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January 12, 2011

Mr. Larry A. Rosenmann
New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau A
625 Broadway
Albany, New York 12233-7528

Re: Carrier Corporation, Thompson Road Facility, Syracuse, New York
Corrective Action Order — Index CO 7-20051118-4
Phase 2 PCB Source Investigation Work Plan (Rev 1)
Sub-Slab PCB Investigation in Building TR-1

Dear Mr. Rosenmann:

Attached is the revised Building TR-1 sub-slab investigation work plan which incorporates some of the comments made by you in correspondence dated November 17, 2010, and also includes changes in the technical approach to the investigation, as we discussed in two telephone conversations on December 22 and 28, 2010.

As we discussed on Wednesday, December 22, 2010, Carrier must complete investigation activities in Building TR-1 prior to the start of building demolition activities, currently scheduled to begin in March 2011. Therefore, in accordance with advance notification requirement set forth in Section XIII, Part G of the above-referenced Corrective Action Order, Carrier has tentative plans to mobilize the week of January 24, 2011, and will begin work related to this work plan as well as the former degreaser investigation.

Please call me if you have any questions at (615) 255-9300.

Sincerely,

EnSafe Inc.

May M. Heflin

By: May Heflin, PE

cc:
Mr. Tim Diguilio — NYSDEC Region 7, Syracuse
Mr. James Gruppe — NYSDEC Region 7, Syracuse
Mr. William Penn — UTC
Mr. Nelson Wong — Carrier Corporation

PHASE 2 — PCB SOURCE INVESTIGATION WORK PLAN
Sub-Slab PCB Investigation in Building TR-1

UNITED TECHNOLOGIES/CARRIER
THOMPSON ROAD FACILITY
SYRACUSE, NEW YORK

EnSafe Project Number
0888809186

Revision No.: 1

Prepared for:

United Technologies Corporation
UTC Shared Remediation Services
United Technologies Building
Hartford, Connecticut 06010

Prepared by:

EnSafe Inc.
220 Athens Way, Suite 410
Nashville, Tennessee 37228
(615) 255-9300
(800) 588-7962
www.ensafe.com

January 2011

PHASE 2 — PCB SOURCE INVESTIGATION WORK PLAN
Sub-Slab PCB Investigation in Building TR-1

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(800) 588-7962
www.ensafe.com

January 2011

Prepared By:

May M. Heflin, PE

Reviewed By:

Lori Goetz

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EXECUTIVE SUMMARY

Carrier Corporation, a wholly-owned subsidiary of United Technologies Corporation, is currently working under a Corrective Action Order — Index CO 7-20051118-4 (order) dated February 13, 2006, with the New York State Department of Environmental Conservation Division of Solid and Hazardous Materials (NYSDEC-DSHM), to identify potential sources of polychlorinated biphenyls (PCBs) in storm water effluent at Outfall 002.

Carrier submitted a Phase 2 PCB Source Investigation Work Plan to NYSDEC-DSHM on February 24, 2010, based on comments received on the Potential PCB Sources Report (Carrier, 2009). In dialogue with the agency, the site strategy has evolved since February 2010:

- NYSDEC-DSHM, in correspondence dated April 30, 2010, commented on this work plan with requests for additional and more extensive investigations.

- Subsequent to the NYSDEC-DSHM April 30, 2010 correspondence, Carrier representatives met with NYSDEC Region 7 representatives on May 12, 2010, to discuss an overall approach to controlling storm water discharges at the Carrier facility. This approach included a combination of treatment, storage, and diversion to meet the 25-year, 24-hour storm event for the 002 outfall basin at the facility.

- Following the May 12 meeting with the NYSDEC, in which Carrier committed to compliance with the 25-year, 24 hour storm water event, Carrier met with NYSDEC representatives to discuss the April 30 comments, and how the work plan would be reevaluated in consideration of the storm water management commitment.

This work plan reflects the meetings and discussions that have occurred over the last several months.

This work plan describes Carrier's approach for continued PCB source investigations at the site, focusing on the areas with the greatest potential of being significant ongoing PCB sources. Because the investigations will occur in several areas of the campus, a work plan has been or will be prepared separately for each.

- PCB Investigation — Sub-Slab PCB Investigation in Building TR-1, (Carrier, October 2010)

- PCB Investigation — Thompson Road & TR-18 Storm Line Bedding Material Excavations, (Carrier, November 2010)

- PCB Investigation — Transformer Yard Storm Line Excavation at Manhole 116 (sludge area), work plan pending

A work plan addressing potential volatile organic compound releases from two former degreasers is presented under separate cover in a work plan entitled *Building TR-1 Former Degreaser Investigation* (Carrier, January 2011).

1.0 BUILDING TR-1 SUB-SURFACE PCB INVESTIGATION

The purpose of this sub-surface investigation is to determine if there are ongoing contributions to the storm water system from polychlorinated biphenyl (PCB)-containing oil (free product) released from historical operations.

The building will be demolished and its footprint will be incorporated into the diversion component of the 25-year/24-hour storm water management for SPDES compliance. The diversion of surface waters will be achieved by applying an asphalt cap over the existing slab, overlain by a grassed soil cap designed to divert waters to a new outfall. To ensure that the cap and diversion components are maintained and that any potential contamination underneath the TR-1 slab is not disturbed, it is anticipated that the entire building footprint will be subject to a deed restriction.

Therefore, the focus of the investigation work is to assess the presence/absence of PCBs underneath the slab at the soil-groundwater interface. If elevated concentrations of PCBs are encountered and documented as contributing to the storm water system, remediation may be required. Because the building is scheduled for demolition starting in March 2011, Carrier does not expect to begin any remedial actions, if necessary, until after the building-related demolition activities are completed.

A hazardous waste survey related to building demolition was performed in Building TR-1. As part of the survey, paint, dust, grease, wood-block flooring, caulking, and several other materials were sampled and analyzed for PCBs. As a result of this survey, Carrier is complying with TSCA requirements and, in consultation with EPA, has prepared a Self-Implementing Remediation Plan (SIP) which was submitted to EPA on November 17, 2010, with a revised plan submitted on December 10, 2010. NYSDEC was copied on both submittals. Relevant data from this survey has been incorporated into the technical approach of this work plan.

Of the materials sampled as part of this survey, the extensive concrete core sampling performed in September 2010, is most relevant to this work plan. Appendix A includes a figure that summarizes the concrete core sampling locations and corresponding results. One-inch diameter by three-inch deep concrete cores were obtained on a 100-ft by 100-ft grid over the entire Building TR-1 floor footprint, with five areas chosen for biased sampling on a 25-ft by 25-ft grid. The biased sampling areas were selected based on information from the wood block sampling, prior removal actions and prior building manufacturing operations as follows:

- Two of the biased areas are the highest PCB concentrations from the wood block floor sampling. Substation G also contained some of the highest PCB concentrations during the cleanup in 1995.

- One is the location of the existing waste oil collection system (southwest corner)

- One is near the metal cutting and receiving areas (southeast)

- One is adjacent to a removal action performed in 1995 (near Substation J), chosen at random.

Of the 200+ concrete cores sampled, only one contained PCBs higher than 25 ppm at 62.5 ppm — near the biased sampling location at former Substation G (Substation G removal actions are discussed in Appendix B. Based on this data, a tighter 3-meter by 3-meter grid was centered on the 62.5 ppm core location, with only one sample above 25 ppm at 39 ppm. Proposed sub-slab investigation activities at Substation G are discussed in Section 1.2). As noted in the transformer removal actions in Appendix B, much higher concentrations of PCBs detected in concrete quickly attenuated over short vertical distances in the concrete. Therefore the PCB values in the upper concrete detected in the hazardous waste survey are not expected to contribute to sub-slab PCB risks. This data supports Carrier's approach to selecting investigation areas, as presented in this work plan.

1.1 Basis of Investigation

A threshold of PCB detections in soil greater than 25 parts per million (ppm) will be used as the basis for expanding field investigations beyond the locations cited in this work plan. This concentration represents the industrial soil cleanup objective (SCO) for PCBs listed in Table 375-6.8(b): Restricted Use Soil Cleanup Objectives of the New York State Department of Environmental Conservation (NYSDEC) Subpart 375-6: Remedial Program Soil Cleanup Objectives.

PCBs in groundwater, however, can be attributable to multiple conditions:

- Proximity to PCB-contaminated soils (equilibrium solubility)
- Sorption of PCBs onto colloids or other suspended particulate that can move with groundwater
- Elevated solubilities due to co-solvency with other organic compounds (e.g., benzene)
- The presence of free product (PCB containing oils)

Because of PCBs' low solubilities, mobility will generally be low and groundwater detections will generally be localized, unless there is a mode of transport (conditions 2 through 4, above). Therefore, the groundwater investigation, if necessary, will focus on identifying the absence/presence of PCBs in groundwater at or above the laboratory reporting limit (RL) for the specific Aroclor, and if present, whether they are migrating toward the storm lines underlying Building TR-1.

1.2 Historical Use

The TR-1 building was constructed in the early 1940s. General Electric, in partnership with the Government Defense Corporation manufactured tanks and heavy military equipment in the building.

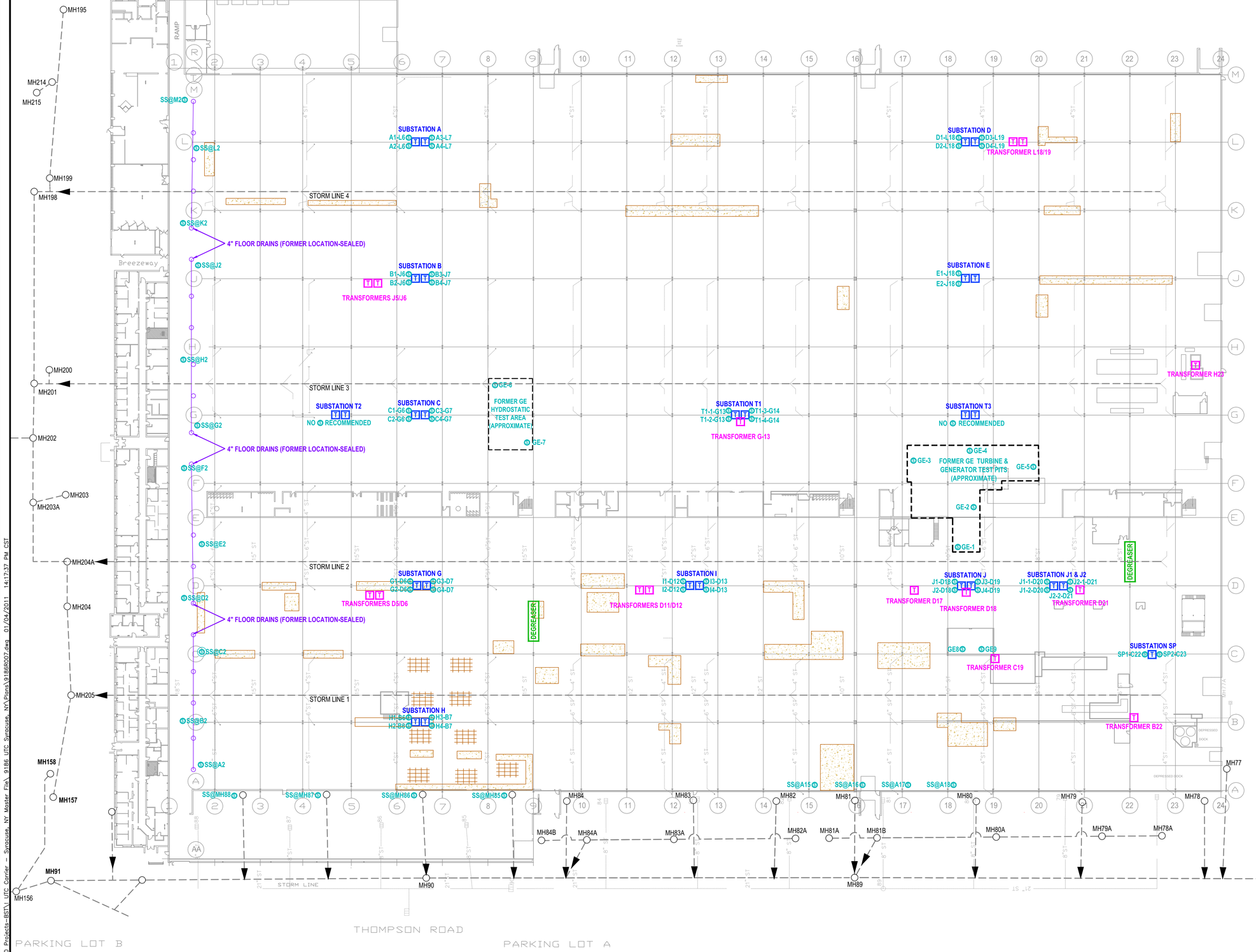
The building was sold to Carrier in the early 1950s. Carrier manufactured large air conditioning chiller units until 1997. Manufacturing processes included welding, grinding, surface preparation for painting, leak tests and testing. Since 1997 the building has been mainly empty. A small research and development laboratory is in the southwest corner and is used to test units. Other parts of the building have been used to store product and air conditioning parts for sale. Besides use in transformers, no other use of PCBs has been documented or known to occur at TR-1.

1.3 Proposed Investigation Locations

A sub-surface investigation under the Building TR-1 concrete slab will be performed prior to its demolition (scheduled to begin March 2011). Using direct-push technology (DPT), soil samples will be obtained at the soil-groundwater interface (estimated to be at the 4- to 6-foot sample interval) at locations that are known to have had or may have had a PCB release to the concrete or woodblock flooring (Figure 1-1 — Proposed Building TR-1 Subsurface Investigation Areas). The locations proposed for investigation include:

- Nine of 11 former transformer locations: Historical data at these 9 locations (Substations A through J) indicate that wood block and/or concrete flooring contained PCBs. Historical information does not reference a Substation F. Substations T2 and T3 will not be investigated as historical information does not indicate a PCB release occurred here.

- One former substation location where no investigation information is available (Substation T1).



LEGEND

- T — FORMER TRANSFORMER LOCATIONS (SOURCE: 1982 DRAWING ON WALL OF TR-7)
- T — EXISTING TRANSFORMER LOCATIONS (FIELD OBSERVATION 08-17-2010) THESE TRANSFORMERS HAVE NEVER USED PCB-CONTAINING FLUIDS. SUBSURFACE WILL NOT BE INVESTIGATED
- SS@ — PROPOSED DPT SOIL BORING LOCATION – APPROXIMATE TBD IN FIELD BASED ON FLOORING CHARACTERISTICS
- DEGREASER — FORMER DEGREASER LOCATION – APPROXIMATE
- WOOD BLOCK FLOORING – APPROXIMATE (POTENTIAL ACM UNDERLYING WOOD-BLOCK)
- WOOD EXPANSION JOINTS – APPROXIMATE
- MH201 — STORM SEWER LINES – APPROXIMATE

SOME COMBINATION OF WOODBLOCK AND CONCRETE REMOVAL ACTION PERFORMED AT SUBSTATION A THROUGH G AND T2 AND T3 IN 1995.

NOTES

1. ALL LOCATIONS ARE APPROXIMATE

0 40
APPROXIMATE SCALE

FIGURE 1-1
PROPOSED BUILDING TR-1
SUBSURFACE INVESTIGATION AREAS
PHASE 2 PCB WORKPLAN – AUGUST 2010
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	15JAN11
DWG NO:	9186R007

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- At 2 former substations identified on drawing in Building TR-7: Substation J1/J2 and Substation SP.

- Adjacent to former floor drain locations. No floor drains are currently visible or in use. Historical information indicates that older floor drains used along the buildings northern end (column line A) were sealed.

- Near the western wall of Building TR-1 near PCB-affected manholes (MH-81, MH-82, and MH-89) along the Thompson Road storm line. Sediments in these manholes have had PCB detections.

- Proximate to the manholes at the end of leaders from the Thompson Road storm line (MH-85, MH-86, MH-87, and MH-88) inside Building TR-1.

- Former GE Turbine & Generator Test Pits

- Former GE Hydrostatic Test Area

- Inverts below finished floor elevations near 1 machining area (former GE Turbine and Generator Test Pits). Former GE Hydrostatic Test Area invert is inside test area where borings are already proposed.

There are 11 transformer units (dual or single) currently located in Building TR-1 as indicated on Figure 1-1. The transformers were manufactured new, are silicon-based, and never contained PCBs or any other oil that might have contained PCBs. Therefore, these locations are not proposed for investigation.

Former Substations (1995 Change-Out Program Summary)

In the spring of 1995, Carrier undertook a transformer change-out program in Building TR-1 to address 12 transformers (Substation A through J [no F] and T1 through T3).

- Each substation consisted of two PCB-containing transformers approximately 15 feet apart, with switch gear in between. (The exception is Substation T1, which consisted of a single transformer with switch gear on the side.) The three components rested on a concrete foundation, which was surrounded by wood-block flooring, underlain by concrete.

The area was surrounded by a chain-link fence. The flooring consisted of a combination of concrete and wood-block flooring (underlain by concrete) outside the fenced area.

- Samples were obtained from the wood-block surrounding the substation, the concrete pad underlying the wood-block flooring, and the concrete surrounding the substation (outside the fence). Samples were not taken from the concrete pads on which the equipment rested.

- PCBs were detected up to 310,000 ppm in wood-block samples and up to 125,000 ppm in concrete surface samples.

- Concentrations in wood block and upper concrete surface were elevated, but vertical characterization of the select concrete areas demonstrated rapid attenuation of PCB concentrations over a couple of inches.

- Where PCB contamination was detected, wood block and concrete was removed (and subsequently restored) ranging from 2-inch to 11-inch depth intervals, depending on the concentration of PCBs detected.

- Subsurface soils were not tested for PCBs; no soil removal actions were performed.

More detailed information on the action taken at each of these substations is provided in Appendix B — Historical Substations Action in Building TR-1.

The higher PCB concentrations found at nine of these substations are indicative of a release to the flooring, but not necessarily to the soils underlying the substations. The nine substations include A, B, C, D, E, G, H, I, and J. No documentation of a Substation F in Building TR-1 is available. Substations T2 and T3 are not proposed for investigation because the historical data does not indicate significant PCB concentrations in the adjacent flooring (less than 1,000 ppm) were found during the changeout program. No information is available on an investigation at Substations T1, J1/J2 and SP; therefore, these former substation locations are proposed for investigation.

Carrier will advance four DPT borings at each former substation location (2 on either end of the transformer set) A, B, C, D, G, H, I, J, T1, and J1/J2. Borings in these locations will be biased to any obvious pathways to subsurface (cracks) or where there is evidence of a possible previous release (i.e., staining). Carrier will attempt to identify newer concrete which may delineate the boundary of the restoration area. The borings will be placed outside this restored area to the extent practical.

Two borings will be advanced on the northern side of former Substation E as historical sampling did not indicate a PCB release at the southern transformer. Two borings will be advanced at Substation SP (one on either end) because it consisted of a single transformer.

Initially, 44 DPT borings will be advanced around the former substation locations.

Sealed (Former) Floor Drains

Carrier has performed a thorough visual inspection of the floor of Building TR-1, and no open floor drains were observed. Historical information (Appendix C — Historical Information, GE Figure) indicates that former, non-Carrier related operations may have had associated floor drain use on the north end of Building TR-1 (along column line A). Therefore, Carrier will include the area of these former floor drains as part of the subsurface PCB investigation in this building. Initially, three DPT borings will be advanced to groundwater at each series of floor drains, for a total of 12 DPT borings advanced in this area.

Western Side of Building TR-1 Near Manholes MH-80, MH-81, MH-82 & MH-89

Sediment samples obtained from Thompson Road storm line manholes MH-80, MH-81, MH-82, and MH-89 have identified concentrations of PCBs up to 80 ppm (approximate). Recent investigations at the Transformer Yard area indicate that past activities and accumulated sediments in the storm lines may have washed down the Thompson Road storm line and accumulated in the manholes along the way — this conceptual site model (CSM) of PCB migration within the storm water lines is the basis for Carrier's actions over the years. However, because of the historical use of PCBs in Building TR-1 and the NYSDEC's alternative CSM that advocates migration of product along the storm water lines, Carrier will advance four DPT borings along the western wall of Building TR-1 near these affected manholes to determine whether there is an internal source of the PCBs found in the manholes.

At Manholes that Extend into Building TR-1 from the Thompson Road Line

Four manholes or cleanouts extend into building TR-1 in the northwest side of the building. These manholes are the terminal points from leaders from the Thompson Road storm line as shown on Figure 1-1. Due to their proximity to a former substation and their connectivity to the main Thompson Road storm line, Carrier will advance one DPT boring at each of the manhole/cleanouts (total of 4 borings).

At Former GE Turbine and Generator Test Pits

A historical GE figure shows the approximate location of turbine and generator test pits in Building TR-1. Six DPT borings are proposed for this area, as shown on Figure 1-1.

At the Former GE Hydrostatic Test Area

A historical GE figure shows the approximate location of a hydrostatic test area in Building TR-1. Two borings are proposed for this area, as shown on Figure 1-1.

