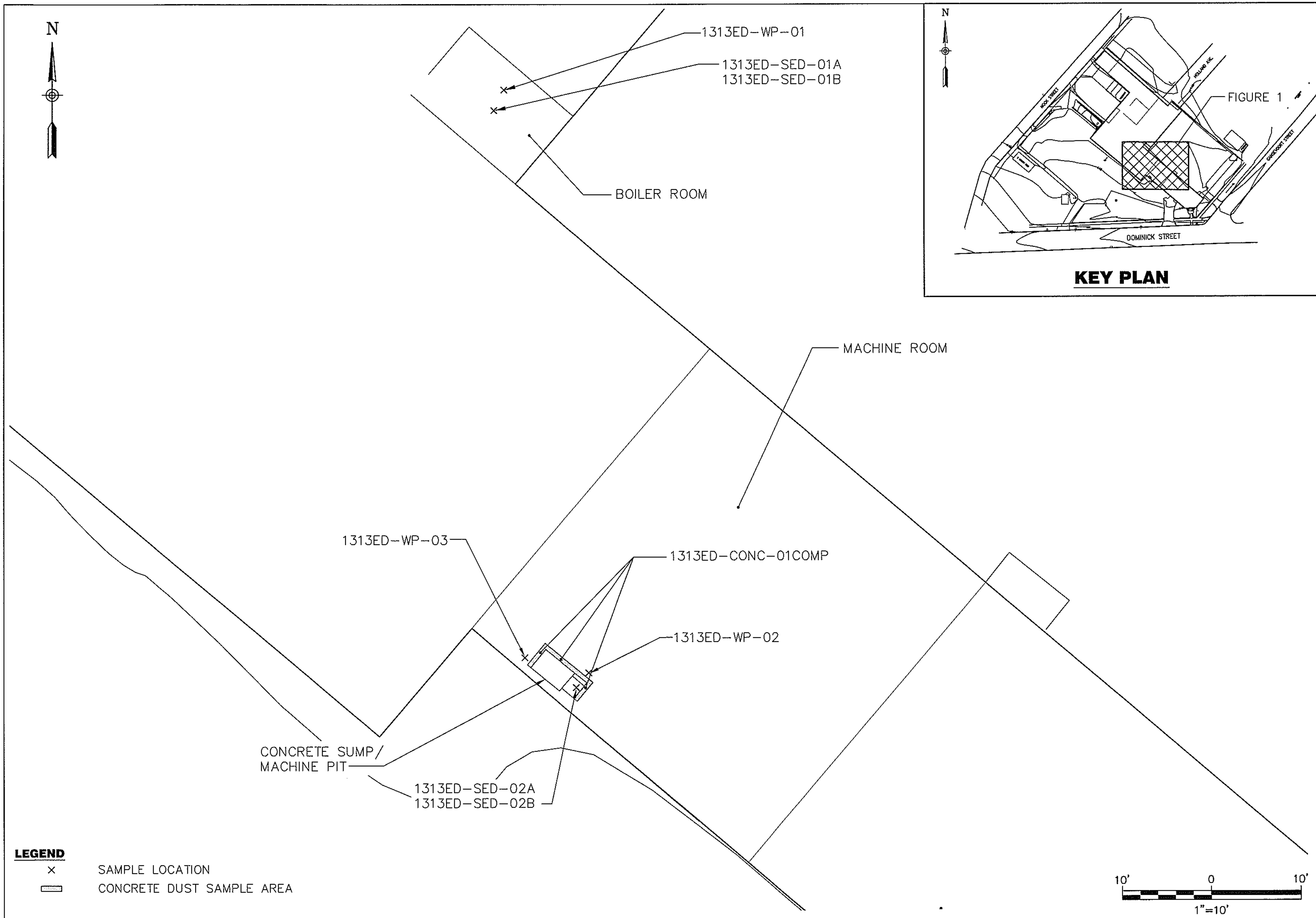
BARTON & LOGUIDICE, P.C.

Stephen B. Le Fevre, P.G.
Managing Hydrogeologist

SBL/akg
Enclosures
cc: Christian Mercurio, City of Rome
Frank Tallarino, City of Rome

Figure 1

Partial Site Plan



CITY OF ROME
SELF-IMPLEMENTING PCB CLEANUP

1333 EAST DOMINICK STREET
PARTIAL SITE PLAN

ONEIDA COUNTY, NEW YORK

CITY OF ROME

Barton & Loguidice, P.C.

Date
AUGUST, 2009

Scale
1" = 10'-0"

Figure Number
1

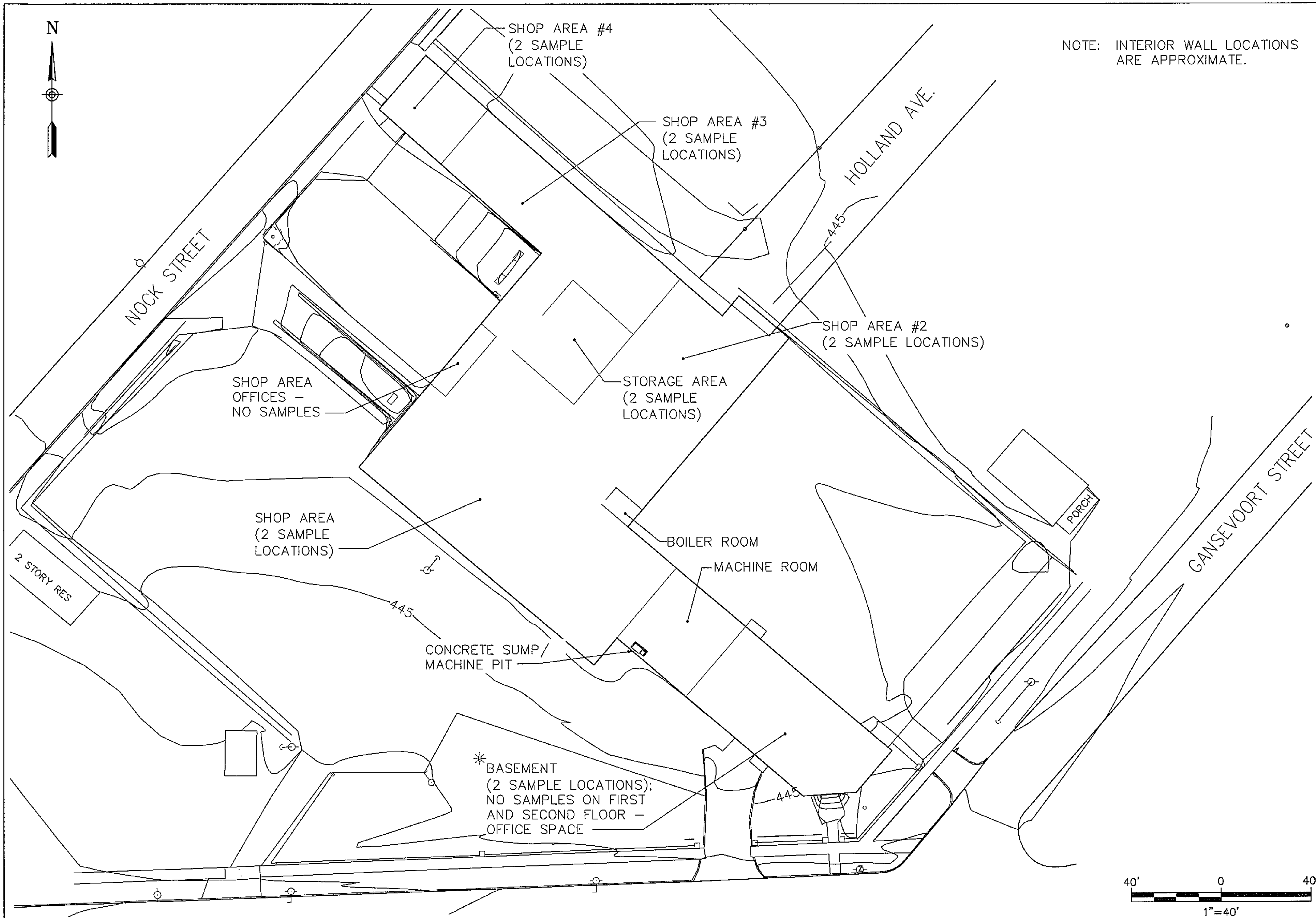
Project Number
245.005

Plotted: Aug 03, 2009 – 2:48PM SYR By: ict
I:\Shared\200\245005-S\DATA\EPA PCB workplan figure 1 and 2.dwg