Inverts Below Finished Floor Elevation @ Former GE Turbine/Generator Test Pits & Hydrostatic Test Area

Carrier has identified 2 references to inverts below the finished floor elevation that possibly are related to the Turbine & Generator Test Pits and the Hydrostatic Test Area. Figure 1-1 of the work plan shows the approximate locations of these drains. The floor drain in the former GE Hydrostatic Test Area appears to have been within the footprint of the test area. Carrier has plans to advance 2 borings in this area (see above description) and therefore no additional borings will be advance for the suspected floor drain. The 2 floor drains in the former GE turbine and generator test area appear to have been outside the test area foot print along column line C and between columns 19 and 20. Carrier will attempt to locate these drains and advance a single DPT boring at each. If they cannot be located, Carrier will use measurements shown on the historical GE figure to estimate the approximate location of the drains to locate the borings.

Table 1-1 summarizes the locations proposed for investigation.

Table 1-1
Building TR-1 PCB Investigation Summary

	Potential PCB Release Location	DPT Locations/Soil Sampling	Temporary Well(s)/ GW Sampling
1.	Former Substations (1995 Change-Out Program Summary) or other	• 12 former substations • 2 to 4 locations per substation • Soil samples @ 4- to 6-foot interval at soil-groundwater interface, initially. • Total PCBs Method 8082	• As needed • Total PCBs Method 8082 • Volatile Organic Compounds (VOCs) Method 8260B
2.	Sealed (Former) Floor Drains	• 4 floor drain runs • 3 locations per floor drain run • Soil samples @ 4- to 6-foot interval at soil-groundwater interface, initially. • Total PCBs Method 8082	• As needed • Total PCBs Method 8082 • Volatile Organic Compounds (VOCs) Method 8260B
3.	Western Side of Building TR-1 Near MHs 80 & 81 and MHs 82 & 89	• 4 locations near affected MHs • Soil samples @ 4- to 6-foot interval at soil-groundwater interface, initially. • Total PCBs Method 8082	• As needed • Total PCBs Method 8082 • Volatile Organic Compounds (VOCs) Method 8260B
4.	Thompson Rd storm line leaders in Bldg TR-1	• 1 locations near each of the 4 MHs • Soil samples @ 4- to 6-foot interval at soil-groundwater interface, initially. • Total PCBs Method 8082	• As needed • Total PCBs Method 8082
5.	Former GE Turbine & Generator Test Pits	• 5 locations in the former turbine/generator test pit area. • Soil samples @ 4- to 6-foot interval at soil-groundwater interface, initially. • Total PCBs Method 8082	• As needed • Total PCBs Method 8082 • Volatile Organic Compounds (VOCs) Method 8260B
6.	Former GE Hydrostatic Test Area	• 2 locations in the former hydrostatic test area. • Soil samples @ 4- to 6-foot interval at soil-groundwater interface, initially. • Total PCBs Method 8082	• As needed • Total PCBs Method 8082 • Volatile Organic Compounds (VOCs) Method 8260B
7.	Inverts below finished floor elevation at 2 machining areas	• 2 locations at inverts below finished floor elevation at former GE turbine/generator test pit • Soil samples @ 4- to 6-foot interval at soil-groundwater interface, initially. • Total PCBs Method 8082	• As needed • Total PCBs Method 8082 • Volatile Organic Compounds (VOCs) Method 8260B

Notes:
- Decision threshold in soil sample ≥25 ppm PCB in 4- to 6-foot soil sample interval → investigation will be expanded
- Decision threshold in groundwater → if laboratory analysis confirms the presence of PCBs above the laboratory RL for a specific Aroclor → expand groundwater investigation

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2.0 TECHNICAL APPROACH

2.1 Soil Sampling Approach

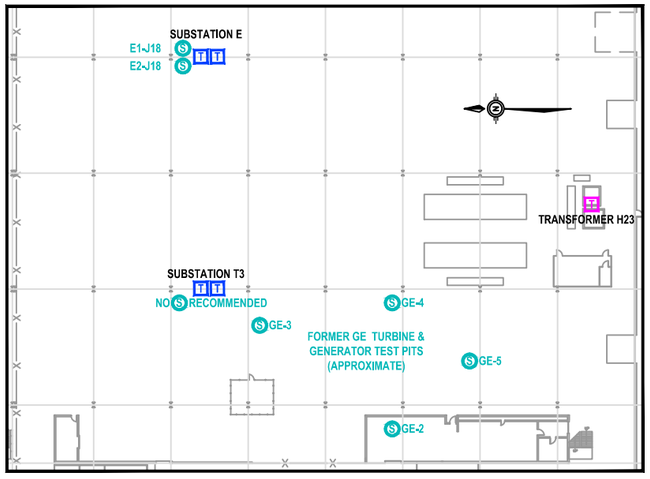
The entire floor of Building TR-1 is constructed primarily of concrete (12- to 18-inches thick) with some limited areas of wood-block flooring and other metal/wood-block combinations. Prior to soil sampling, a concrete coring machine will be used to cut a 4- to 6-inch diameter concrete core at each proposed DPT location. The core will be advanced through the full thickness of the concrete to the sub-base, if present. If the sub-base is composed of a permeable layer such as gravel or sand, it will be removed from the hole prior to DPT soil sampling. The open hole will be visually inspected for the presence of liquids. If liquid is observed, the hole will be cased prior to beginning DPT soil sampling activities.

At each proposed DPT location, soil samples will be obtained continuously to groundwater (estimated 6 feet below ground surface). Sample collection will start at the base of the concrete slab and/or bedding material. Soil samples will be collected in 2-foot intervals (0- to 2-foot, 2- to 4-foot, and 4- to 6-foot) and each sample aliquot will be divided equally for description purposes/PID-field screening. Because the NYSDEC CSM concern is focused on PCB migration along the soil-groundwater interface and into the storm water lines or underlying bedding material, only the 4- to 6-foot sample interval will submitted to the laboratory for Total PCB analysis using USEPA Method 8082.

- If PCBs are found in the 4- to 6-foot soil sample interval at concentrations less than 25 ppm, no further investigative actions are warranted. As necessary, Carrier intends to propose a deed notice, environmental easement, or other mechanism used in conjunction with the planned asphalt cap and overlying soil/revegetated layer for storm water control to restrict future use of this area.

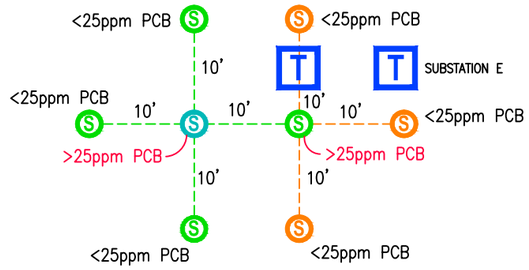
- If PCBs in soils are found at concentrations greater than 25 ppm at a DPT location, Carrier will expand the investigation around this location as follows:

  – Additional locations will be sampled surrounding the sample point of concern, generally one each 10 feet to the north, south, east, and west (Figure 2-1 — Example Expansion of Soil Investigation). Sampling at these locations will follow the same protocol as described in the second paragraph of this section (i.e., only the 4- to 6-foot soil sample interval will be analyzed for total PCBs).



INSET OF EXAMPLE AREA

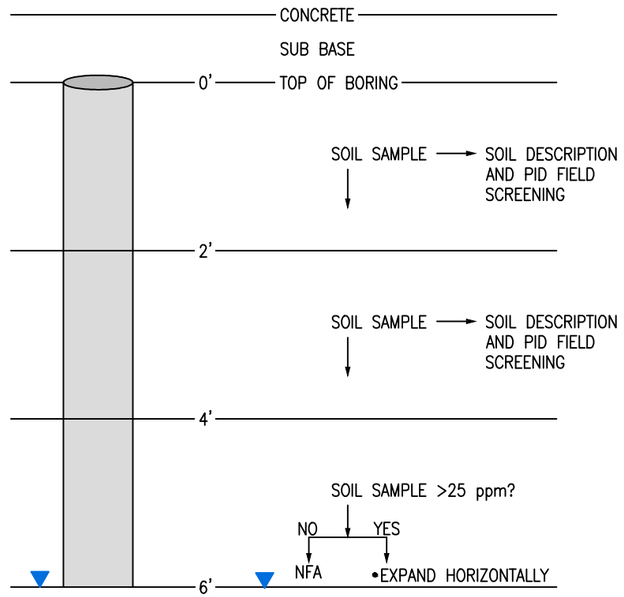
EXAMPLE OF PROPOSED HORIZONTAL EXPANSION (4'-6' FT INTERVAL)



LEGEND

- S – ORIGINAL PROPOSED SOIL BORING LOCATION
- S – 1st TIER EXPANDED HORIZONTAL LOCATION (SAMPLED AT 4'–6' INTERVAL)
- S – 2nd TIER EXPANDED HORIZONTAL LOCATION (SAMPLED AT 4'–6' INTERVAL)
- T – TRANSFORMER
- T T – TRANSFORMER SUBSTATION

PROPOSED VERTICAL EXPANSION



- INSTALL A TEMPORARY GROUNDWATER WELL AT LOCATION WITHIN EXPANDED INVESTIGATION AREA WITH HIGHEST PCB CONCENTRATION IN SOIL AT 4'–6' INTERVAL

PCB NAPL? (IF PCBs ARE DETECTED)

NO — NFA

YES — EXPAND GROUNDWATER INVESTIGATION USING TEMPORARY WELLS DOWNGRADIENT AND/OR TOWARD NEARBY STORMLINE

NOT TO SCALE

FIGURE 2–1
EXAMPLE EXPANSION OF SOIL INVESTIGATION
HASE 2 PCB INVESTIGATION WORKPLAN
BUILDING TR–1
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.HEFLIN
DRAWN BY:	E.ROGERS
DWG DATE:	12JAN11
DWG NO:	9186R008

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- The same grid expansion protocol will be used when the concentration in the 4- to 6-foot sample interval exceeds 25 ppm PCB in soils, unless a scattered pattern is determined to be present (i.e., not focused and identifying a source area). In this case, the NYSDEC will be consulted with to review the data and make a decision on the need to expand the sampling grid.

    - Once soil data indicates PCBs are at concentrations less than 25 ppm, the limits of PCB impact will be defined, and no further investigation in that direction will be necessary. The expanded soil investigation will not cross over a storm water line, but will refocus on a groundwater investigation (Section 2.3).

    - Carrier will install a temporary groundwater monitoring well at three of the expanded soil investigation areas with concentrations higher than 25 ppm to determine if groundwater contains PCBs, as described in Section 2.3 below. If groundwater is impacted by PCBs at these locations, Carrier will consult with NYSDEC to determine if additional wells will be installed at other areas with PCB concentrations in soil higher than 25 ppm.

Prior to demobilization, each DPT location will be abandoned by placing bentonite pellets or chips in the boring and hydrating with water up to one foot below grade. The last foot of the borehole will be backfilled with concrete.

2.2 Soil Sample Handling

At the end of each work day, all samples collected will be submitted to the laboratory via overnight delivery.

- Sample containers will be properly labeled with a unique sample identification code, the date and time of sampling, and the required analysis.

- Samples will be placed into laboratory supplied containers, labeled and placed on ice until delivered to the laboratory.

- Samples will be transported to the laboratory under chain of custody protocol. Sample descriptions, sample time, interval information, and observations will be recorded in the field logbook.

- In all cases, expedited turn-around times will be requested.

Additional information and detail of the sampling protocol is included Appendix D — Sampling and Analysis Plan (SAP). The SAP addresses:

- Whether the samples will be composite or grab samples.

- The PCB sample handling techniques to ensure that the samples are analyzed as quickly as possible after they are collected.

- Preservation techniques for those samples that cannot be analyzed right away.

- Maximum holding times.

2.3 Temporary Well Groundwater Sampling Approach

To determine if historical activities have potentially resulted in a release or conditions that would result in PCB mobility in groundwater, Carrier will install a temporary well at the location with the highest PCB concentration in soils (and exceeding the 25 ppm PCB threshold) at the soil-groundwater interface, presumed to be the 4- to 6-foot sample interval, at three of the expanded investigation areas. Carrier will consult with NYSDEC to determine at which three locations the temporary wells should be installed. The temporary well will be allowed to equilibrate for 24 hours after installation.

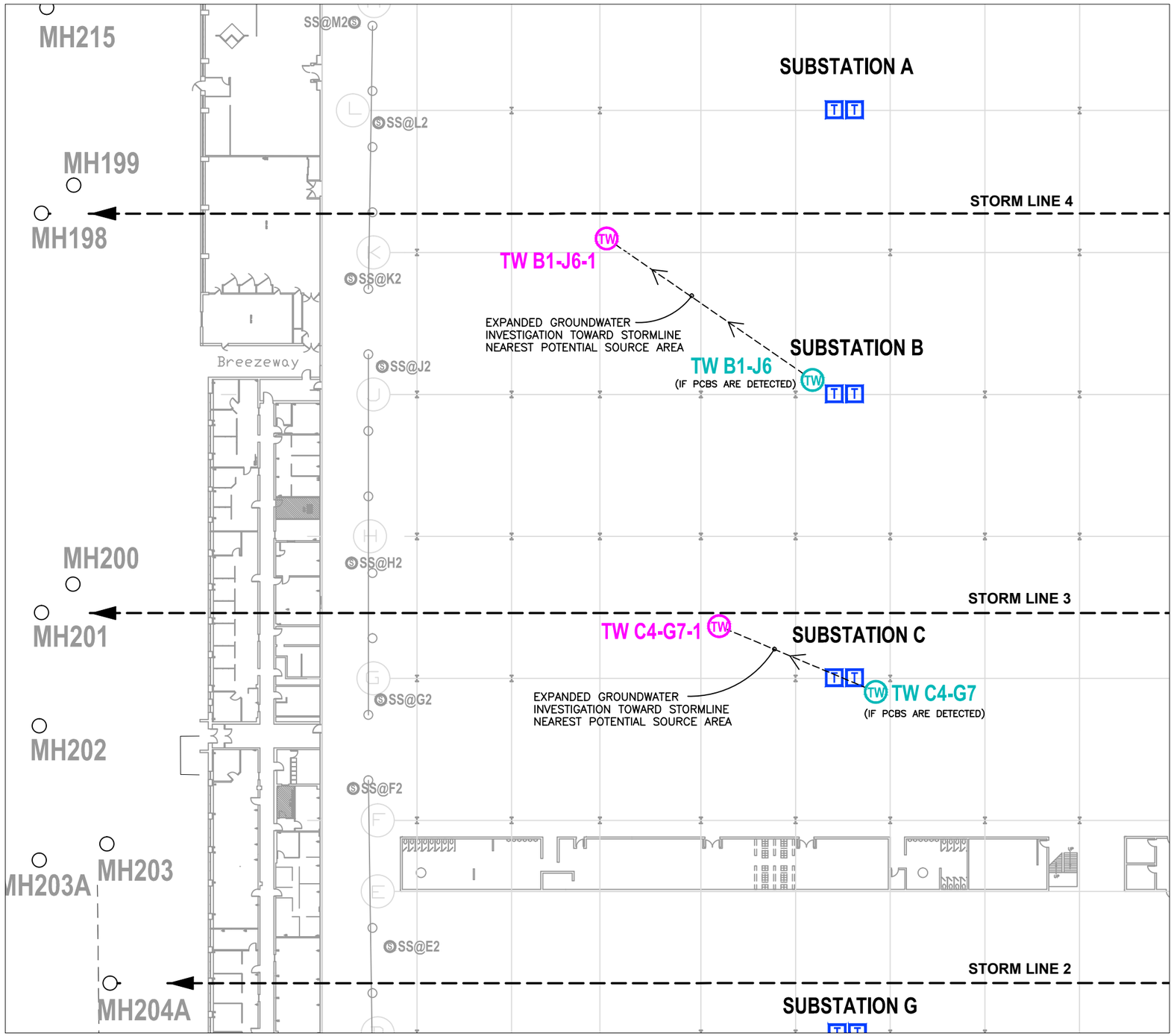
A groundwater sample will be obtained from the temporary well and analyzed for Total PCBs using USEPA Method 8082 on an unfiltered sample. Groundwater samples will also be analyzed for VOCs analysis using USEPA SW-846 Method 8260B (to be used as an indicator of co-solvency).

- If laboratory analysis does not confirm the presence of PCBs above the laboratory RL for the specific Aroclor in groundwater, then no further investigative action at this location will be taken. The temporary well will be abandoned and this location will not be investigated further.

- If laboratory analysis confirms the presence of PCBs above the laboratory RL for the specific Aroclor, then laboratory protocol will require the sampled to be filtered and re-analyzed for Total PCBs only. The filtered sample will allow Carrier to determine whether the detected PCB is dissolved (suggesting mobility is associated with cosolvency or free phase oil) or sorbed onto colloids or other particulates. The groundwater investigation will be expanded to determine the extent of PCB impact, as described below.

  – Carrier will install a second temporary well down-gradient of the former substation/transformer area, biased toward and adjacent to the storm line nearest the expanded investigation area (see Figure 2-2 — Example Expansion of Ground Water Investigation). The goal of the expanded groundwater investigation is to determine if PCBs are migrating from the source area to the storm line bedding material. Therefore, the temporary well will be installed as close to the storm line as is practical without damaging the line, to obtain a water sample from the bedding material. Note that at the time of construction of Building TR-1 and the storm lines, permeable aggregate was not typically used as either sub-base or bedding material during construction. It is likely that the storm lines were placed directly on compacted soil, and that traditional bedding materials (e.g., gravel or sand) will not be encountered.

    If PCB migration from the source area to the storm lines is not confirmed through laboratory analyses, no further investigation in this area will be performed and the well will be abandoned. If PCB migration from the source area to the storm lines is determined, the temporary well will be located by a New York licensed surveyor prior to abandonment. All wells will be abandoned prior to demolition of Building TR-1 (scheduled to begin in March 2010).



LEGEND

MH201 — STORM SEWER LINES – APPROXIMATE

T — FORMER TRANSFORMER LOCATIONS (SOURCE: 1982 DRAWING ON WALL OF TR-7)

TW C4-G7 (TW) POSSIBLE INITIAL TEMPORARY WELL LOCATION. (IF SOIL INVESTIGATION WARRENTS WELL BE PLACED)

TW C4-G7-1 (TW) EXAMPLE OF PROPOSED EXPANDED TEMPORARY WELL LOCATION

NOTES

1. ALL LOCATIONS ARE APPROXIMATE

NOT TO SCALE

FIGURE 2-2
EXAMPLE EXPANSION OF GROUNDWATER INVESTIGATION
PHASE 2 PCB INVESTIGATION WORKPLAN
BUILDING TR-1
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY: M.HEFLIN	
DRAWN BY: WM	
DWG DATE: 11JAN11	
DWG NO: 9186R009	

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I:\2010 Projects BST\I UTC Carrier – Syracuse, NY Master File\9186 UTC – Carrier – Syracuse, NY\Plans\9186R009 Example of Proposed Expansion of Groundwater Investigation.dwg

3.0 METHODOLOGY

3.1 Soil Sampling Methodology

A hydraulically-powered DPT drilling rig will be employed to conduct this subsurface investigation. At each location inside Building TR-1, the concrete building floor will be cored using a concrete coring machine to provide a clean access point. Once coring is complete, the DPT drilling rig will advance steel rods containing acetate sleeves that will allow collection of the soil column encountered. From the ground surface, the sampler is advanced 48- or 60-inches (depending on the sampling tool length) and retrieved from the borehole with the first sample. The plastic sleeve and soil core are removed, the barrel is decontaminated, a new sleeve is installed, and the sampler is inserted back down the same hole to collect the next interval's sample. Additional information on DPT soil sampling protocol is provided in Appendix E.

Soil and Headspace Logging

The soil column will be evaluated at 2-foot intervals and split for description purposes and field screening using a photoionization detector. After the soil has been in the sealable plastic bag or glass jar for a sufficient amount of time, the volatile organic vapor concentration will be measured from the headspace of each bag or jar. The concentrations will be recorded in the field logbook or on soil boring logs for each boring. Descriptions of the soils encountered will also be placed on soil boring logs and/or recorded in the field logbook.

3.2 Groundwater Sampling Methodology

Temporary Well Installation

As previously described, a temporary well may be installed based on the findings of the soil investigation at each location. The depth of each temporary well is not expected to exceed 15 feet as the depth to groundwater is encountered approximately 5-6 feet below ground surface in the TR-1 area. If necessary, a 1-inch diameter temporary monitoring well constructed of polyvinyl chloride (PVC) materials will be installed in the borehole approximately 5 feet below the observed water table. Grab groundwater samples will be collected at each location using a peristaltic pump.

The DPT rig will advance the soil borings using a double push rod system of inner and outer rods. One section of inner rod will be fitted with a drive point and inserted into a section of outer rod. The drive point on the inner rod prevents soil from entering the outer rod as the rod string is pressed into the ground. New inner and outer rods are added as the rod string is advanced into the ground. Once the target depth is reached, the inner rods will be removed, leaving the

outer rods in place to hold the hole open during temporary well installation. If the cohesiveness of the soil allows the hole to remain open when the rods are removed, single rods may be used instead of the dual-wall system. Use of single rods instead of dual wall will expedite temporary well installation.

The 1-inch diameter PVC temporary well screen and riser materials will be lowered through the outer rods to the bottom of the hole. The length of well screen will depend on the total depth of the boring, with no less than 5 feet of screen and no more than 10 feet of screen being used. Once the temporary well is in place, a sand filter pack will be poured through the rods (if the double push rod system is used) as they are slowly pulled to approximately 2 feet above the temporary well screen, allowing the sand filter pack to form around the screen.