Figure 2

Proposed PCB Sampling Locations

Plotted: Aug 03, 2009 – 2:47PM   SYR   By: lct
I:\Shared\200\245005-S\DATA\EPA PCB workplan figure 1 and 2.dwg



CITY OF ROME
SELF-IMPLEMENTING PCB CLEANUP
1333 EAST DOMINICK STREET
PROPOSED PCB SAMPLING LOCATIONS
ONEIDA COUNTY, NEW YORK
CITY OF ROME

Barton & Loguidice, P.C.

Date	AUGUST, 2009
Scale	1" = 40'-0"
Figure Number	2
Project Number	245.005

Table 1

Sediment and Concrete Dust Sample Results

1333 EAST DOMINICK STREET
PCB SITE INVESTIGATION WORK PLAN
TABLE 1 - SEDIMENT AND CONCRETE DUST SAMPLE RESULTS

	Sample ID:	1313ED-SED-01A		1313ED-SED-01A-DUP		1313ED-SED-01B		1313ED-SED-02A		1313ED-SED-02B		1313ED-CONC-01COMP	
	Lab Sample Number:	220-8178-1		220-8178-2		220-8178-3		220-8178-4		220-8178-5		220-9351-3	
	Sampling Date:	2/24/2009 11:30:00 AM		2/24/2009 11:30:00 AM		2/24/2009 11:30:00 AM		2/24/2009 11:55:00 AM		2/24/2009 11:55:00 AM		6/12/2009 12:30:00 PM	
	Matrix:	Solid		Solid		Solid		Solid		Solid		Solid	
	Units:	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
METALS	Dilution Factor:	20		20		50		1000		1000		1000	
(EPA METHOD 8082)	CAS	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Aroclor-1016	12674-11-2	350	U	360	U	870	U	20000	U	22000	U	18000	U
Aroclor-1221	11104-28-2	350	U	360	U	870	U	20000	U	22000	U	18000	U
Aroclor-1232	11141-16-5	350	U	360	U	870	U	20000	U	22000	U	18000	U
Aroclor-1242	53469-21-9	350	U	360	U	870	U	20000	U	22000	U	18000	U
Aroclor-1248	12672-29-6	350	U	600		870	U	20000	U	22000	U	18000	U
Aroclor-1254	11097-69-1	3400		4600		7400		200000		130000		76000	
Aroclor-1260	11096-82-5	2000		2200		2800		20000	U	22000	U	18000	U
TOTAL DETECTABLE		5,400		7,400		10,200		200,000		130,000		76,000	

Notes:

Highlights indicate exceedence of Toxic Substance Control Act (TSCA) Waste Regulatory Limits of 50 ppm for solids and 10 ug/ 100 cm^2 for wipe samples.

Qualifiers:

*: MS or MSD exceeds the control limits
*: Surrogate exceeds the control limit
U: Analyzed for but not detected.

Table 2

Wipe Sample Results

1333 EAST DOMINICK STREET
PCB SITE INVESTIGATION WORK PLAN
TABLE 2 - WIPE SAMPLE RESULTS

	Sample ID:	1313ED-WP-01		1313ED-WP-02		1313ED-WP-03	
	Lab Sample Number:	220-8178-10		220-9351-1		220-9351-2	
	Sampling Date:	2/24/2009 11:25:00 AM		6/12/2009 11:20:00 AM		6/12/2009 11:22:00 AM	
	Matrix:	Wipe		Wipe		Wipe	
	Units:	UG/WIPE		UG/WIPE		UG/WIPE	
METALS	Dilution Factor:	1		1000		100	
(EPA METHOD 8082)	CAS	Result	Qual	Result	Qual	Result	Qual
Aroclor-1016	12674-11-2	0.5	U	500	U	50	U
Aroclor-1221	11104-28-2	0.5	U	500	U	50	U
Aroclor-1232	11141-16-5	0.5	U	500	U	50	U
Aroclor-1242	53469-21-9	0.5	U	500	U	50	U
Aroclor-1248	12672-29-6	0.5	U	500	U	50	U
Aroclor-1254	11097-69-1	3.8		2000		520	
Aroclor-1260	11096-82-5	0.5	U	500	U	50	U
TOTAL DETECTABLE		3.8		2,000		520	

Notes:

Highlights indicate exceedence of Toxic Substance Control Act (TSCA) Waste Regulatory Limits of 50 ppm for solids and 10 ug/ 100 cm ^{2} for wipe samples.

Qualifiers:

*: MS or MSD exceeds the control limits
*: Surrogate exceeds the control limit
U: Analyzed for but not detected.

Attachment 1

Laboratory Analytical Reports
(See Previously Enclosed Data CD)

Attachment 2

Chip, Wipe, and Sweep Sampling Standard Operating Procedures

CHIP, WIPE, AND SWEEP SAMPLING

1.0 SCOPE AND APPLICATION

This standard operating procedure (SOP) outlines the recommended protocol and equipment for collection of representative chip, wipe, and sweep samples to monitor potential surficial contamination.

This method of sampling is appropriate for surfaces contaminated with non-volatile species of analytes (i.e., PCB, PCDD, PCDF, metals, cyanide, etc.) Detection limits are analyte specific. Sample size should be determined based upon the detection limit desired and the amount of sample requested by the analytical laboratory. Typical sample area is one square foot. However, based upon sampling location, the sample size may need modification due to area configuration.

These are standard (i.e., typically applicable) operating procedures which may be varied or changed as required, dependent on site conditions, equipment limitations or limitations imposed by the procedure or other procedure limitations. In all instances, the ultimate procedures employed should be documented and associated with the final report.

Mention of trade names or commercial products does not constitute U.S. EPA endorsement or recommendation for use.

2.0 METHOD SUMMARY

Since surface situations vary widely, no universal sampling method can be recommended. Rather, the method and implements used must be tailored to suit a specific sampling site. The sampling location should be selected based upon the potential for contamination as a result of manufacturing processes or personnel practices.

Chip sampling is appropriate for porous surfaces and is generally accomplished with either a hammer and chisel, or an electric hammer. The sampling device should be laboratory cleaned and wrapped in clean, autoclaved aluminum foil until ready for use. To collect the sample, a measured and marked off area is chipped both horizontally and vertically to an even depth of 1/8 inch. The sample is then transferred to the proper sample container.

Wipe samples are collected from smooth surfaces to indicate surficial contamination; a sample location is measured and marked off. While wearing a new pair of surgical gloves, a sterile gauze pad is opened, and soaked with solvent. The solvent used is dependent on the surface being sampled. This pad is then stroked firmly over the sample surface, first vertically, then horizontally, to ensure complete coverage. The pad is then transferred to the sample container.

Sweep sampling is an effective method for the collection of dust or residue on porous or non-porous surfaces. To collect such a sample, an appropriate area is measured off. Then, while wearing a new pair of disposable surgical gloves, a dedicated brush is used to sweep material into a dedicated dust pan. The sample is then transferred to the proper sample container.

Samples collected by all three methods are then sent to the laboratory for analysis.

3.0 SAMPLE PRESERVATION, CONTAINERS, HANDLING, AND STORAGE

Samples should be stored out of direct sunlight to reduce photodegredation, cooled to 4°C and shipped to the laboratory performing the analysis. Appropriately sized laboratory cleaned, glass sample jars should be used for sample collection. The amount of sample required will be determined in concert with the analytical laboratory.

4.0 INTERFERENCES AND POTENTIAL PROBLEMS

This method has few significant interferences or problems. Typical problems result from rough porous surfaces which may be difficult to wipe, chip, or sweep.