After the rods have been pulled and the sand filter pack installed to at least one foot above the screened interval, the remaining portion of the hole will be sealed to ground surface with granulated bentonite, which will be slowly poured down the annulus as the rods are pulled from the hole. The bentonite granules in the vadose zone will be hydrated with deionized water. All temporary wells will be completed flush with ground surface and sealed with a water-tight cap. The temporary wells will be abandoned after groundwater results have been received and evaluated, in anticipation of building demolition activities.

Temporary Well Sampling

After allowing the temporary points to equilibrate overnight (24-hours), an oil-water interface probe will be used to measure the depth to water and, if present, the depth to and thickness of product. A groundwater sample will be collected from the well using a length of dedicated polyethylene or Teflon tubing attached to a peristaltic pump by which the water can be drawn up into the tubing through the pump head and into the sample container. New tubing will be used for each temporary well groundwater sample.

If no groundwater enters the temporary well after a period of time, it will be abandoned and another location will be installed in an attempt to obtain a sample from the general area. Each groundwater sample will be submitted to Accutest Laboratories in Dayton, New Jersey (New York Certification 11791), for Total PCB analysis using USEPA Method 8082.

Investigation Derived Wastes

Investigation derived wastes (IDW) generated during the field activities will be placed in Department of Transportation-approved drums, logged, properly labeled, and stored on the Site. Analytical data from the investigation will be used for characterization, as practicable.

4.0 HEALTH AND SAFETY PLAN

All field activities will be conducted in compliance with a site-specific health and safety plan, to be prepared prior to conducting activities outlined in this work plan. The health and safety plan will be prepared by EnSafe specifically for the activities described herein for the facility.

5.0 IMPLEMENTATION SCHEDULE

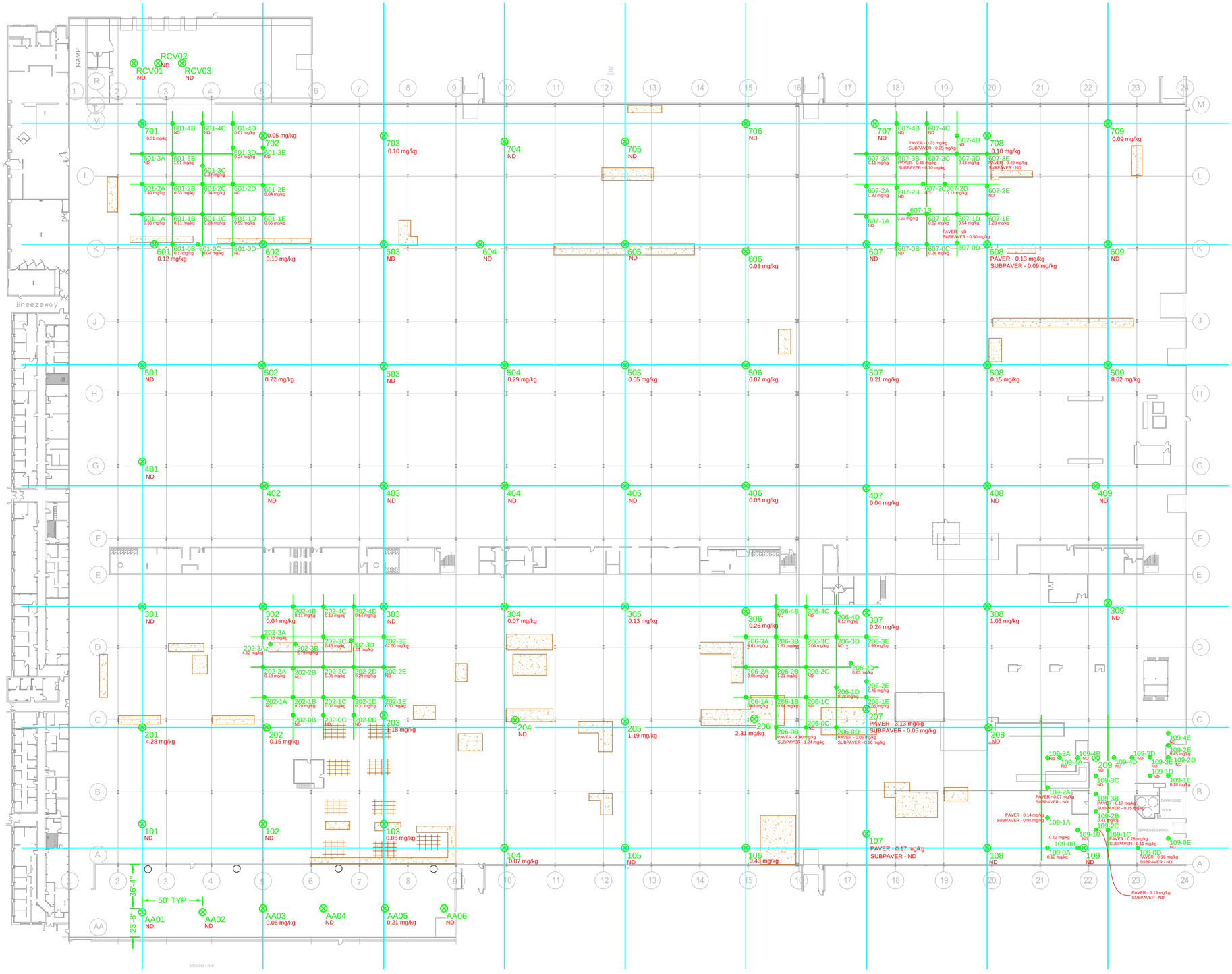
The schedule for the Building TR-1 investigation activities outlined in this work plan is as follows:

Proposed Schedule

Submit Revised Work Plan to NYSDEC	January 12, 2011
NYSDEC Review and Approval	January 19, 2011 (approx. 1 week after submittal)
Preparation and Mobilization for Field Activities	January 24, 2011
Completion of Field Investigation Activities	February 28, 2011 (Bldg TR-1 demolition activities scheduled to start March 2011)
Report generated for submittal to NYSDEC	April 29, 2011 (approx. 60 days after completion of field work, assuming no delays in completing field activities)

Note:
Dates are conditional based upon approval date of work plan, investigation findings, Bldg TR-1 abatement activities, and other factors.

Appendix A
Concrete Core Grid-Based Sample Locations (Figure), October 2010



LEGEND

- SAMPLING GRID (DIMENSIONS ARE MEASURED TO CENTER OF COLUMN GRID, ADDITIONAL DIMENSIONS MAYBE MEASURED TO WALL FOR REFERENCE AS WELL)
- BIASED GRID SAMPLE POINTS
- WOOD BLOCK FLOORING – APPROXIMATE (POTENTIAL ACM UNDERLYING WOOD–BLOCK)
- WOOD EXPANSION JOINTS – APPROXIMATE

NOTES

1. ALL LOCATIONS ARE APPROXIMATE
2. POINTS SHOWN OFF THE GRID INTERSECTIONS WERE MOVED TO ACCESS RESTRICTIONS TO THE PLANNED GRID INTERSECTIONS.

GRAPHIC SCALE

0 40 60 80

(IN FEET)

1 inch = 40 ft.

PRELIMINARY

DRAFT

ATTORNEY - CLIENT PRIVILEGED CONFIDENTIAL

BUILDING TR-1
CONCRETE GRID-BASED SAMPLING RESULTS
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	G.O.
DRAWN BY:	A.W.
DWG DATE:	10/07/2010
DWG NO:	8989 F4

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File name: I:\2010 PROJECTS BSTI\ UTC CARRIER - SYRACUSE, NY\ MASTER FILE\8989 UTC - CARRIER - SYRACUSE, NY\PLANS\8989 TR 01 CONCRETE GRID-BASED SAMPLING RESULTS.DWG - Plotted By: EDDIE ROGERS Plot Date: 10/12/2010 11:17:12 AM

Appendix B
Historical Substation Actions in Building TR-1

Table B-1
Summary of Findings — Substations in TR-1
(1995 Removal Action)

Substation	Comments
A	➢ Substation A consists of switch gear with 1 transformer on either end. • North end of substation – Wood Block — PCB detections in wood block samples up to 64,000 ppm. – Concrete — concrete was not sampled inside the fenced area. • South end of substation – Wood Block — PCB detections in wood block samples up to 1,200 ppm. – Concrete — surface concrete samples had PCB detections up to 13,000 ppm, with concentrations decreasing with depth. • Central portion of substation – Wood Block — PCB detections in wood block at concentrations less than 200 ppm. Wood block areas outside fenced substation area had PCB concentrations ranging from 49 ppm to 200 ppm. – Concrete — outside wood block areas had PCB concentrations <3 ppm. • Removal Action – Wood Block — wood block was removed around the substation outside the fenced area, extending 2 feet to the east of the substation and 10 feet to the west of the substation. Wood block was removed on the north and south ends, to columns L6 and L7, respectively. – Concrete — a 2-inch removal action was made on both the northern and southern ends of the substation inside the fenced area. No removal action occurred in the central portion of the substation (around the switch gear).
B	➢ Substation B consists of switch gear with 1 transformer on either end. • North end of substation – Wood Block — PCB detections in wood block samples up to 64,000 ppm. – Concrete — concrete was not sampled inside the fenced area. – Removal Action — a 4-inch removal action was made on the northern end of the substation inside the fenced area. • South end of substation – Wood Block — PCB detections in wood block samples up to 310,000. – Concrete — surface concrete samples had PCB detections up to 125,000 ppm and decreasing with depth. • Central portion of substation – Wood Block — PCB detections in wood block at concentrations up to 24,000 ppm – Concrete — concrete was not sampled inside the fenced central section of the substation • Removal Action – Wood Block — wood block was removed inside the fenced area and in a small section on the north end of the substation outside the fenced area. The limits of the wood block removal extend to and around column J6. – Concrete — a 4-inch removal action was made on the northern end of the substation inside the fenced area. An 8-inch removal action was made on the southern end of the substation inside the fenced area. A 2-inch removal action was performed here and along the full eastern side of the substation, both inside and outside the fenced area. On the western side, a 2-inch removal action inside the fenced area and limited to central section.

Table B-1
Summary of Findings — Substations in TR-1
(1995 Removal Action)

Substation	Comments
C	➢ Substation C consists of switch gear with 1 transformer on either end. • North end of substation – Wood Block — PCB detections in wood block samples up to 100,000 ppm. – Concrete — concrete was not sampled inside the fenced area. – Outside the fenced areas, concrete samples were < 3 ppm PCB. No wood block sampled (or present) • South end of substation – Wood Block — PCB detections up to 160,000 ppm. – Concrete — concrete was not sampled inside the fenced area – Outside the fenced areas, concrete samples were < 3 ppm PCB. No wood block sampled (or present) • Central portion of the substation – Wood Block — had PCB detections in wood block at concentrations up to 140 ppm. – Concrete — concrete was not sampled inside the fenced area. Concrete flooring outside wood block areas had <3 ppm PCBs. • Removal Action – Wood Block — wood block flooring was not removed. – Concrete — a 2-inch removal action was made on the northern and southern ends of the substation, inside the fenced area. No removal action was performed in the central section of the substation around the switch gear.
D	➢ Substation D consists of switch gear with 1 transformer on either end. • North end of Substation (silicon transformer) – Wood Block — PCB detections in wood block flooring up to 420 ppm. – Concrete — concrete was not sampled inside the fenced area. – Outside the fenced area, concrete samples ranged from <3 ppm to 18 ppm PCBs. No wood block sampled (or present?). • South end of this substation – Wood Block — PCB detections in wood block flooring up to 7,800 ppm. – Concrete — surface concrete flooring up to 21,000, decreasing with depth. Outside the fenced area, concrete samples ranged from < 3 ppm to 47 ppm PCBs. No wood block sampled (or present?). • Central section of substation – Wood Block — PCB detections in wood block flooring up to 1,500 ppm. – Concrete — concrete was not sampled inside the fenced area. • Removal Action – Wood Block — it appears that wood block flooring was removed inside the fenced area of the substation – Concrete — an 8-inch removal action on the south-east portion of the substation inside the fenced area was made, extending 5 feet outside the fenced area. No removal actions were made on the northern or central sections of the substation.

Table B-1
Summary of Findings — Substations in TR-1
(1995 Removal Action)

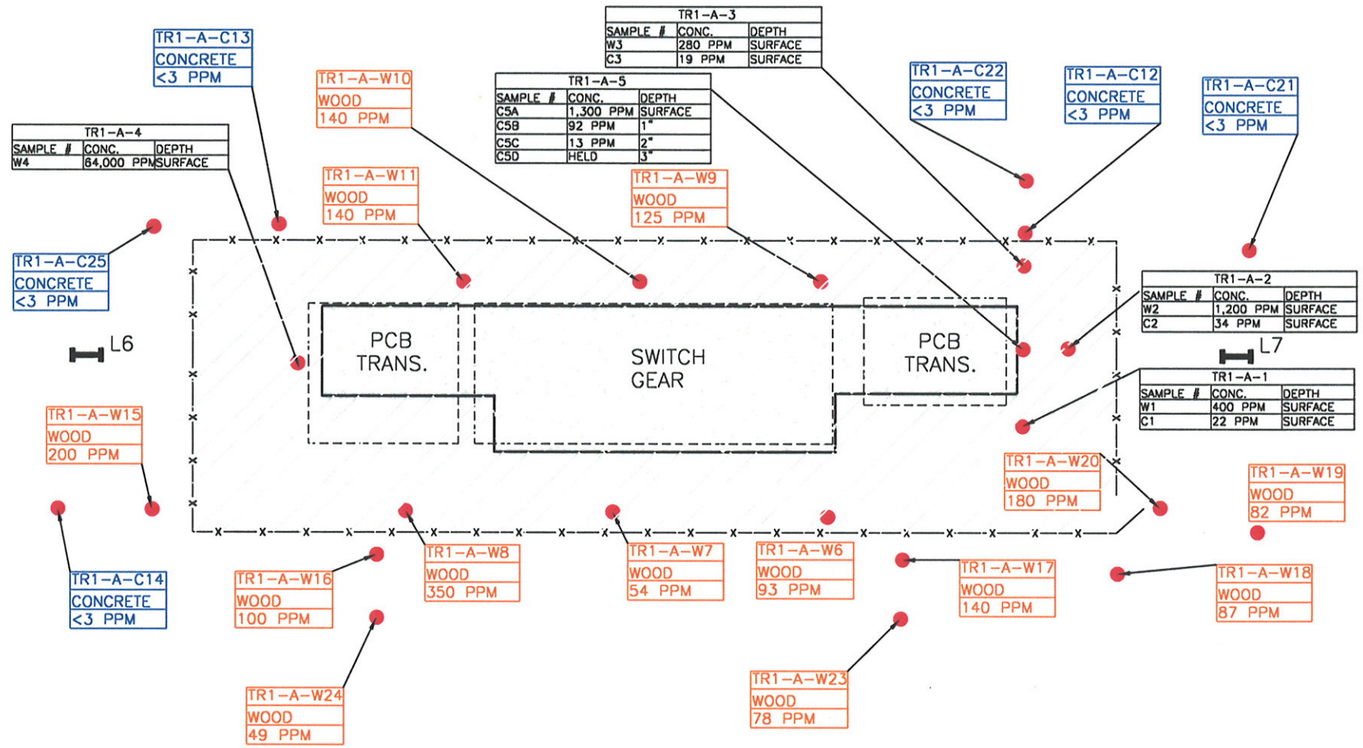
Substation	Comments
E	➢ Substation E consists of switch gear with 1 transformer on either end. • North end of Substation E – Wood Block — PCB detections in wood block flooring up to 10,000 ppm. – Concrete — surface concrete samples had PCB concentrations up to 134,000 ppm, decreasing with depth. – The concrete flooring outside the fenced area ranged from < 3 ppm to 16 ppm. No wood block flooring was sampled outside the fenced area (though none may have existed). • South end of substation – Wood Block — PCB detections in wood block flooring less than 1,000 ppm. – Concrete — surface concrete samples ranged from 40 ppm to 110 ppm PCBs inside the fenced area. – The wood block flooring outside the fenced area on this end ranged from 130 to 150 ppm PCBs. The concrete flooring outside the fenced area ranged from <3 ppm to 12 ppm PCBs. • Central section of substation – Wood Block — PCB detections in wood block flooring up to 780 ppm. – Concrete — concrete was not sampled inside the fenced area. • Removal Action – Wood Block — wood block flooring was removed inside the fenced area. Wood block flooring was also removed outside the fenced area on a portion of the western side of the substation and on the southern end to column J19. – Concrete — an 8-inch removal action was performed on the northern-most end of the substation, with a 2-inch removal action was made immediately surrounding the transformer. A 2-inch removal action was made inside the fenced area near this transformer. N o removal actions were made in the central section of the substation (around the switch gear).
G	➢ Substation G consists of switch gear with 1 transformer on either end. • North end of substation – Wood Block — PCB concentrations in wood block samples up to 6,000 ppm. – Concrete — surface concrete samples up to 8,400 ppm. • Outside the fenced area, concrete samples were < 3 ppm. No wood block flooring was sampled outside the fenced area (though none may have existed). South end of substation – Wood Block — PCB detections in wood block samples were up to 8,000 ppm. – Concrete — surface concrete samples were up to 36,000 ppm PCB, decreasing with depth. • Outside the fenced area, wood block flooring samples had PCB detections up to 3,100 ppm. Concrete samples were < 3 ppm, with one exception, which was 21 ppm. Central section of substation – Wood Block — wood block samples detected PCBs up to 720 ppm. – Concrete — concrete was not sampled inside the fenced area. • Removal Action – Wood Block Flooring — wood block flooring was removed inside the fenced area. Outside the fenced area, removal extended 5 feet outside the fenced area along the entire length of the fenced area on the eastern side and extended to the north and south some to columns D6 and D7, respectively. – Concrete Flooring — 3 inches of flooring was removed from the northern end of substation and along the western side, inside the fenced area, up to the start of the southern transformer. An 8-inch removal action was made around the southern transformer, inside the fenced area.

Table B-1
Summary of Findings — Substations in TR-1
(1995 Removal Action)

Substation	Comments
H	➢ Substation H consists of switch gear with 1 transformer on either end. • North end of substation – Wood Block — PCB detections in wood block flooring up to 12,000 ppm. – Concrete — surface concrete samples up to 29,000 ppm. Outside the fenced area, concrete samples ranged from 45 to 98 ppm PCBs. • South end of this substation – Wood Block — PCB detections in wood block flooring up to 26,000 ppm. – Concrete — surface concrete samples up to 1,800 ppm, decreasing with depth. Outside the fenced area, a single wood block sample was 200 ppm PCBs. Concrete flooring ranged from <3 ppm to 29 ppm. • Central section of substation – Wood Block — PCB detections in wood block flooring up to 46 ppm – Concrete — concrete flooring up to 14 ppm. • Removal Action – Wood Block — wood block flooring was removed from inside the fenced area. Wood block was also removed extending 10 feet outside the western fence and to the north and south to columns B6 and B7, respectively. – Concrete — an 8-inch removal action was made on the northern side of this transformer inside the fenced area, but not around the transformer. A 4-inch removal action was made on the southern end of the transformer, but not around the transformer. A 2-inch removal action was made on the east side of the central section, inside the fence. Concrete was also removed outside the fenced area, extending 5 feet to the north of column B6 and 5 feet to the west.
I	➢ Substation I consists of switch gear with 1 transformer on either end. • North end of substation – Oil — an oil sample was obtained from this area which contained 2,800 ppm PCBs. – Wood Block — PCB detections in wood block flooring up to 560 ppm. – Concrete — concrete was not sampled. • South end of substation – Wood Block — PCB detections in wood block flooring up to 25,000 ppm. – Concrete — concrete was not sampled. Outside the fenced area, concrete flooring ranged from <3 ppm to 90 ppm. • Central section of substation was not sampled. • Removal Action – Wood Block — it appears that wood block was removed inside the fenced area and also extending outside the fenced area 1 foot to the west, 5 feet to the east, and to the north to 2 feet beyond column D12 and to the south to column D13. – Concrete — a 4-inch removal action was taken on the northern end of the substation both inside and outside the fenced area. A 2-inch removal action was made on the southern end of the substation both inside and outside the fenced area. No removal action was made in the central section.

Table B-1
Summary of Findings — Substations in TR-1
(1995 Removal Action)

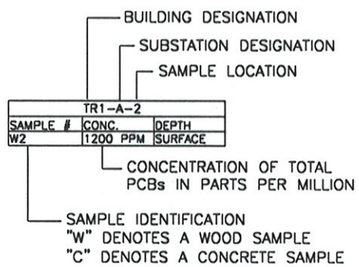
Substation	Comments
J	➢ Substation J consists of switch gear with 1 transformer on either end. • North end of Substation – Wood Block — PCB detections in wood block flooring up to 3,800 ppm. – Concrete — concrete flooring was not sampled inside the fenced area on this end. Outside the fenced area, the concrete flooring ranged from < 12 ppm to 120 ppm. No wood block flooring was sampled outside the fenced area (though none may have existed). • South end of this substation – Wood Block — PCB detections in wood block flooring up to 22,000 ppm – Concrete — surface concrete samples had PCB detections up to 19,000 ppm, decreasing with depth. The concrete flooring outside the fenced area ranged from <3 ppm to 59 ppm PCBs. Outside the fenced area, a single wood block flooring sample outside the fenced area on this end contained 220 ppm. • The central section of this substation – Wood Block — PCB detections in wood block flooring less than 500 ppm. – Concrete — concrete flooring was not sampled inside the fenced area in this section. • Removal Action – Wood Block — it appears that wood block was removed inside the fenced area. Outside the fenced area, wood block was removed extending 2 feet on the east side of the substation. – Concrete — a 2-inch removal action took place on the northern and central sections of this substation, extending 2 feet to the west, outside the fenced area and to 2 feet past column D18 on the north end. On the southern end, an approximately 11-inch removal action took place.
T1	➢ Substation T1 consists of switch gear with 1 transformer on either end. – No sampling data available on this substation. • Removal Action – Wood Block — it appears that wood block inside the fenced area was removed. – Concrete — it does not appear a concrete removal action took place at this substation.
T2	➢ Substation T2 consists of a single transformer with switch gear. – Wood Block — 2 wood block samples (1 inside fenced area and 1 outside) had PCB detections of 650 ppm and 930 ppm, respectively. All other wood blocks samples were < 50 ppm. – Concrete — concrete samples ranged from < 3 ppm to 7 ppm. • Removal Action – Wood Block — wood block flooring was removed inside the fenced area and extending to 5 feet outside the fenced area on the west side of the substation and 2 feet on the north end. – Concrete — no concrete removal actions took place at this substation.
T3	➢ Substation T3 consists of a single transformer with switch gear. – Wood Block — 3 wood block samples obtained, one of which was over 50 ppm at 60 ppm. – Concrete — 4 concrete samples were obtained, ranging from 4 ppm to 16 ppm PCBs. • Removal Action – Wood Block — wood block was removed inside the fenced area – Concrete — a 2-inch removal action was made on the southeast side of the southern transformer.



CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- —x— – EXISTING FENCING
- L7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ——— – EQUIPMENT TO REMAIN
- – – – – – – EQUIPMENT TO BE REMOVED
- – SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 1
SUBSTATION A PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE A-1: SUBSTATION A
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION (1995)
SAMPLING RESULTS
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R004

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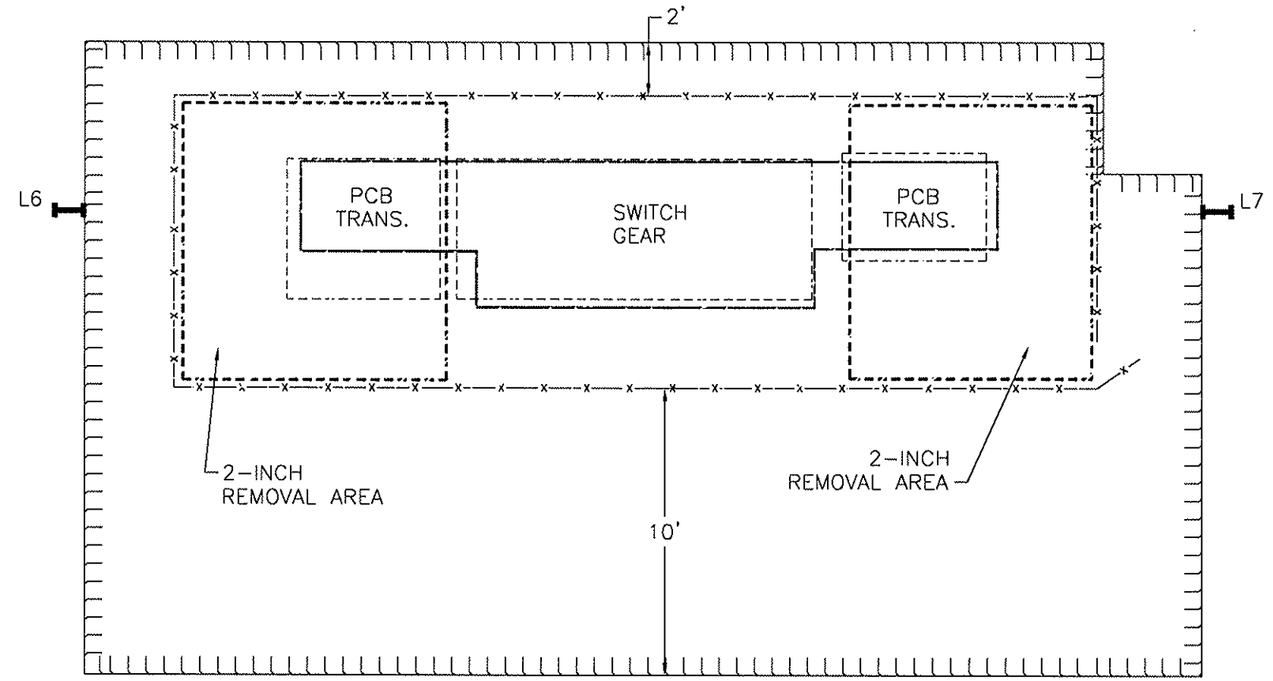

LEGEND

- x - EXISTING FENCING
- L7 - COLUMN LOCATION
- ~ WOOD BLOCK/ASPHALT BLOCK FLOORING
- ~ CONCRETE
- ~ EQUIPMENT TO REMAIN
- ~ EQUIPMENT TO BE REMOVED (BY OTHERS)
- ~ LIMITS OF WOOD BLOCK REMOVAL/RESTORATION
- ~ LIMITS OF CONCRETE REMOVAL/RESTORATION

NOTE: FIGURE GENERATED FROM BB&L FIGURE 1
PCB TRANSFORMER CHANGEOUT PROGRAM-
BUILDING TR-1, 7-95.

0 5 10
SCALE IN FEET

FIGURE A-2: SUBSTATION A
APPENDIX A - BLDG TR-1
FLOORING REMOVAL DETAILS
(1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R008

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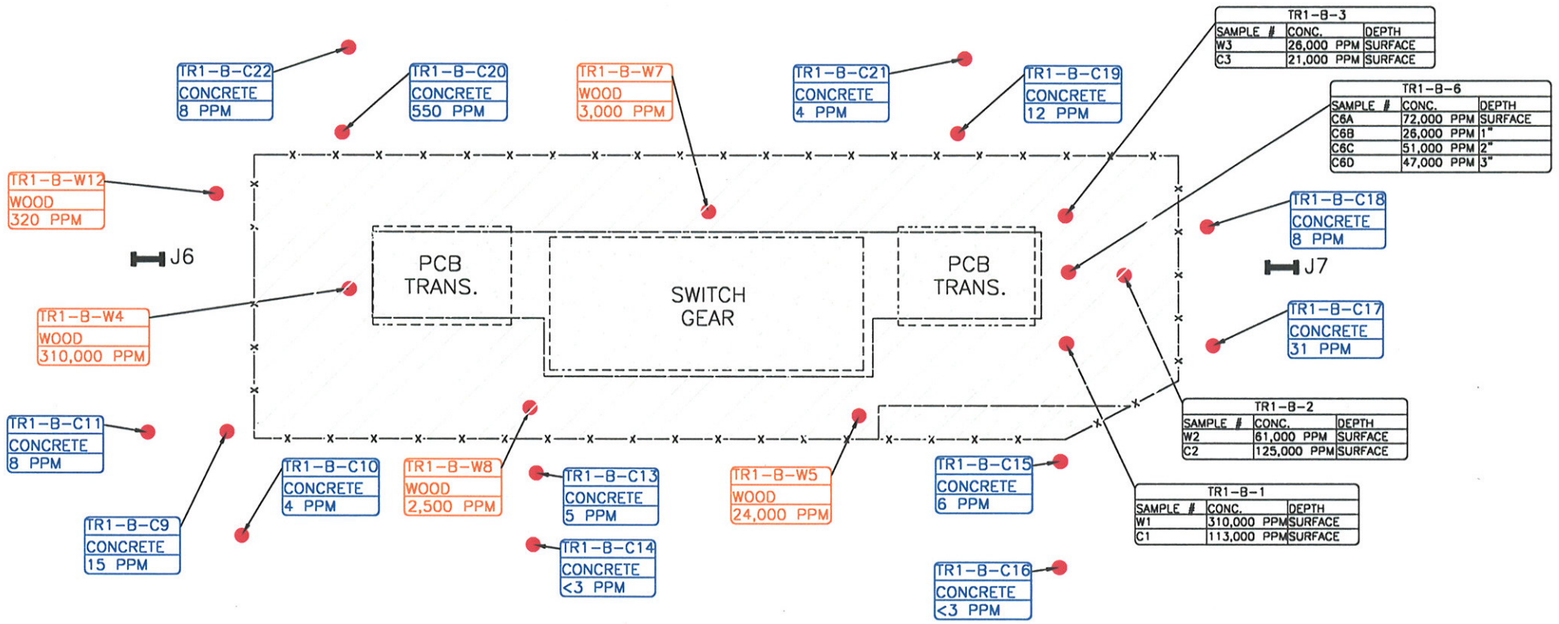


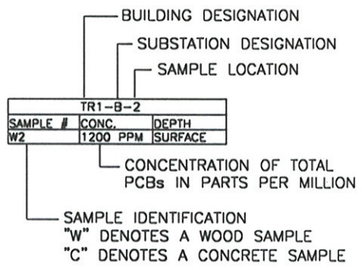
CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- —x— – EXISTING FENCING
- J7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ——— – EQUIPMENT TO REMAIN
- – – – – – – EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE

NOTE: FIGURE GENERATED FROM BB&L FIGURE 2
SUBSTATION B PCB ANALYTICAL DATA 6-29-95



0 5 10
SCALE IN FEET

FIGURE B-1: SUBSTATION B
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION
SAMPLING RESULTS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R007

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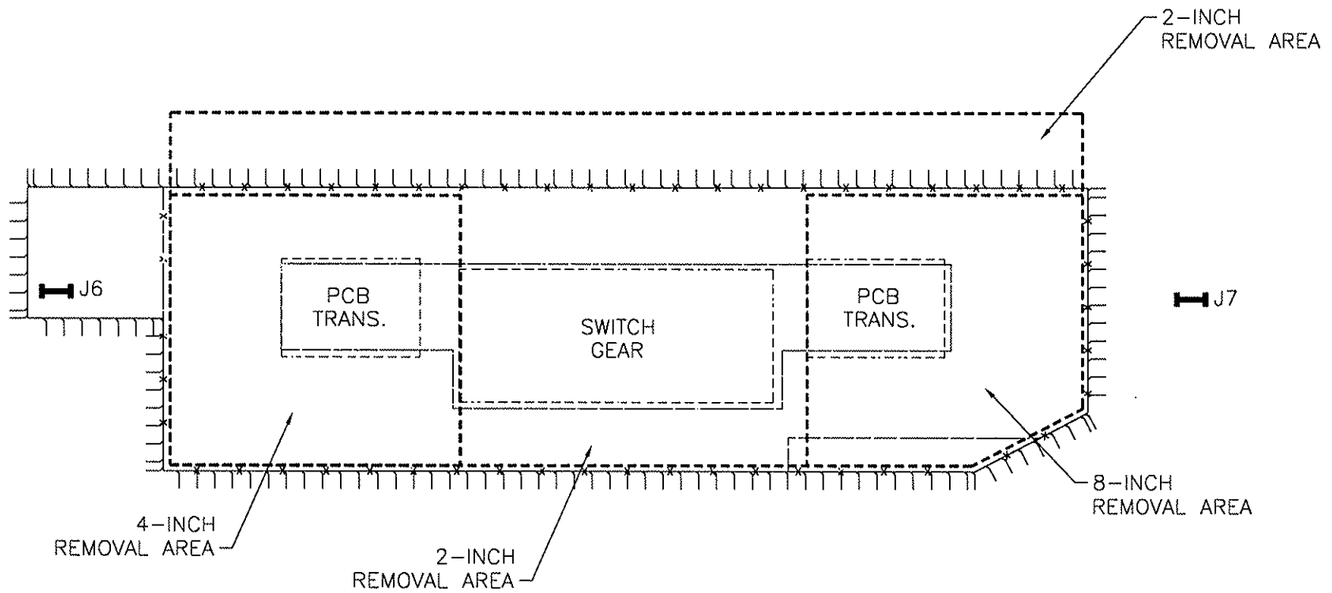

LEGEND

- EXISTING FENCING
- COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED (BY OTHERS)
- LIMITS OF WOOD BLOCK REMOVAL/RESTORATION
- LIMITS OF CONCRETE REMOVAL/RESTORATION

NOTE: FIGURE GENERATED FROM BB&L FIGURE 2
PCB TRANSFORMER CHANGEOUT PROGRAM-
BUILDING TR-1, 7-95.

0 5 10
SCALE IN FEET

FIGURE B-2: SUBSTATION B
APPENDIX A - BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY: M.H.	
DRAWN BY: E.R.	
DWG DATE: 08/24/2010	
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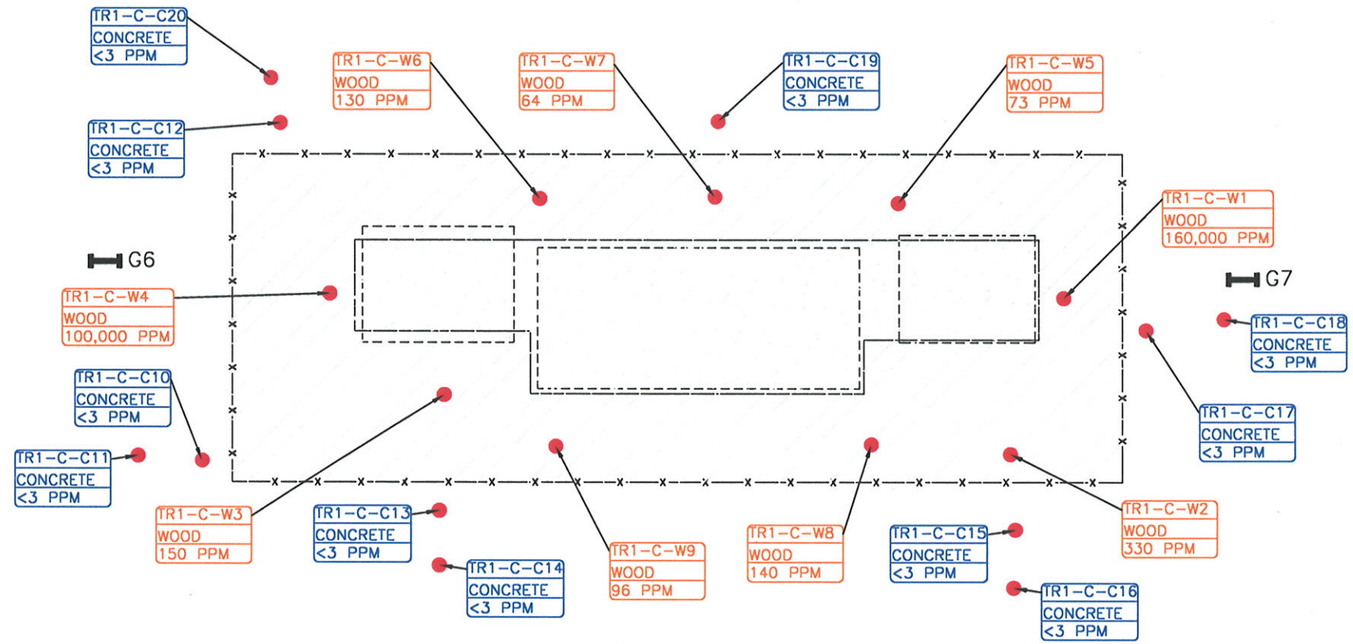
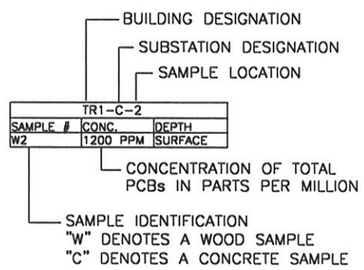


CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- ——x—— – EXISTING FENCING
- J7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ——— – EQUIPMENT TO REMAIN
- – – – – – – EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 3
SUBSTATION C PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE C-1: SUBSTATION C
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION (1995)
SAMPLING RESULTS
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
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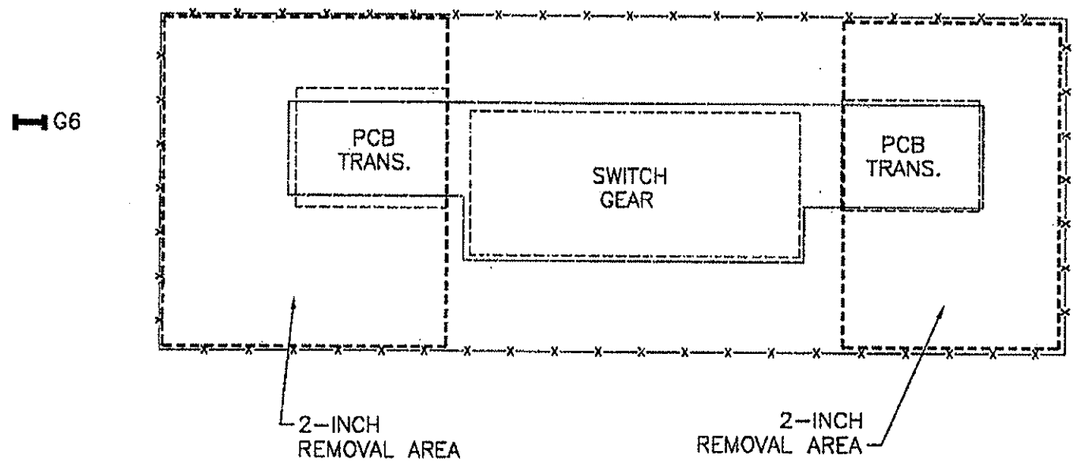

LEGEND

- ——x—— – EXISTING FENCING
- J7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ———— – EQUIPMENT TO REMAIN
- - - - - - – EQUIPMENT TO BE REMOVED

NOTE: FIGURE GENERATED FROM BB&L FIGURE 3
PCB TRANSFORMER CHANGEOUT PROGRAM–
BUILDING TR-1, 7-95

0 5 10
SCALE IN FEET

FIGURE C-2: SUBSTATION C
APPENDIX A – BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
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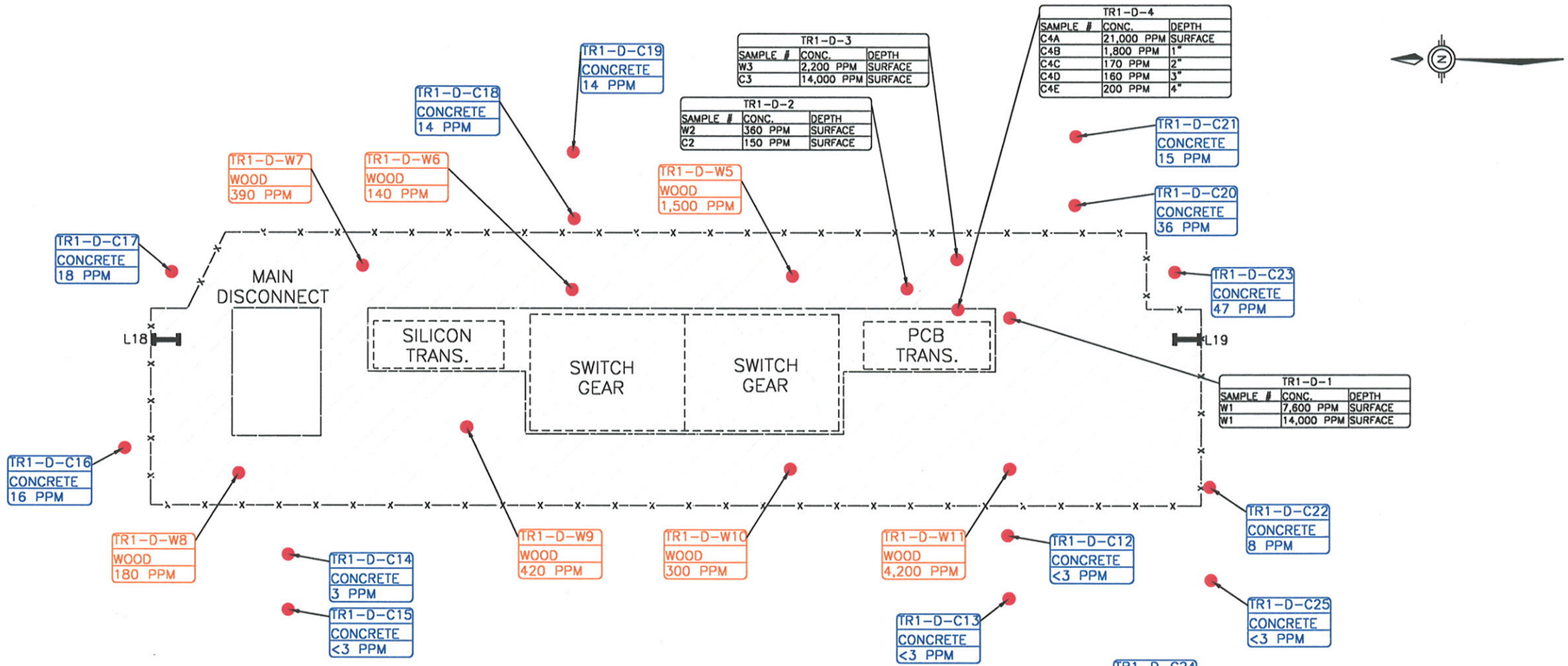