5.0 EQUIPMENT

Equipment required for performing chip, wipe, or sweep sampling is as follows:

- Lab clean sample containers of proper size and composition
- Site logbook
- Sample analysis request forms
- Chain of Custody records
- Custody seals
- Field data sheets
- Sample labels
- Disposable surgical gloves
- Sterile wrapped gauze pad (3 in. x 3 in.)
- Appropriate pesticide (HPLC) grade solvent
- Medium sized laboratory cleaned paint brush
- Medium sized laboratory cleaned chisel
- Autoclaved aluminum foil
- Camera
- Hexane (pesticide/HPLC grade)
- Iso-octane
- Distilled/deionized water

6.0 REAGENTS

Reagents are not required for preservation of chip, wipe or sweep samples. However, reagents will be utilized for decontamination of sampling equipment.

7.0 PROCEDURES

7.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and the types and amounts of equipment and supplies needed.

2. Obtain necessary sampling and monitoring equipment.

3. Decontaminate or preclean equipment, and ensure that it is in working order.

4. Prepare scheduling and coordinate with staff, clients, and regulatory agency, if appropriate.

5. Perform a general site survey prior to site entry in accordance with the site specific Health and Safety Plan.

6. Mark all sampling locations. If required the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions.

7.2 Chip Sample Collection

Sampling of porous surfaces is generally accomplished by using a chisel and hammer or electric hammer. The sampling device should be laboratory cleaned or field decontaminated as per the Sampling Equipment Decontamination SOP. It is then wrapped in cleaned, autoclaved aluminum foil. The sampler should remain in this wrapping until it is needed. Each sampling device should be used for only one sample.

1. Choose appropriate sampling points; measure off the designated area. Photo documentation is optional.

2. Record surface area to be chipped.

3. Don a new pair of disposable surgical gloves.

4. Open a laboratory-cleaned chisel or equivalent sampling device.

5. Chip the sample area horizontally, then vertically to an even depth of approximately 1/8 inch.

6. Place the sample in an appropriately prepared sample container with a Teflon lined cap.

7. Cap the sample container, attach the label and custody seal, and place in a plastic bag. Record all pertinent data in the site logbook and on field data sheets. Complete the sampling analysis request form and chain of custody record before taking the next sample.

8. Store samples out of direct sunlight and cool to 4EC.

9. Follow proper decontamination procedures then deliver sample(s) to the laboratory for analysis.

7.3 Wipe Sample Collection

Wipe sampling is accomplished by using a sterile gauze pad, adding a solvent in which the contaminant is most soluble, then wiping a pre-determined, pre-measured area. The sample is packaged in an amber jar to prevent photodegradation and packed in coolers for shipment to the lab. Each gauze pad is used for only one wipe sample.

1. Choose appropriate sampling points; measure off the designated area. Photo documentation is optional.

2. Record surface area to be wiped.

3. Don a new pair of disposable surgical gloves.

4. Open new sterile package of gauze pad.

5. Soak the pad with solvent of choice.

6. Wipe the marked surface area using firm strokes. Wipe vertically, then horizontally to insure complete surface coverage.

7. Place the gauze pad in an appropriately prepared sample container with a Teflon-lined cap.

8. Cap the sample container, attach the label and custody seal, and place in a plastic bag. Record all pertinent data in the site logbook and on field data sheets. Complete the sampling analysis request form and chain of custody record before taking the next sample.

9. Store samples out of direct sunlight and cool to 4°C.

10. Follow proper decontamination procedures, then deliver sample(s) to the laboratory for analysis.

7.4 Sweep Sample Collection

Sweep sampling is appropriate for bulk contamination. This procedure utilizes a dedicated, hand held sweeper brush to acquire a sample from a pre-measured area.

1. Choose appropriate sampling points; measure off the designated area. Photo documentation is optional.

2. Record the surface area to be swept.

3. Don new pair of disposable surgical gloves.

4. Sweep the measured area using a dedicated brush; collect the sample in a dedicated dust pan.

5. Transfer sample from dust pan to sample container.

6. Cap the sample container, attach the label and custody seal, and place in a plastic bag. Record all pertinent data in the site log book and on field data sheets. Complete the sampling analysis request form and chain of custody record before taking the next sample.

7. Store samples out of direct sunlight and cool to 4EC.

8. Leave contaminated sampling device in the sample material, unless decontamination is practical.

9. Follow proper decontamination procedures, then deliver sample(s) to the laboratory for analysis.

8.0 CALCULATIONS

Results are usually provided in mg/g, µg/g, mass per unit area, or other appropriate measurement. Calculations are typically done by the laboratory.