TR1-D-4

SAMPLE #	CONC.	DEPTH
C4A	21,000 PPM	SURFACE
C4B	1,800 PPM	1"
C4C	170 PPM	2"
C4D	160 PPM	3"
C4E	200 PPM	4"

TR1-D-3

SAMPLE #	CONC.	DEPTH
W3	2,200 PPM	SURFACE
C3	14,000 PPM	SURFACE

TR1-D-2

SAMPLE #	CONC.	DEPTH
W2	360 PPM	SURFACE
C2	150 PPM	SURFACE

TR1-D-1

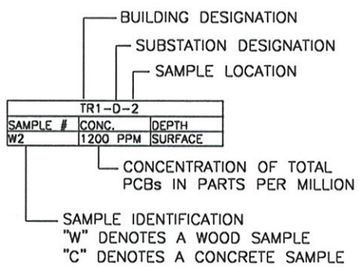
SAMPLE #	CONC.	DEPTH
W1	7,600 PPM	SURFACE
W1	14,000 PPM	SURFACE

CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- —x— – EXISTING FENCING
- J7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ——— – EQUIPMENT TO REMAIN
- – – – – – – EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 4
SUBSTATION D PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE D-1: SUBSTATION D
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION(1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
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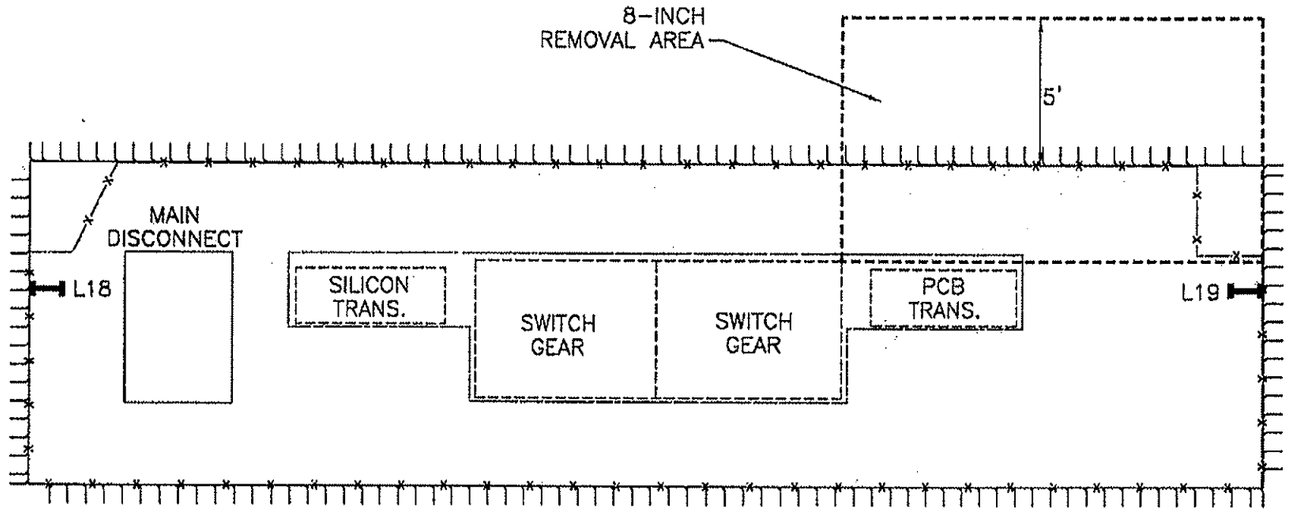

LEGEND

——x—— – EXISTING FENCING

J7 – COLUMN LOCATION

– WOOD BLOCK/ASPHALT BLOCK FLOORING

– CONCRETE

——— – EQUIPMENT TO REMAIN

- - - - - - – EQUIPMENT TO BE REMOVED

NOTE: FIGURE GENERATED FROM BB&L FIGURE 3
PCB TRANSFORMER CHANGEOUT PROGRAM–
BUILDING TR-1, 7-95

0 5 10
SCALE IN FEET

FIGURE D-2: SUBSTATION D
APPENDIX A – BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
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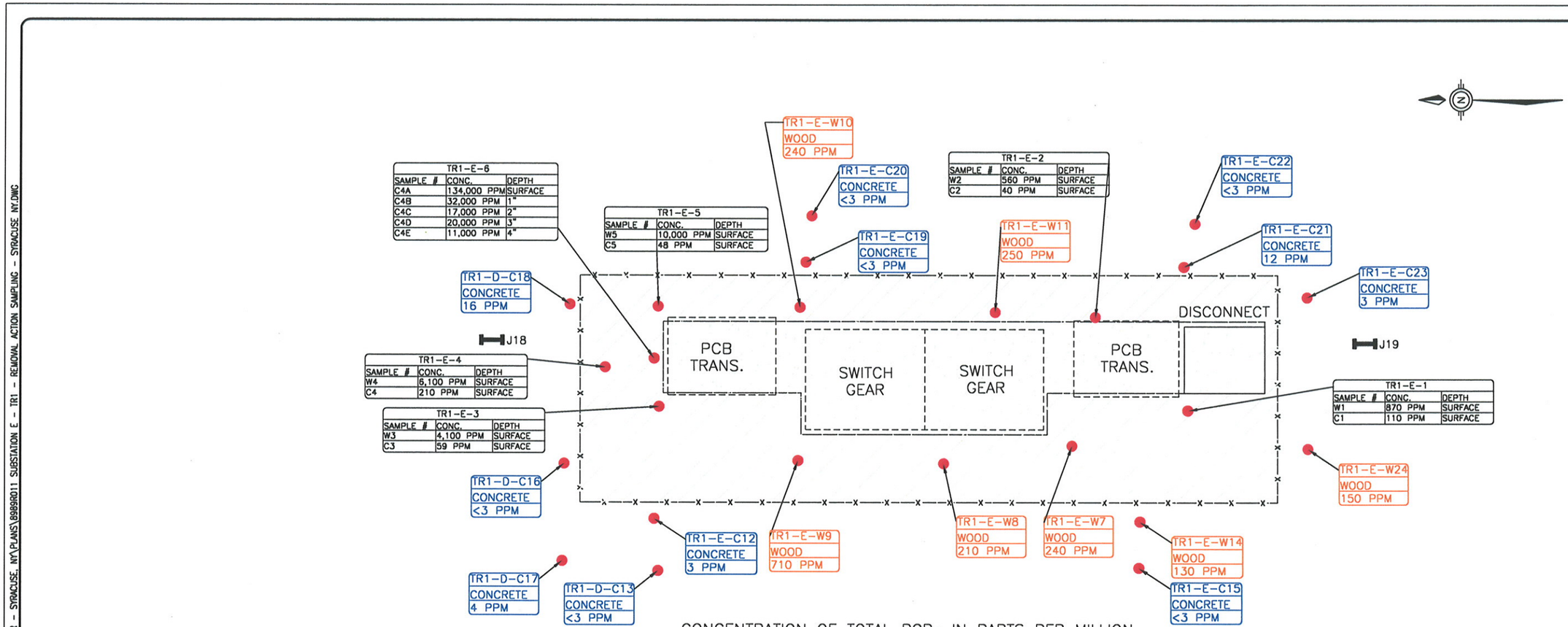
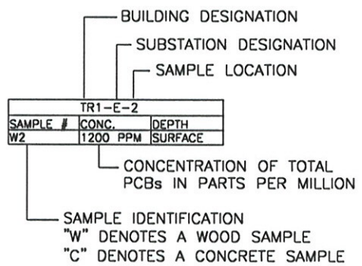


CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- ——x—— – EXISTING FENCING
- J7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ——— – EQUIPMENT TO REMAIN
- - - - - - – EQUIPMENT TO BE REMOVED
- – SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 5
SUBSTATION E PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE E-1: SUBSTATION E
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION (1995)
SAMPLING RESULTS
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

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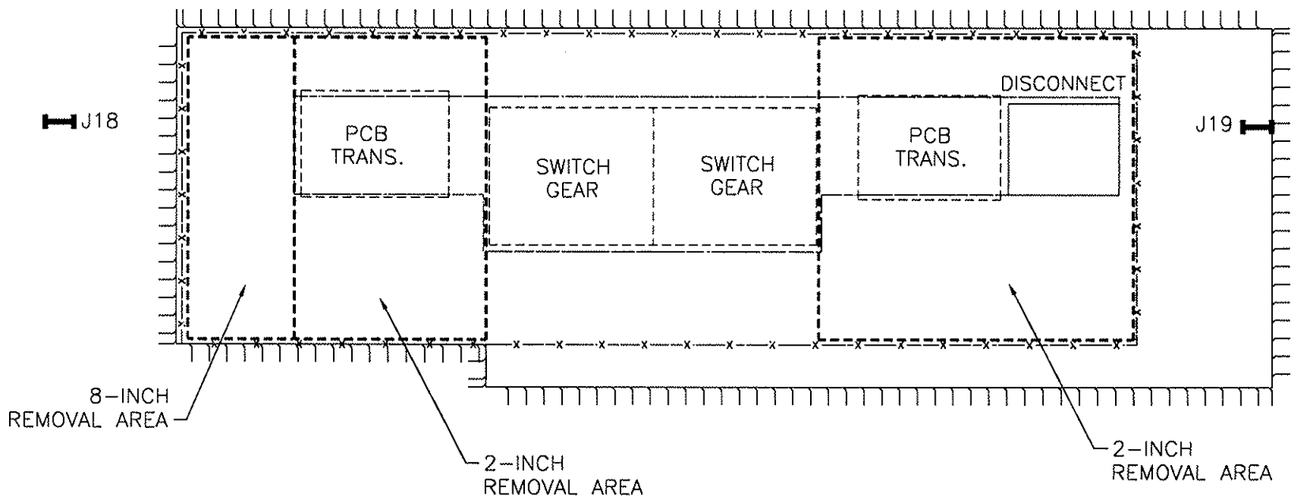

LEGEND

- EXISTING FENCING
- L7 – COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED (BY OTHERS)
- LIMITS OF WOOD BLOCK REMOVAL/RESTORATION
- LIMITS OF CONCRETE REMOVAL/RESTORATION

NOTE: FIGURE GENERATED FROM BB&L FIGURE 5 PCB TRANSFORMER CHANGEOUT PROGRAM– BUILDING TR–1, 7–95.

0 5 10
SCALE IN FEET

FIGURE E–2: SUBSTATION E
APPENDIX A – BLDG TR–1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R012

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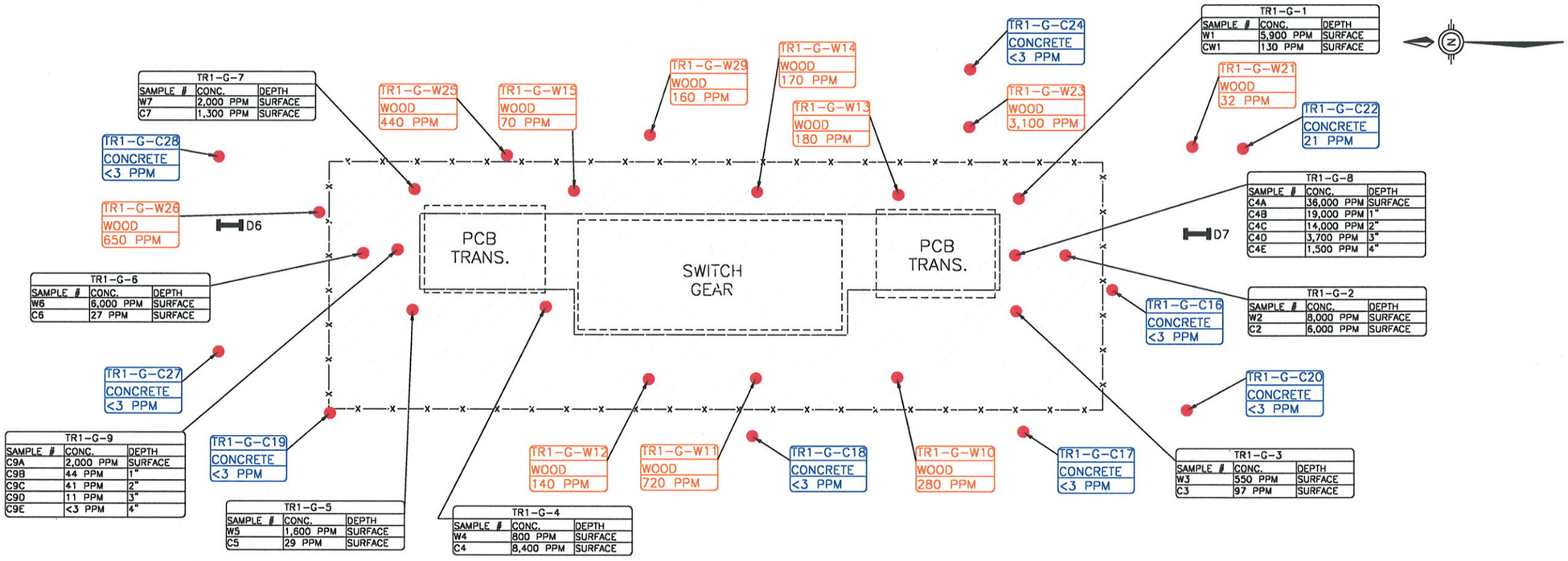
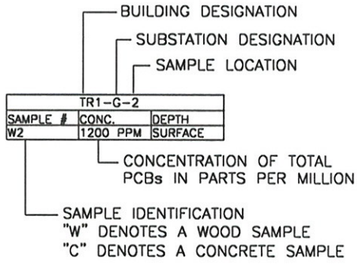


CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- x - EXISTING FENCING
- J7 - COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED

- SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 6
SUBSTATION G PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE G-1: SUBSTATION G
APPENDIX A - BLDG TR-1
REMOVAL ACTION INFORMATION
SAMPLING RESULTS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

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DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R015

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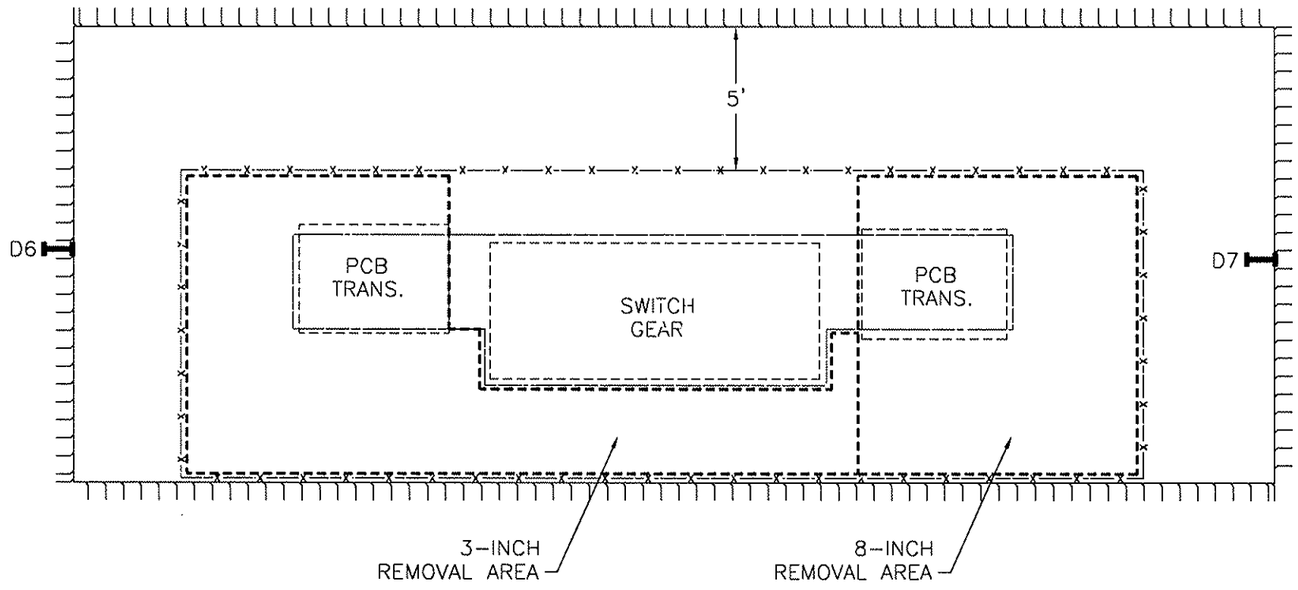

LEGEND

- EXISTING FENCING
- L7 – COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED (BY OTHERS)
- LIMITS OF WOOD BLOCK REMOVAL/RESTORATION
- LIMITS OF CONCRETE REMOVAL/RESTORATION

NOTE: FIGURE GENERATED FROM BB&L FIGURE 6
PCB TRANSFORMER CHANGEOUT PROGRAM–
BUILDING TR–1, 7–95.

0 5 10
SCALE IN FEET

FIGURE G–2: SUBSTATION G
APPENDIX A – BLDG TR–1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R013

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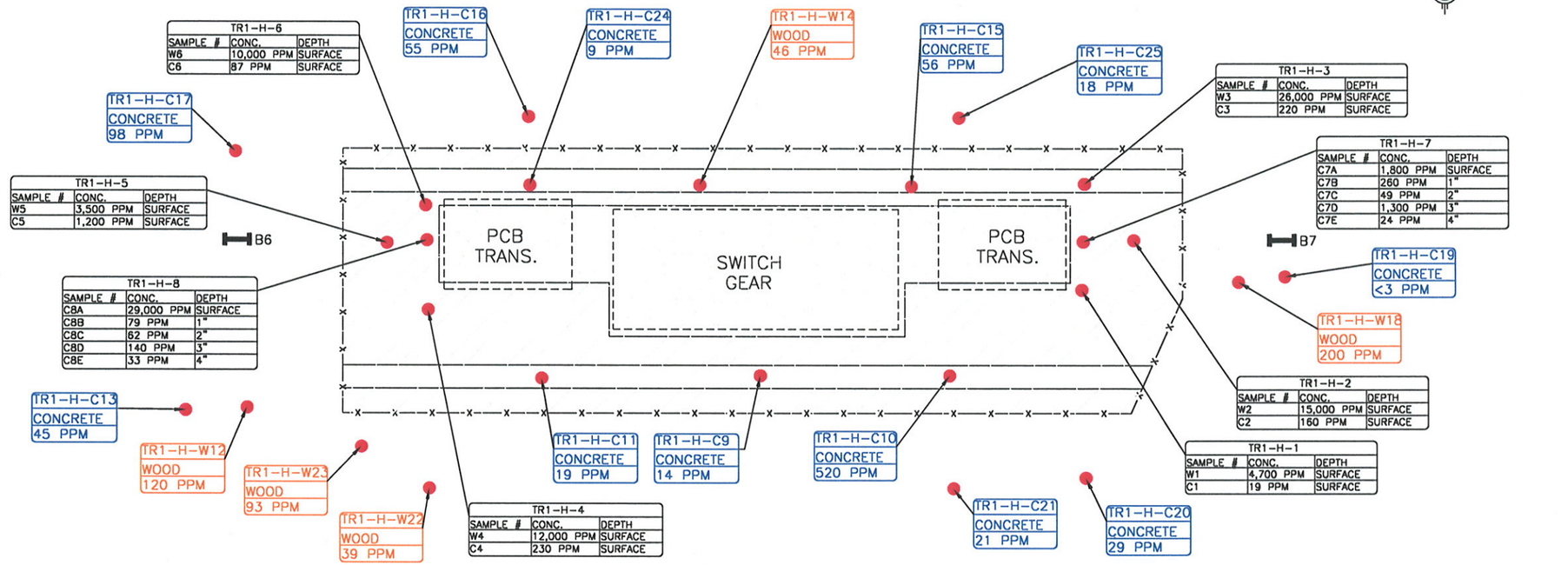
L:\2010 PROJECTS (BSTL) UTC CARRIER - SYRACUSE, NY MASTER FILE\8989 UTC - CARRIER - SYRACUSE, NY\PLANS\8989R013 SUBSTATION G - TR1 - FLOORING REMOVAL DETAILS - SYRACUSE NY.DWG



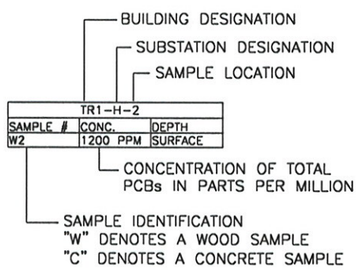
CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- EXISTING FENCING
- J7 – COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE

NOTE: FIGURE GENERATED FROM BB&L FIGURE 7
SUBSTATION H PCB ANALYTICAL DATA 6-29-95



0 5 10
SCALE IN FEET

FIGURE H-1: SUBSTATION H
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION
SAMPLING RESULTS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
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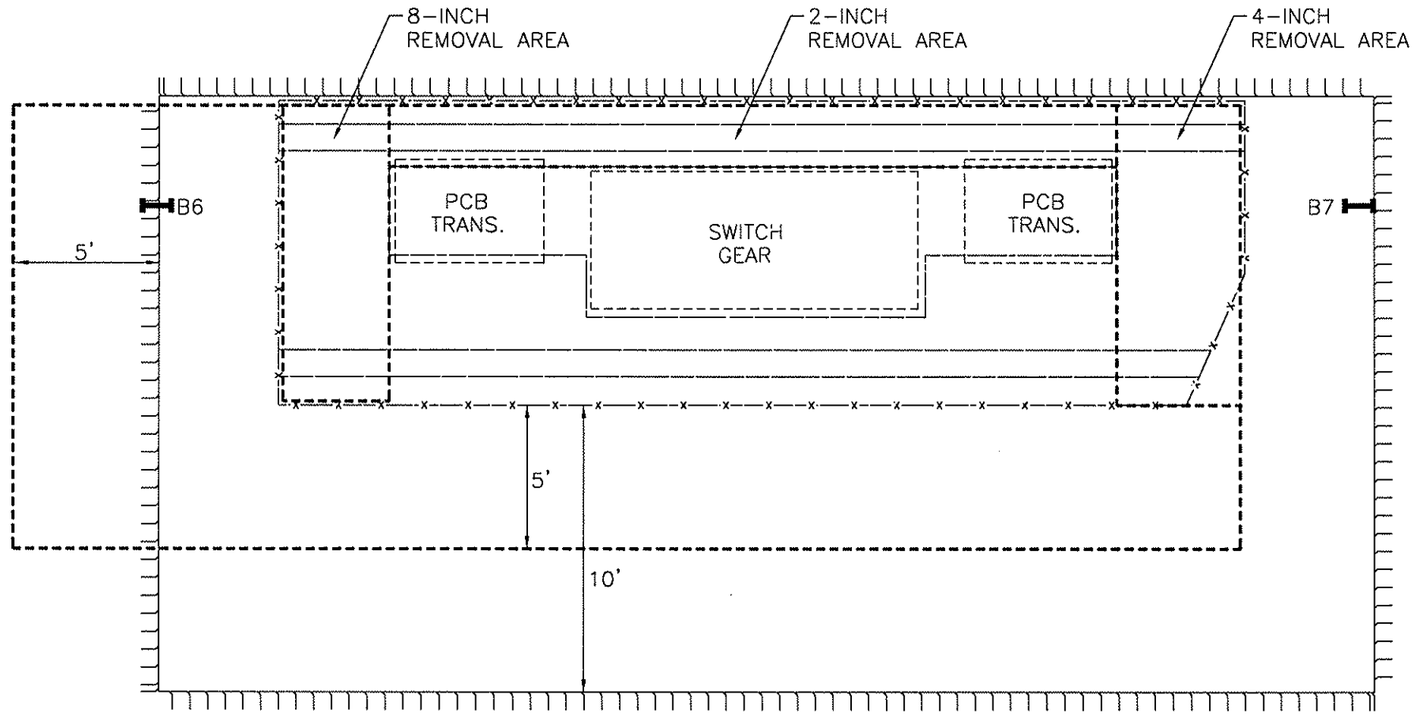

LEGEND

- EXISTING FENCING
- L7 – COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED (BY OTHERS)
- LIMITS OF WOOD BLOCK REMOVAL/RESTORATION
- LIMITS OF CONCRETE REMOVAL/RESTORATION

NOTE: FIGURE GENERATED FROM BB&L FIGURE 7
PCB TRANSFORMER CHANGEOUT PROGRAM–
BUILDING TR-1, 7-95.

0 5 10
SCALE IN FEET

FIGURE H-2: SUBSTATION H
APPENDIX A – BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
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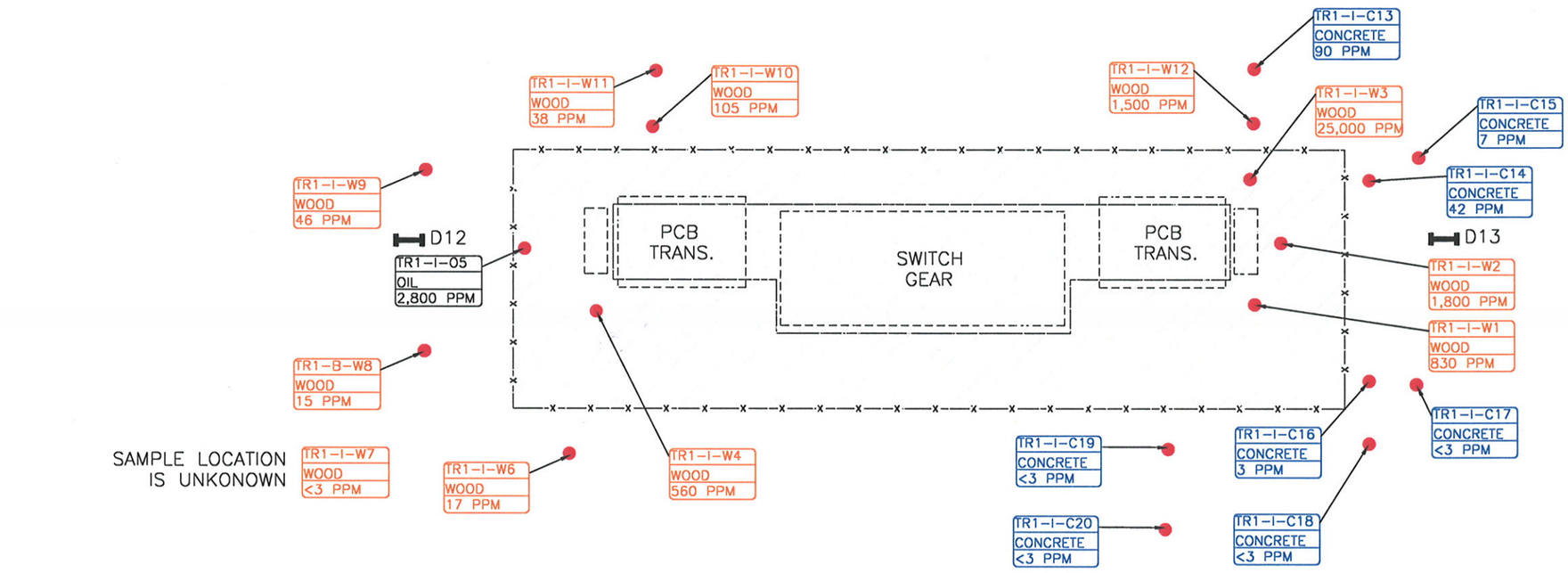
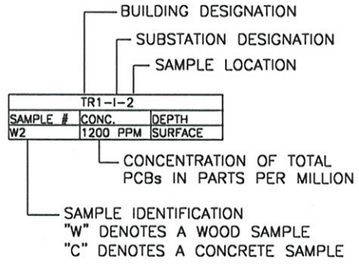


CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

——x—— – EXISTING FENCING
J7 – COLUMN LOCATION
– WOOD BLOCK/ASPHALT BLOCK FLOORING
– CONCRETE
——— – EQUIPMENT TO REMAIN
– – – – – – – EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 11
SUBSTATION I PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE I-1: SUBSTATION I
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION
SAMPLING RESULTS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

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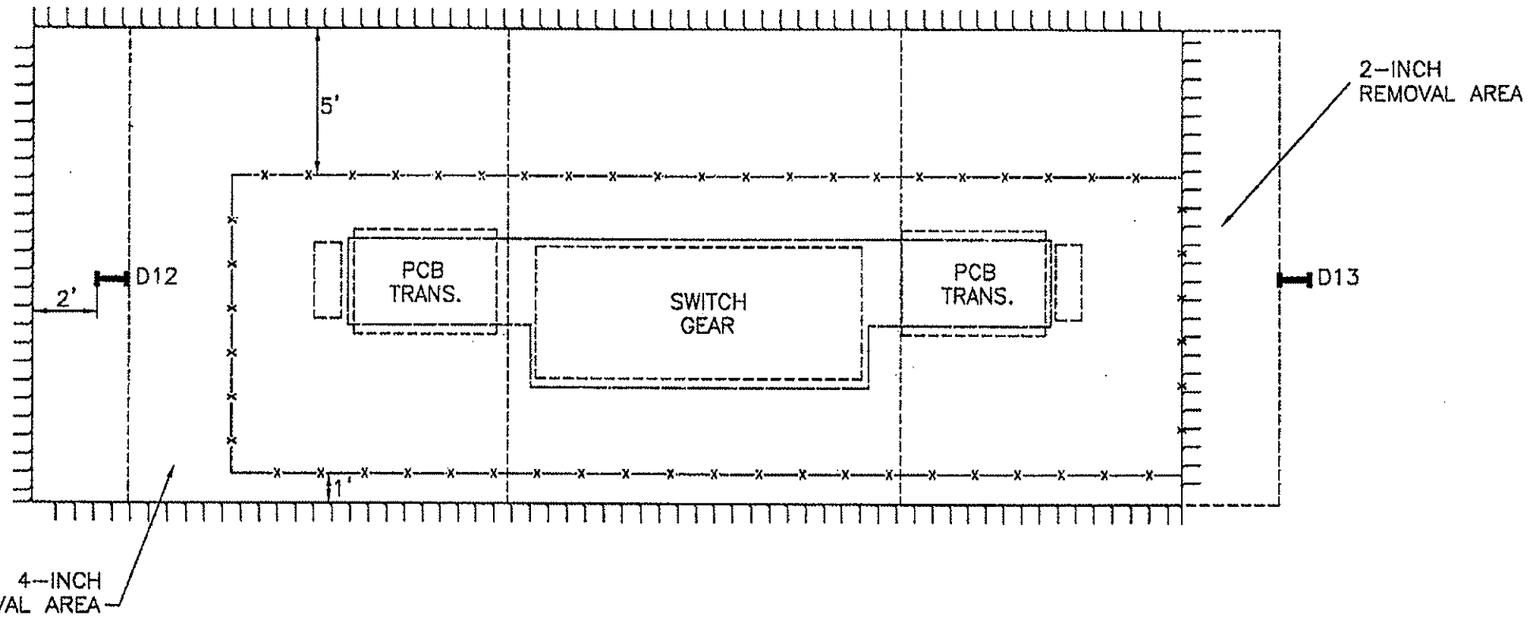

LEGEND

- EXISTING FENCING
- J7 – COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED

NOTE: FIGURE GENERATED FROM BB&L FIGURE 3
PCB TRANSFORMER CHANGEOUT PROGRAM–
BUILDING TR-1, 7-95

0 5 10
SCALE IN FEET

FIGURE 1-2: SUBSTATION I
APPENDIX A – BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

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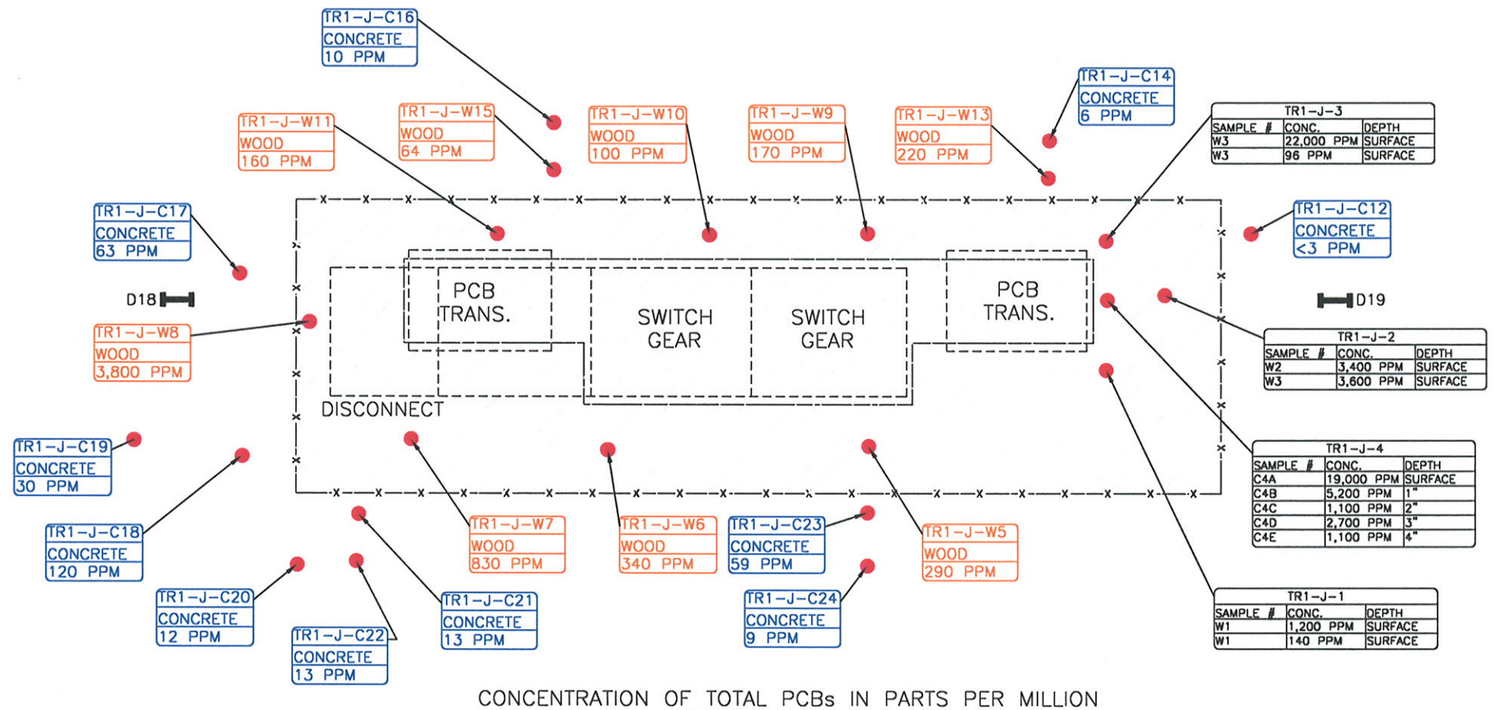


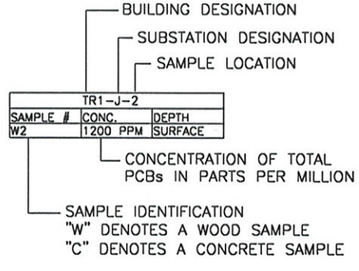
CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

——x—— – EXISTING FENCING
J7 – COLUMN LOCATION
– WOOD BLOCK/ASPHALT BLOCK FLOORING
– CONCRETE
——— – EQUIPMENT TO REMAIN
- - - - - - – EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE

NOTE: FIGURE GENERATED FROM BB&L FIGURE 8
SUBSTATION J PCB ANALYTICAL DATA 6-29-95



0 5 10
SCALE IN FEET

FIGURE J-1: SUBSTATION J
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION
SAMPLING RESULTS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R017

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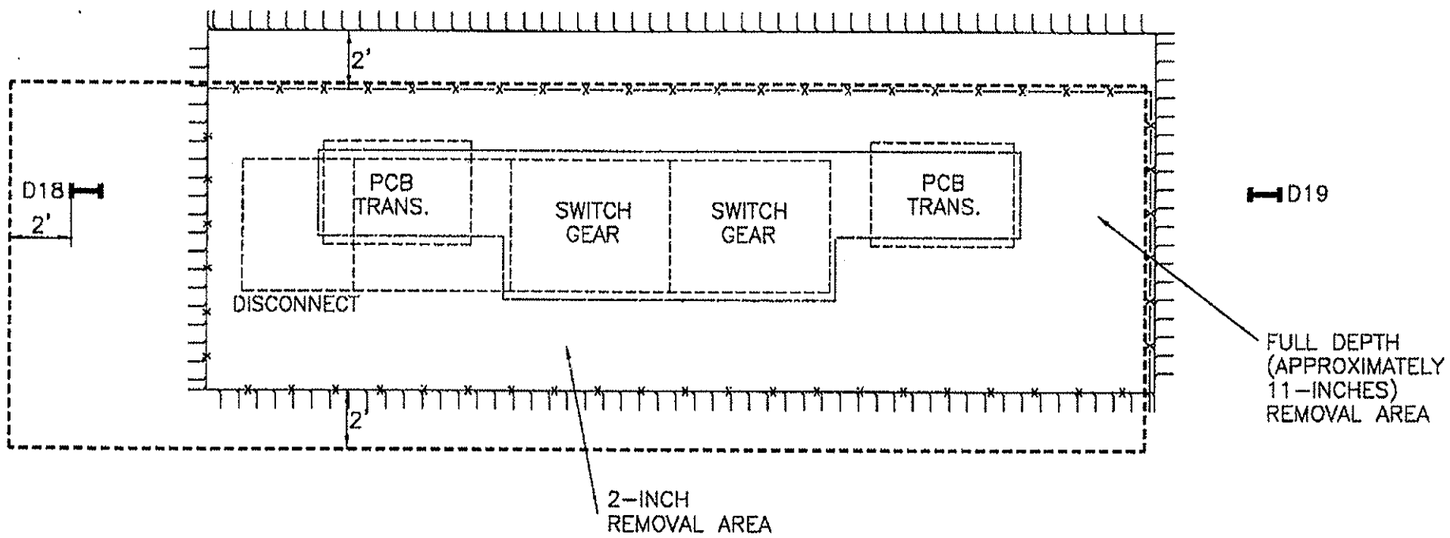

LEGEND

- —x— – EXISTING FENCING
- J7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ——— – EQUIPMENT TO REMAIN
- – – – – – – EQUIPMENT TO BE REMOVED

NOTE: FIGURE GENERATED FROM BB&L FIGURE 3
PCB TRANSFORMER CHANGEOUT PROGRAM-
BUILDING TR-1, 7-95

0 5 10
SCALE IN FEET

FIGURE J-2: SUBSTATION J
APPENDIX A - BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

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DRAWN BY:	E.R.
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DWG NO:	8989R026

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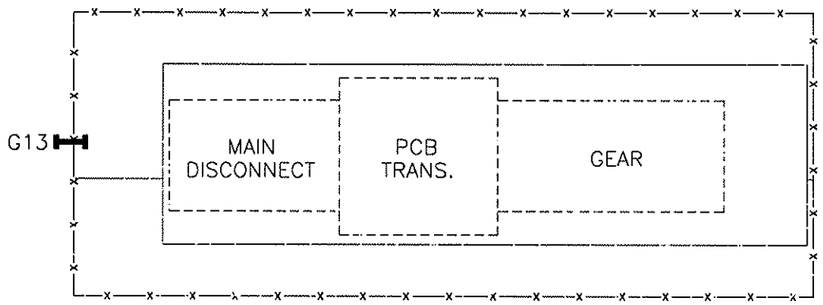

CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

—x— – EXISTING FENCING
J7 – COLUMN LOCATION
– WOOD BLOCK/ASPHALT BLOCK FLOORING
– CONCRETE
——— – EQUIPMENT TO REMAIN
– – – – – – – – – EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE

NOTE: FIGURE GENERATED FROM BB&L FIGURE 12
SUBSTATION T1 PCB ANALYTICAL DATA 6-29-95

BUILDING DESIGNATION
SUBSTATION DESIGNATION
SAMPLE LOCATION

TR1-T1-2		
SAMPLE #	CONC.	DEPTH
W2	1200 PPM	SURFACE

CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION

SAMPLE IDENTIFICATION
"W" DENOTES A WOOD SAMPLE
"C" DENOTES A CONCRETE SAMPLE

0 5 10
SCALE IN FEET

FIGURE T1-1: SUBSTATION T1
APPENDIX A – BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R018

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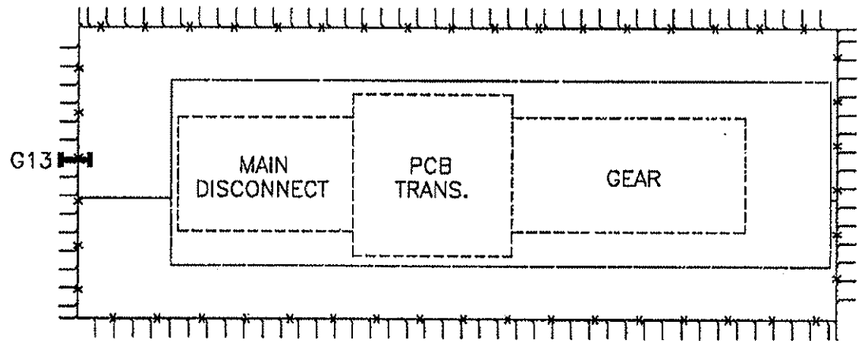

LEGEND

——x—— – EXISTING FENCING

J7 – COLUMN LOCATION

– WOOD BLOCK/ASPHALT BLOCK FLOORING

– CONCRETE

———— – EQUIPMENT TO REMAIN

- - - - - - – EQUIPMENT TO BE REMOVED

NOTE: FIGURE GENERATED FROM BB&L FIGURE 3
PCB TRANSFORMER CHANGEOUT PROGRAM–
BUILDING TR–1, 7–95

0 5 10
SCALE IN FEET

FIGURE T1–2: SUBSTATION T1
APPENDIX A – BLDG TR–1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R027