9.0 QUALITY ASSURANCE/ QUALITY CONTROL

The following general quality assurance procedures apply:

1. All data must be documented on standard chain of custody forms, field data sheets or within the site logbook.

2. All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior to sampling/operation, and they must be documented.

The following specific quality assurance activities apply to wipe samples:

For wipe samples, a blank should be collected for each sampling event. This consists of a sterile gauze pad, wet with the appropriate solvent, and placed in a prepared sample container. The blank will help identify potential introduction of contaminants via the sampling methods, the pad, solvent or sample container. Spiked wipe samples can also be collected to better assess the data being generated. These are prepared by spiking a piece of foil of known area with a standard of the analyte of choice. The solvent containing the standard is allowed to evaporate, and the foil is wiped in a manner identical to the other wipe samples.

Specific quality assurance activities for chip and sweep samples should be determined on a site specific basis.

10.0 DATA VALIDATION

A review of the quality control samples will be conducted and the data utilized to qualify the environmental results.

11.0 HEALTH AND SAFETY

When working with potentially hazardous materials, follow EPA, OSHA and corporate health and safety procedures.

12.0 REFERENCES

U.S. EPA, A Compendium of Superfund Field Operation Methods. EPA/540/5-87/001.

NJDEP Field Sampling Procedures Manual, February, 1988.

Appendix B

Opinion of Probable Costs for Proposed Remedial Alternatives

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Engineers • Environmental Scientists • Planners • Landscape Designers
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Job #:	245.005
Calculated by:	ICT
Checked by:	KCW
Date:	5/18/2010

Rome ERP - 1333ED
PCB Remdial Program - Option 1
Opinion of Probable Cost

Area	Construction Item	Unit cost	Unit	Quantity	Cost
	Mobilization	$ 4,500.00	LS	1	$ 4,500.00
All	Remove and Dispose of Debris and Materials (Non-contaminated)	$ 2,500.00	LS	1	$ 2,500.00
BA	Removal of PCB Contaminated Wood Floor	$ 750.00	LS	1	$ 750.00
BA	PCB Contaminated Wood Floor Transport and Disposal (<50 ppm)	$ 125.00	Ton	3	$ 375.00
BA	Hazardous PCB Contaminated Wood Floor Transport and Disposal ($\geq$50 ppm and <500 ppm)	$ 250.00	Ton	3	$ 750.00
A, B, BR	Saw-Cut, Demolish, and Remove Concrete Floor over PCB Contaminated Soil	$ 6.00	SF	1,300	$ 7,800.00
A, B, BR	PCB Contaminated Concrete Floor Transport and Disposal (<50 ppm)	$ 125.00	Ton	50	$ 6,250.00
A, B, BR	Shoring and Bracing	$ 5,000.00	LS	1	$ 5,000.00
	Excavate, Remove, and Dispose PCB Contaminated Soil (<25 ppm)	$ 100.00	Ton		$ -
A, B, BR	Excavate, Remove, and Dispose PCB Contaminated Soil ($\geq$25 and <50 ppm)	$ 125.00	Ton	410	$ 51,250.00
	Excavate, Remove, and Dispose PCB Contaminated Soil ($\geq$50 ppm and <500 ppm)	$ 250.00	Ton		$ -
A	Shop A Floor Drain Closure and Removal	$ 1,500.00	LS	1	$ 1,500.00
A, B, C, ST, BA	Scarify Concrete Surface (1/4" depth)	$ 8.00	SF	22,975	$ 183,800.00
A, B, C, ST, BA	Disposal of Scarified Concrete Dust ($\geq$50 ppm)	$ 1.50	SF	22,975	$ 34,462.50
A, B, C, ST, BA	Skim Coat Concrete Floor - Scarified Area	$ 3.00	SF	22,975	$ 68,925.00
MR	Demolition and Removal of PCB Contaminated Concrete Floor - Machine Room, Concrete Not Intact	$ 2,000.00	LS	1	$ 2,000.00
MR	Hazardous PCB Contaminated Concrete Transport and Disposal ($\geq$50 ppm and <500 ppm)	$ 250.00	Ton	75	$ 18,750.00
MR	Replace Concrete Floor - Machine Room and Area of Contaminated Soil (6" reinforced slab)	$ 7.50	SF	3,325	$ 24,937.50