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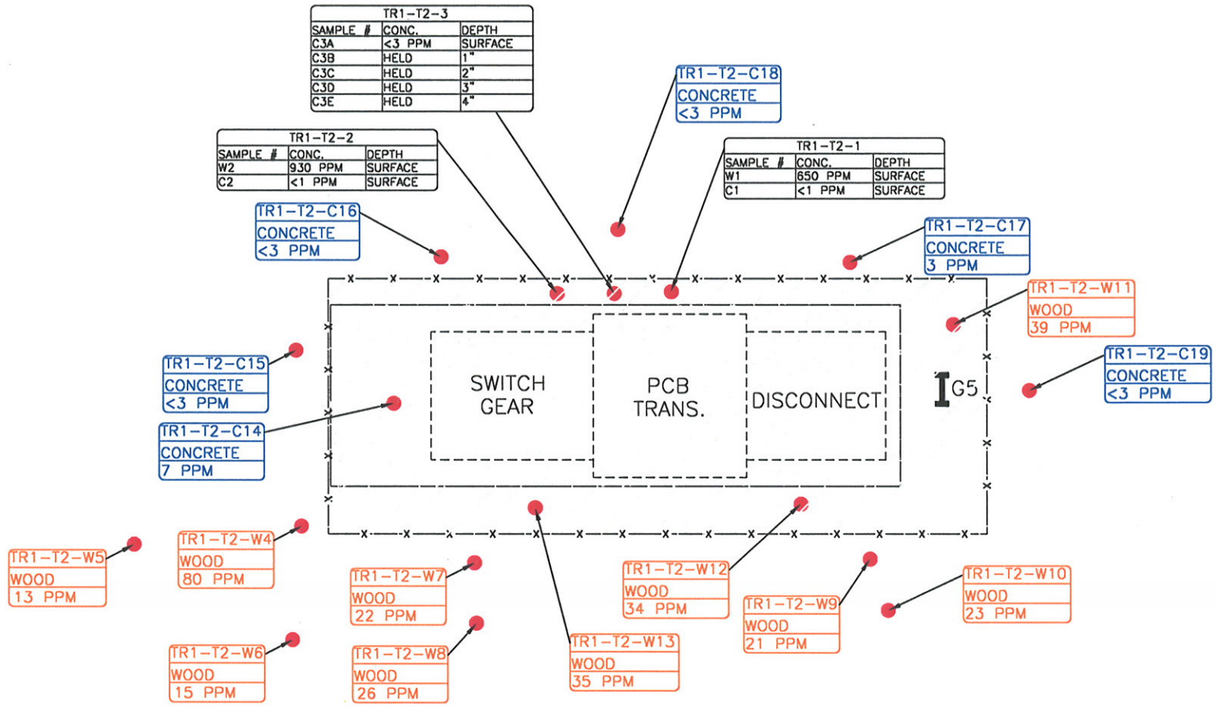
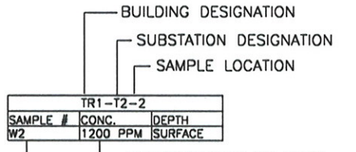


CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- EXISTING FENCING
- J7 – COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED
- SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 9
SUBSTATION T2 PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE T2-1: SUBSTATION T2
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION
SAMPLING RESULTS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R019

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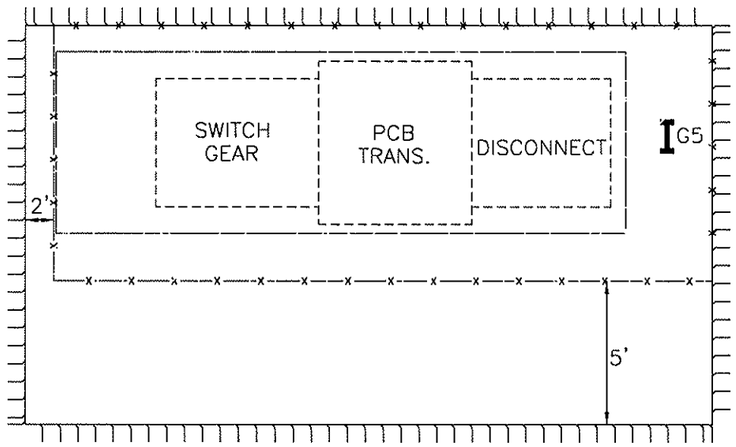

LEGEND

- EXISTING FENCING
- L7 – COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED (BY OTHERS)
- LIMITS OF WOOD BLOCK REMOVAL/RESTORATION
- LIMITS OF CONCRETE REMOVAL/RESTORATION

NOTE: FIGURE GENERATED FROM BB&L FIGURE 9 PCB TRANSFORMER CHANGEOUT PROGRAM– BUILDING TR–1, 7–95.

0 5 10
SCALE IN FEET

FIGURE T2–2: SUBSTATION T2
APPENDIX A – BLDG TR–1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

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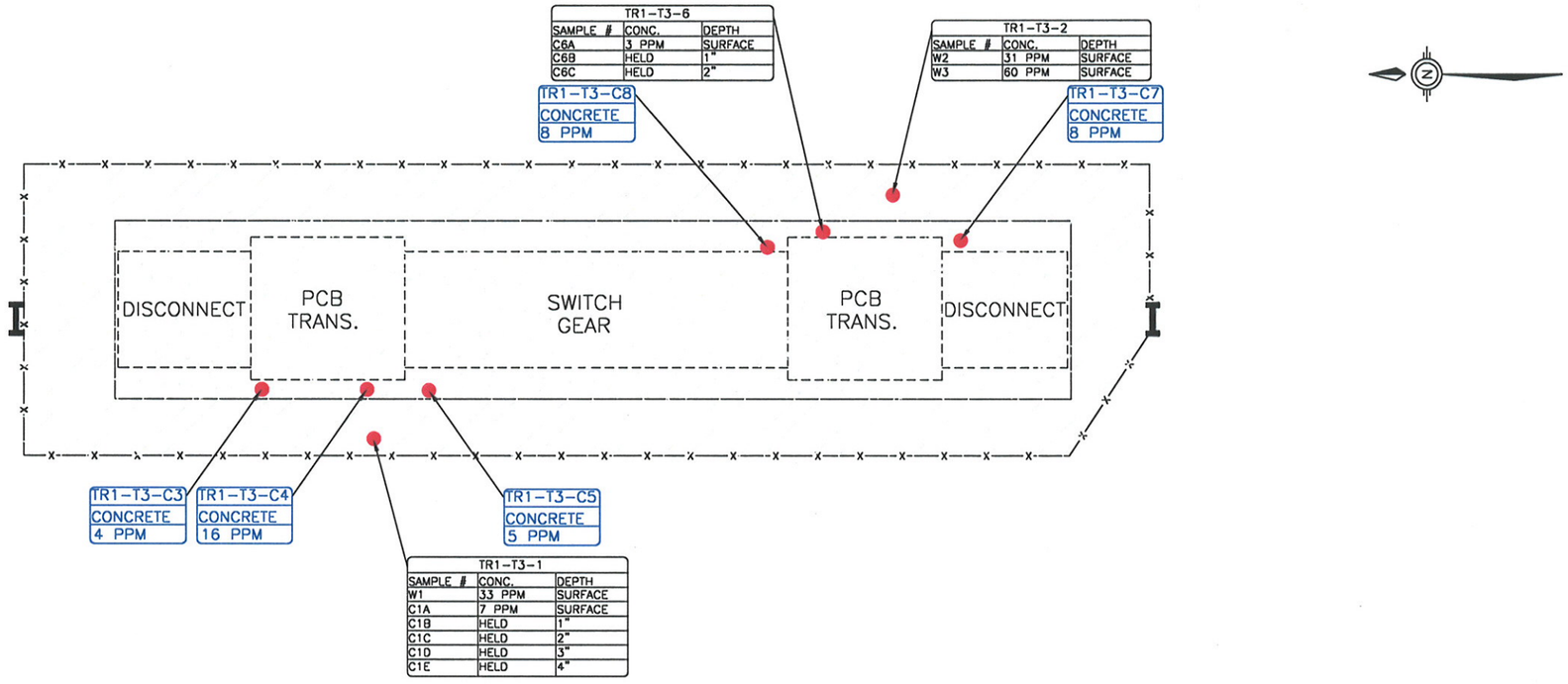
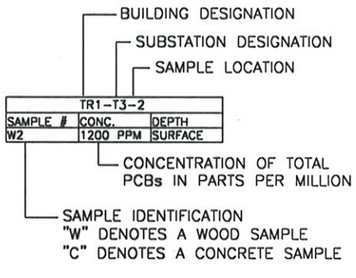


CONCENTRATION OF TOTAL PCBs IN PARTS PER MILLION
AROCLOR 1260

LEGEND

- ——x—— – EXISTING FENCING
- J7 – COLUMN LOCATION
- – WOOD BLOCK/ASPHALT BLOCK FLOORING
- – CONCRETE
- ——— – EQUIPMENT TO REMAIN
- – – – – – – EQUIPMENT TO BE REMOVED

– SIZE OF TRANSFORMERS, AS WELL AS SUBSTATION SPACING SPACING BETWEEN COLUMNS, IS APPROXIMATE



NOTE: FIGURE GENERATED FROM BB&L FIGURE 10
SUBSTATION T3 PCB ANALYTICAL DATA 6-29-95

0 5 10
SCALE IN FEET

FIGURE T3-1: SUBSTATION T3
APPENDIX A – BLDG TR-1
REMOVAL ACTION INFORMATION
SAMPLING RESULTS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

REQUESTED BY:	M.H.
DRAWN BY:	E.R.
DWG DATE:	08/24/2010
DWG NO:	8989R022

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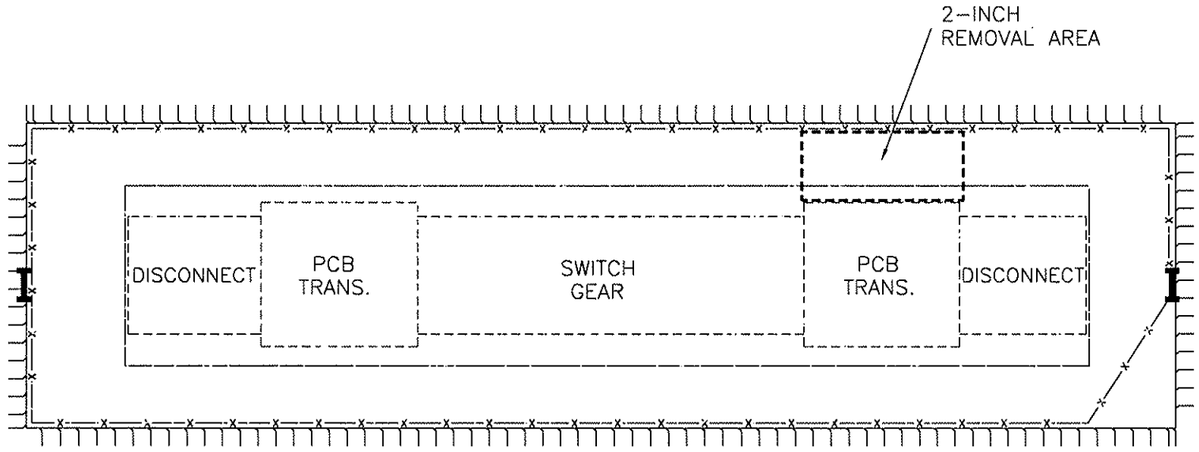

LEGEND

- EXISTING FENCING
- COLUMN LOCATION
- WOOD BLOCK/ASPHALT BLOCK FLOORING
- CONCRETE
- EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED (BY OTHERS)
- LIMITS OF WOOD BLOCK REMOVAL/RESTORATION
- LIMITS OF CONCRETE REMOVAL/RESTORATION

NOTE: FIGURE GENERATED FROM BB&L FIGURE 10
PCB TRANSFORMER CHANGEOUT PROGRAM-
BUILDING TR-1, 7-95.

0 5 10
SCALE IN FEET

FIGURE T3-2: SUBSTATION T3
APPENDIX A - BLDG TR-1
FLOORING REMOVAL DETAILS (1995)
CARRIER FACILITY, THOMPSON ROAD
SYRACUSE, NEW YORK

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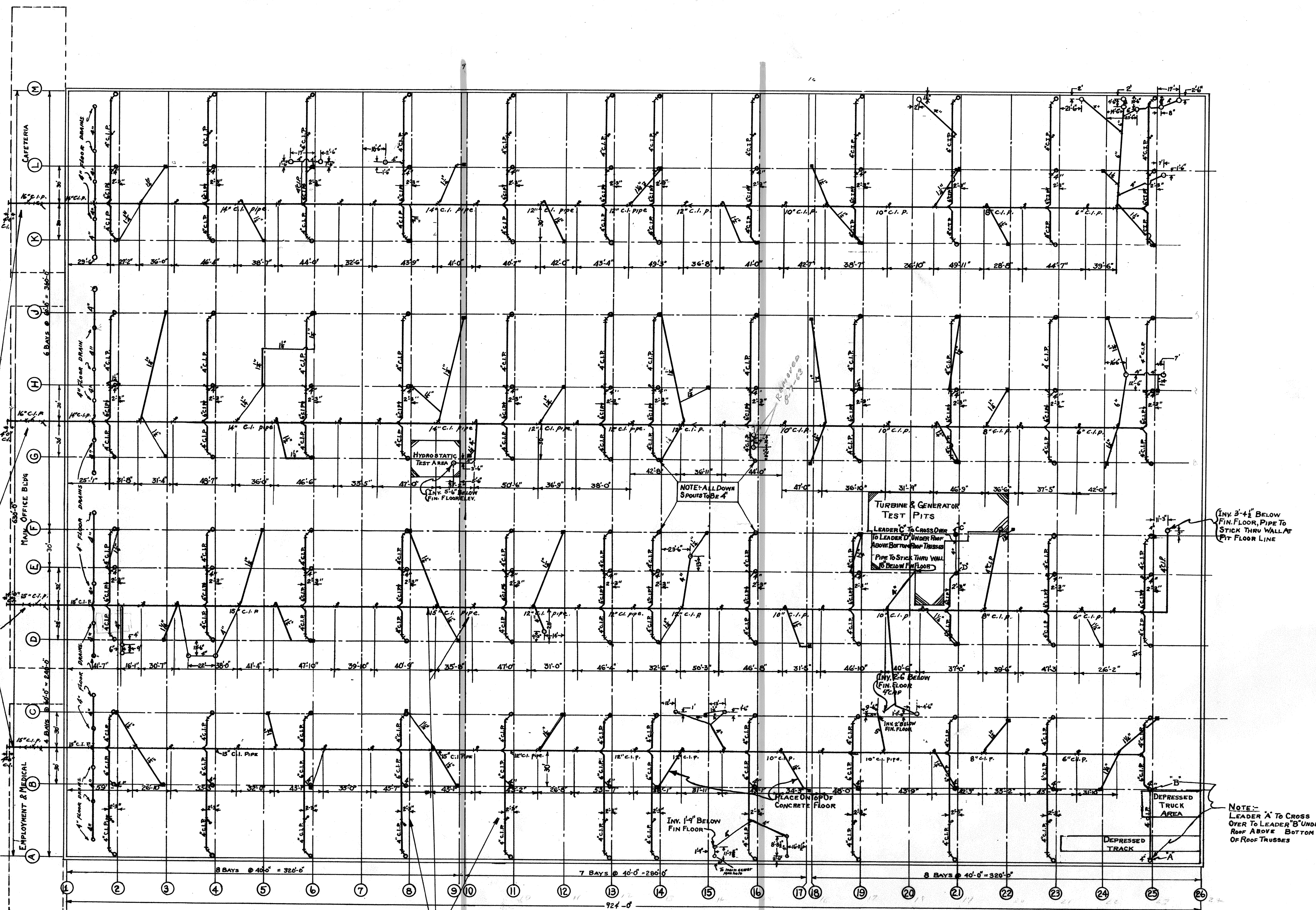
Appendix C
Historical Information, GE Figure



PLAN
Scale 1/32" = 1 FT.

Typical
4" Conn. to main drain line. These conn. to extend 2'-0" below fin. floor line.

Section 1
48 roof drains

Section 2
48 roof drains

Section 3
48 roof drains

Symbols:-
■ - Drinking Fountain
O - Roof Or Machine Drain

Note:-
For Layout Of Acid Drain Under Floor See Drawing B-583

Issue No	Drawn By	Checked By			Approved	Date
9	Located abandoned drain in B19			H L Bates		7/6/44

Issue No	Drawn By	Checked By	Inter. Div Check	Def Plant Corp. Check	G.E.Co. Check	Approval of Engineer		Date
5	Added Dimensions of Drains F.A.P.	JM				[illegible]	[illegible]	7/10/42
6	Added Dimensions As Noted F.A.P.	JM				[illegible]	[illegible]	7/17/42
7	Added dimensions & relocated branches to conform to as built locations G.V.N.						[illegible]	5/31/43
8	Added lines at A15 and E15 Helhinch							12/20/43

APPROVED FOR
DEFENSE PLANT CORPORATION
BY [signature] DATE 4-10-43

APPROVED FOR
GENERAL ELECTRIC COMPANY
BY [signature] DATE 2-23-43

RECORD OF ISSUES AND REVISIONS

Issue No.	Drawn By	Checked By	Inter Div. Check	Def. Plant Corp. Check	G. E. Co. Check	Approval of Engineer		Date
1	R.G.Mc J.F.	[illegible]				[illegible]	[illegible]	5/13/42
2	Generally Revised F.A.P.	F.X.B.				[illegible]	[illegible]	6/2/42
3	Added Note, Depressed & Test Areas F.A.P.	F.X.B.				[illegible]	[illegible]	6/6/42
4	Added Drinking Fountain & Machine Drains F.A.P.	JM				[illegible]	[illegible]	7/9/42

B-10-9

TURBINE - GENERATOR BL'D'G
ROOF DRAINAGE PLAN SHOWING UNDERFLOOR LEADER & FACTORY WASTE WATER PIPING.

TURBINE - GENERATOR PLANT - SYRACUSE, NEW YORK
DEFENSE PLANT CORPORATION
GENERAL ELECTRIC COMPANY, LESSEE

THE J. G. WHITE ENGINEERING CORPORATION
80 BROAD ST., NEW YORK

[signature]
RESIDENT ENGINEER

SCALE 1/32" = 1 FT.
DATE 5/13/42

B-10-9

PEP-TI-159-E B-10-9

Appendix D
Sampling and Analysis Plan

APPENDIX D

SAMPLING AND ANALYSIS PLAN

For

PHASE 2 — PCB SOURCE INVESTIGATION WORK PLAN

Sub-Slab PCB Investigation in Building TR-1

UNITED TECHNOLOGIES/CARRIER
THOMPSON ROAD FACILITY
SYRACUSE, NEW YORK

EnSafe Project Number
0888809186

Revision No.: 0

Prepared for:

United Technologies Corporation
UTC Shared Remediation Services
United Technologies Building
Hartford, Connecticut 06010

Prepared by:

EnSafe Inc.
220 Athens Way, Suite 410
Nashville, Tennessee 37228
(615) 255-9300
(800) 588-7962
www.ensafe.com

January 2011

Table of Contents

Figures

1.0 INTRODUCTION

Carrier Corporation (Carrier), a wholly-owned subsidiary of United Technologies Corporation, is currently working through Corrective Action Order — Index CO 7-20051118-4 (order) dated February 13, 2006, with the New York State Department of Environmental Conservation Division of Solid and Hazardous Materials (NYSDEC-DSHM), to identify potential sources of polychlorinated biphenyls (PCBs) in storm water effluent at Outfall 002 at Carrier's Thompson Road, Syracuse, New York, facility (facility).

Carrier will conduct sampling and analysis of subsurface soils underlying the concrete slab at the 4- to 6-foot sample interval (i.e., at the soil-groundwater interface) in Building TR-1. The findings of this investigation may require the investigation to be expanded.