Subtotal	$ 413,550.00
Administration, Bonds, Insurance, Taxes (10%)	$ 41,355.00
Construction Estimate	**$ 454,905.00**
Estimated Engineering Design Fee	$ 68,300.00
Estimated Engineering Oversight Fee (Including Confirmational Sampling)	$ 35,000.00
Laboratory Costs	$ 2,500.00
Engineering and Laboratory Estimate	**$ 105,800.00**
Subtotal	$ 560,705.00
Contingency (15%)	$ 84,200.00
Overall Estimate	**$ 644,905.00**

PROJECT ESTIMATE $ 645,000

Area Legend

A	Shop A
B	Shop B
C	Shop C
All	Entire Building (except office area)
BA	Basement
BR	Boiler Room
MR	Machine Room
ST	Storage

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Job #:	245.005
Calculated by:	ICT
Checked by:	KCW
Date:	5/18/2010

Rome ERP - 1333ED
PCB Remdial Program - Option 2
Opinion of Probable Cost

Area	Construction Item	Unit cost	Unit	Quantity	Cost
	Mobilization	$ 4,500.00	LS	1	$ 4,500.00
All	Remove and Dispose of Debris and Materials (Non-contaminated)	$ 2,500.00	LS	1	$ 2,500.00
BA	Removal of PCB Contaminated Wood Floor	$ 750.00	LS	1	$ 750.00
BA	PCB Contaminated Wood Floor Transport and Disposal (<50 ppm)	$ 125.00	Ton	3	$ 375.00
BA	Hazardous PCB Contaminated Wood Floor Transport and Disposal (≥50 ppm and <500 ppm)	$ 250.00	Ton	3	$ 750.00
A, C, ST	Double Wash/Rinse Concrete Floor (including fluid disposal) (where PCBs are >1 ppm and <50 ppm except basement)	$ 5.00	SF	18,200	$ 91,000.00
A, BR	Shop A and Boiler Room Floor Drain Closure and Removal	$ 1,500.00	Ea	2	$ 3,000.00
B, BA	Scarify Concrete Surface (1/4" depth) - Assume Portion of Shop B and Basement	$ 8.00	SF	6,075	$ 48,600.00
B, BA	Disposal of Scarified Concrete Dust (≥50 ppm)	$ 1.50	SF	6,075	$ 9,112.50
MR	Demolition and Removal of PCB Contaminated Concrete Floor - Machine Room, Concrete Not Intact	$ 2,000.00	LS	1	$ 2,000.00
	PCB Contaminated Concrete Floor Transport and Disposal (<50 ppm)	$ 125.00	Ton		$ -
MR	Hazardous PCB Contaminated Concrete Transport and Disposal (≥50 ppm and <500 ppm)	$ 250.00	Ton	75	$ 18,750.00
B, BA	Skim Coat Concrete Floor - Scarified Area	$ 3.00	SF	6,075	$ 18,225.00
MR	Replace Concrete Floor - Machine Room (6" reinforced slab)	$ 7.50	SF	2,025	$ 15,187.50
				Subtotal	$ 214,750.00
				Administration, Bonds, Insurance, Taxes (10%)	$ 21,475.00
				Construction Estimate	**$ 236,225.00**
				Estimated Engineering Design Fee	$ 35,500.00
				Estimated Engineering Oversight Fee (Including Intermediate and Confirmational Sampling)	$ 30,000.00
				Laboratory Costs	$ 3,000.00
				Engineering and Laboratory Estimate	**$ 68,500.00**
				Subtotal	$ 304,725.00
				Contingency (15%)	$ 45,800.00
				Overall Estimate	**$ 350,525.00**

PROJECT ESTIMATE $ 350,600

Area Legend

A	Shop A
B	Shop B
C	Shop C
All	Entire Building (except office area)
BA	Basement
BR	Boiler Room
MR	Machine Room
ST	Storage