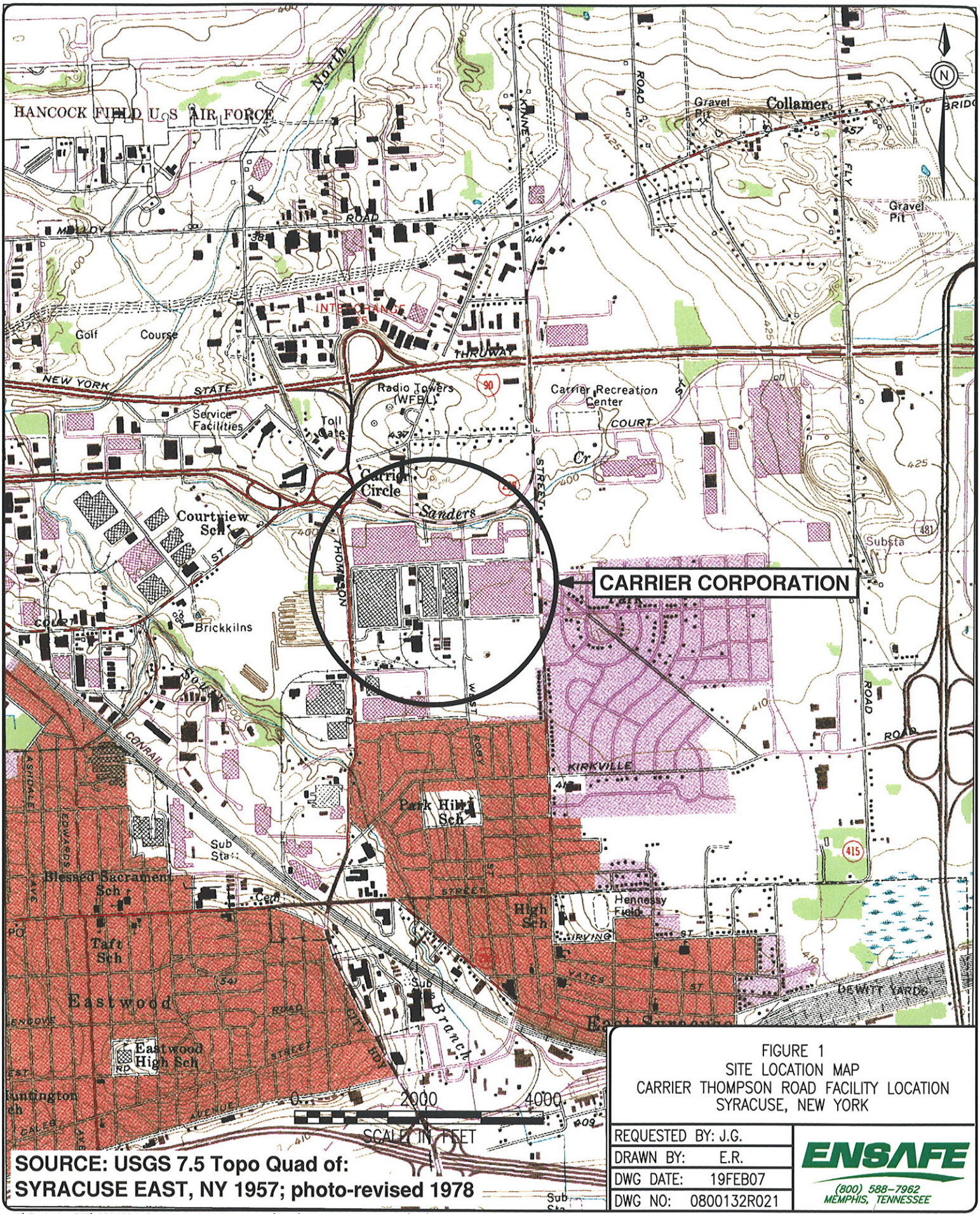
This project is part of several proposed PCB source investigations planned for the facility in an attempt to identify potential sources of PCBs in storm water discharges at Outfall 002. This document is a Sampling and Analysis Plan (SAP) describing the project objectives and the sampling and analysis methods to meet those objectives and is an appendix of and is to be used in conjunction with the *Phase 2 — PCB Source Investigation Work Plan (Rev 1), Building TR-1 Sublab Investigation (January 2011),* hereinafter referred to as "work plan".

1.1 Project Objectives

The purpose of this sub-surface investigation is to determine if there are ongoing contributions to the storm water system from polychlorinated biphenyl (PCB)-containing oil (free product) released from historical operations. The focus of the investigation work is to assess the presence/absence of PCBs underneath the slab at the soil-groundwater interface.

1.2 Site Setting

The Carrier facility is located in the northeast portion of Syracuse, New York, approximately one mile south of the New York State Thruway (**Figure 1 – Site Location Map**). The facility is bordered by Sanders Creek to the north, Thompson Road to the west, Kinne Street to the east, and a residential area to the south. The property slopes slightly north toward Sanders Creek. The facility property covers approximately 175 acres and most is either paved or covered by manufacturing and office buildings.



SOURCE: USGS 7.5 Topo Quad of:
SYRACUSE EAST, NY 1957; photo-revised 1978

FIGURE 1
SITE LOCATION MAP
CARRIER THOMPSON ROAD FACILITY LOCATION
SYRACUSE, NEW YORK

REQUESTED BY:	J.G.
DRAWN BY:	E.R.
DWG DATE:	19FEB07
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I:\Projects-BST\0804084 Carrier Carlyle Compressor\Dwg\800132R021.dwg 2/28/2007 11:37:39 AM CST

1.3 Investigation Area Description

A sub-surface investigation under the Building TR-1 concrete slab will be performed prior to its demolition (scheduled to begin March 2011). Using direct-push technology (DPT), soil samples will be obtained at the soil-groundwater interface (estimated to be at the 4- to 6-foot sample interval) at locations that are known to have had or may have had a PCB release to the concrete or woodblock flooring. The locations proposed for investigation include (see Figure 1-1 of work plan):

- Nine of 11 former transformer locations: Historical data at these 9 locations (Substations A through J) indicate that wood block and/or concrete flooring contained PCBs. Historical information does not reference a Substation F. Substations T2 and T3 will not be investigated as historical information does not indicate a PCB release occurred here.

- One former substation location where no investigation information is available (Substation T1).

- At 2 former substations identified on drawing in Building TR-7: Substation J1/J2 and Substation SP.

- Adjacent to former floor drain locations. No floor drains are currently visible or in use. Historical information indicates that older floor drains used along the buildings northern end (column line A) were sealed.

- Near the western wall of Building TR-1 near PCB-affected manholes (MH-81, MH-82, and MH-89) along the Thompson Road storm line. Sediments in these manholes have had PCB detections.

- Proximate to the manholes at the end of leaders from the Thompson Road storm line (MH-85, MH-86, MH-87, and MH-88) inside Building TR-1.

- Former GE Turbine & Generator Test Pits

- Former GE Hydrostatic Test Area

- Inverts below finished floor elevations near 1 machining area (former GE Turbine and Generator Test Pits). Former GE Hydrostatic Test Area invert is inside test area where borings are already proposed.

2.0 SAMPLING AND ANALYSIS

A threshold of PCB detections in soil greater than 25 parts per million (ppm) will be used as the basis for expanding field investigations beyond the locations cited in this work plan. This concentration represents the industrial soil cleanup objective (SCO) for PCBs listed in Table 375-6.8(b): Restricted Use Soil Cleanup Objectives of the New York State Department of Environmental Conservation (NYSDEC) Subpart 375-6: Remedial Program Soil Cleanup Objectives.

PCBs in groundwater, however, can be attributable to multiple conditions:

- Proximity to PCB-contaminated soils (equilibrium solubility)
- Sorption of PCBs onto colloids or other suspended particulate that can move with groundwater
- Elevated solubilities due to co-solvency with other organic compounds (e.g., benzene)
- The presence of free product (PCB containing oils)

Because of PCBs' low solubilities, mobility will generally be low and groundwater detections will generally be localized, unless there is a mode of transport (conditions 2 through 4, above). Therefore, the groundwater investigation, if necessary, will focus on identifying the absence/presence of PCBs in groundwater at or above the laboratory reporting limit (RL) for the specific Aroclor, and if present, whether they are migrating toward the storm lines underlying Building TR-1.

2.1 Field Sampling Methods

Field activities required to complete this investigation include soil sampling and groundwater sampling. Each field method described below was selected to meet the objectives of the work plan.

DPT Soil Sampling

The entire floor of Building TR-1 is constructed primarily of concrete (12- to 18-inches thick) with some limited areas of wood-block flooring and other metal/wood-block combinations. Prior to soil sampling, a concrete coring machine will be used to cut a 4- to 6-inch diameter concrete core at each proposed DPT location. The core will be advanced through the full thickness of the concrete to the sub-base, if present. If the sub-base is composed of a permeable layer such as gravel or sand, it will be removed from the hole prior to DPT soil sampling. The open hole will be visually inspected for the presence of liquids. If liquid is observed, the hole will be cased prior to beginning DPT soil sampling activities.

At each proposed DPT location, soil samples will be obtained continuously to groundwater (estimated 6 feet below ground surface). Sample collection will start at the base of the concrete slab and/or bedding material. Soil samples will be collected in 2-foot intervals (0- to 2-foot, 2- to 4-foot, and 4- to 6-foot) and each sample aliquot will be divided equally for description purposes/PID-field screening. Because the NYSDEC CSM concern is focused on PCB migration along the soil-groundwater interface and into the storm water lines or underlying bedding material, only the 4- to 6-foot sample interval will submitted to the laboratory for Total PCB analysis using USEPA Method 8082.

- If PCBs are found in the 4- to 6-foot soil sample interval at concentrations less than 25 ppm, no further investigative actions are warranted.

- If PCBs in soils are found at concentrations greater than 25 ppm at a DPT location, Carrier will expand the investigation around this location as follows:

  – Additional locations will be sampled surrounding the sample point of concern, generally one each 10 feet to the north, south, east, and west (see Figure 2-1 of the work plan). Sampling at these locations will follow the same protocol as described in the second paragraph of this section (i.e., only the 4- to 6-foot soil sample interval will be analyzed for total PCBs).

  – The same grid expansion protocol will be used when the concentration in the 4- to 6-foot sample interval exceeds 25 ppm PCB in soils, unless a scattered pattern is determined to be present (i.e., not focused and identifying a source area). In this case, the NYSDEC will be consulted with to review the data and make a decision on the need to expand the sampling grid.

    ○ Once soil data indicates PCBs are at concentrations less than 25 ppm, the limits of PCB impact will be defined, and no further investigation in that direction will be necessary. The expanded soil investigation will not cross over a storm water line, but will refocus on a groundwater investigation.

    ○ Carrier will install a temporary groundwater monitoring well at three of the expanded soil investigation areas with concentrations higher than 25 ppm to determine if groundwater contains PCBs. If groundwater is impacted by PCBs at these locations, Carrier will consult with NYSDEC to determine if

additional wells will be installed at other areas with PCB concentrations in soil higher than 25 ppm.

Prior to demobilization, each DPT location will be abandoned by placing bentonite pellets or chips in the boring and hydrating with water up to one foot below grade. The last foot of the borehole will be backfilled with concrete.

***Before DPT Sampling*:**

- Utilities in the subsurface and overhead should be identified by the appropriate agency prior to drilling and by the appropriate facility engineer or other facility personnel. If utility locating services are not provided by local utilities, a subsurface utility engineering subcontractor will be contracted to assure buried utilities will not interfere with the selected drilling site.

- Decontaminate the drilling rig and all downhole tooling.

- Inspect the drilling rig for motor and hydraulic leaks.

- Don personal protective clothing and equipment as specified in the site-specific health and safety plan.

- Mark the location(s) to be drilled using spray paint.

- Prior to drilling at a particular location, the invert elevation of the storm line at the nearest manhole to the drilling location will be measured.

- At each location along the storm line, the asphalt pavement will be cored using an asphalt coring machine to provide an access point for the rig. Asphalt and gravel sub-base will be removed and loaded (drummed or other collection container) for offsite disposal as construction-demolition debris.

- Place plastic sheeting on ground near the area to hold decontaminated equipment.

- Prepare for sampling by placing plastic sheeting over a sampling table or tailgate of truck.

- Set up the decontaminated drill rig at the sampling location.

During DPT Sampling **:**

- Prior to soil sampling, nitrile gloves are donned.
- The soil sampler is opened.
- Soil samples will be collected in 2-foot intervals (0- to 2-foot, 2- to 4-foot, and 4- to 6-foot) and each sample aliquot will be divided equally for description purposes/PID-field screening. Each sample interval is screened for head space by placing a portion of the soil into a re-sealable plastic bag for 15-20 minutes so that any volatile organic vapors present in the soil would collect in the bag. Headspace is measured by inserting the intake tube of the PID through a small opening in the bag. Readings are recorded on the soil boring log.
- The 4- to 6-foot sample interval is collected and placed in laboratory cleaned sample containers for laboratory analysis.
- VOC samples are collected using Terra Cores, following EPA SW-846 Method 5035. Other samples are transferred directly to laboratory prepared glass sample jars.
- The samples from the 4- to 6-foot interval are subsequently placed in a cooler on ice and packed and shipped to an offsite laboratory and analyzed for PCBs (USEPA Method 8082) and VOCs (USEPA Method 8261A).
- Each soil sample will be logged for estimated grain size, grading, color, odor, and other related information using the visual-manual procedure (ASTM D2488-00 — Standard Practice for Description and Identification of Soils) and the unified soil classification system.
- Repeat each step for each soil boring.
- Following completion of the soil boring, the open borehole will be abandoned by filling with granular bentonite and hydrating with water.
- Investigation derived wastes (IDW) generated during the field activities as part of DPT investigation activities will be placed in Department of Transportation (DOT)-approved 55-gallon open-top storage drums, logged, properly labeled, and stored at a central staging area designated by facility management. Analytical data from the investigation will be used for characterization, as practicable, and proper disposal of the drums will be arranged.

2.2 Temporary Well Groundwater Sampling Approach

To determine if historical activities have potentially resulted in a release or conditions that would result in PCB mobility in groundwater, Carrier will install a temporary well at the location with the highest PCB concentration in soils (and exceeding the 25 ppm PCB threshold) at the soil-groundwater interface, presumed to be the 4- to 6-foot sample interval, at three of the expanded investigation areas. Carrier will consult with NYSDEC to determine at which three locations the temporary wells should be installed. The temporary well will be allowed to equilibrate for 24 hours after installation.

A groundwater sample will be obtained from the temporary well and analyzed for Total PCBs using USEPA Method 8082 on an unfiltered sample. Groundwater samples will also be analyzed for VOCs analysis using USEPA SW-846 Method 8260B (to be used as an indicator of co-solvency).

- If laboratory analysis does not confirm the presence of PCBs above the laboratory RL for the specific Aroclor in groundwater, then no further investigative action at this location will be taken. The temporary well will be abandoned and this location will not be investigated further.

- If laboratory analysis confirms the presence of PCBs above the laboratory RL for the specific Aroclor, then laboratory protocol will require the sampled to be filtered and re-analyzed for Total PCBs only. The groundwater investigation will be expanded to determine the extent of PCB impact, as described below.

  – Carrier will install a second temporary well down-gradient of the former substation/transformer area, biased toward and adjacent to the storm line nearest the expanded investigation area (see Figure 2-2 of work plan).

    If PCB migration from the source area to the storm lines is not confirmed through laboratory analyses, no further investigation in this area will be performed and the well will be abandoned. If PCB migration from the source area to the storm lines is determined, the temporary well will be located by a New York licensed surveyor prior to abandonment.

Chain of Custody

Chain-of-custody (COC) documentation will be used to document samples collected and analyzed for the investigation. This documentation will commence upon collection of each sample. The COC form serves as an analytical request and documents the transfer of custody from the time and point

of collection until delivery to the laboratory for analysis. The COC form is crucial in ensuring that the information is properly transmitted to the laboratory so the laboratory can properly populate required fields in its electronic data submission.

Specific information provided on each COC form include:

- Project name, number, and location
- Sample identification code
- Sample date and time
- Number, size, and type of sample containers and associated preservatives
- List of requested analysis and analytical method numbers
- Requested turn-around time for laboratory data deliverable
- Date and time of custody transfer
- Name, contact information, and signature of individuals who collected the samples
- Name, shipping address, and signature of recipient of samples
- Any additional comments from the field

2.2 Laboratory Sample Analyses

All soil and groundwater samples will be analyzed for Total PCBs and VOCs, with the exception of any filtered groundwater samples that may be analyzed. Filtered samples will be analyzed for total PCBs only. Laboratory report data deliverables will include all results. While Accutest Laboratories (Accutest) of Dayton, New Jersey, has been selected to perform the sample analysis, it may be necessary to use additional New York and UTC certified laboratories in order to obtain expedited TATs. Accutest is both a New York and UTC certified laboratory.

Each soil sample submitted to an offsite laboratory for analysis will be submitted for the following analyses:

- Total Polychlorinated Biphenyls (7 Aroclors) Method SW846-8082
  - Holding Time — 14 days to extraction, 40 day extract hold time
- Volatile Organic Compounds Method SW846-8260B
  - Holding Time — 14 days from the time of sampling

Additionally, at least one soil sample (per 10 collected) will be analyzed for total organic carbon (TOC) by the Lloyd Kahn Procedure. TOC analysis is recommended because soil is typically rich in organic content, which may result in false positive results for some organic analysis. TOC data may be used to compensate for the affect of rich organic content.

Each groundwater sample will be submitted for the following analyses:

- Total Polychlorinated Biphenyls — Method SW846-608A
  - Holding Time — 7 days to extraction, 40 day extract hold time
  - If filtered analysis is required, a standard 0.45 micron filter is used
- Volatile Organic Compounds — Method SW846-8260B
  - Holding Time — 14 days from the time of sampling

Sample Containers and Preservation

Groundwater and quality assurance/quality control (QA/QC) samples for VOC analysis will be collected into laboratory-supplied 40 milliliter vials and preserved with hydrochloric acid (HCL) per the requirements of SW-846 Method 8260B.

Quality Assurance/Quality Control

Field QA/QC samples will be collected to assure the precision and accuracy of analytical results, identify interferences produced by conditions during sampling, cross contaminations, and decontamination procedures. This will be accomplished by collecting QA/QC samples including:

- field duplicate at 5% of total field sample numbers per matrix;
- potable water samples from each source or supply stream used during borehole installation;
- one trip blank per cooler with VOC containers; and
- one equipment blank.

3.0 DECONTAMINATION

The following procedures are to be used when sampling equipment is decontaminated. All sampling equipment must be decontaminated between sample locations and between sample intervals. At no time shall sampling equipment that has been in contact with contaminated or potentially contaminated media be used for sample collection without being properly decontaminated.

3.1 Decontamination of Drilling Equipment

The following is the standard procedure for field cleaning augers, drill stems, rods, tools, and associated equipment:

- Clean with tap water and soap, using a brush if necessary, to remove particulate matter and surface films. Steam cleaning (high-pressure hot water with soap) may be necessary to remove matter that is difficult to remove with a brush. Drilling equipment that is steam cleaned should be placed on racks or saw horses at least 2 feet above the floor of the decontamination pad. Macro-Cores, hollow-stem augers, drill rods, etc., that are hollow or have holes that transmit water or drilling fluids should be cleaned on the inside with vigorous brushing if possible.

- Rinse thoroughly with tap water.

- Remove from the decontamination pad and cover with clean, unused plastic. If not used immediately, the plastic should be secured to ensure that it stays in place.

3.2 Decontamination of Field Instruments

Field instruments include water level indicators, interface probes, etc. Follow manufacturer's recommendations for cleaning instruments. The following procedures should be performed at a minimum:

- Wash equipment body, probes and cables with soapy water mixture

- Rinse thoroughly with tap water

- Store equipment in accordance with manufacturer's specifications or wrap with aluminum foil

4.0 INVESTIGATIVE DERIVED WASTE (IDW)

The IDW may include concrete cores, soil cuttings, decontamination water, groundwater, and general trash, and will be placed in DOT-approved 55-gallon drums. Drums will be labeled to identify the locations from which the IDW was derived, the date generated, and the type of material contained inside. At the end of each working day, the drums will be sealed and moved to a staging area designated by the facility's management.

IDW from wells suspected of containing high concentrations of VOCs will be stored in separate drums because special disposal considerations may be required. IDW characterization will be determined using the soil analytical results, as appropriate. Concrete will not be sampled as part of this investigation. However, concrete IDW will be characterized using SIP-generated concrete coring data and treated as a low-level PCB-containing special waste. If there is a question as to whether or not the contents of the drum have been characterized then additional analysis may be conducted. Once a drum is filled, it will remain at the staging area until disposed of according to state and federal guidelines.

Appendix E
DPT Soil Sampling Procedures

DPT Soil Sampling Procedures

DIRECT PUSH TECHNOLOGY (DPT) SAMPLING STEPS

DPT uses percussion hammers and hydraulic slide systems to advance clear plastic acetate liners into the subsurface to collect relatively undisturbed soil samples from selected depths.

These procedures include using DPT methods for boring advancement and sampling to a maximum depth of 4 feet below ground surface or to groundwater, headspace screening, logging, selection of samples for laboratory analysis, and transportation of selected samples to a NYSDEC-certified laboratory under chain-of-custody control. Following sample collection, each boring will be abandoned by placing bentonite pellets or chips in the boring and hydrating. Upon sample retrieval, the acetate liner will be cut open lengthwise to allow soil collection for laboratory analysis and for headspace screening using the following procedures:

- The acetate liner will be cut open with a cutting tool.

- Soil will be described and visually classified and logged by a Professional or Registered Geologist.

- Samples will be screened for headspace readings by placing a portion of the soil into a re-sealable plastic bag so that any volatile organic vapors in the soil will collect in the bag. Headspace will then be measured using a photoionization detector (PID) and recorded.

- A second portion of the soil sample will be collected and immediately placed in predetermined, laboratory-cleaned sample containers for potential laboratory analysis.

- The samples will be subsequently placed on ice for preservation and transport to a NYSDEC-certified laboratory under chain-of-custody control.

- Following sample collection, borings will be abandoned by placing bentonite pellets or chips in the borehole and hydrating with water.

BASIC SURFACE SOIL SAMPLING STEPS

Before Sampling:

1. Don personal protective clothing and equipment as required by the site-specific health and safety plan.

2. Stake the location(s) to be sampled. The locations of the soil borings will be determined based on the site-specific SAP.

3. Clear vegetation and debris from the ground surface.

4. Set up a decontamination area for sampling equipment, if required.

During Sampling:

1. Screen breathing zone and/or sample with a PID or flame ionization detector (FID) as necessary.

2. Remove surface debris from the sample location.

3. Use the appropriate decontaminated or disposable sampling device to advance the soil boring and collect the volume of soil needed to fill the sample container(s).

4. Remove the sample from the sampler by pushing or scraping the soil with an appropriate pre-cleaned utensil into a pre-cleaned tray or onto aluminum foil (remove any portion of the sample that has been disturbed and discard).

5. ***For Grab Samples***: Completely fill the sample containers directly from the sampling device, avoiding twigs, large rocks, and grass. Some vegetative matter is expected due to the nature of the sample being collected (i.e. surface soil from 0 to 6 inches). Fill the sample container so there is zero or minimal headspace.

6. ***For Composite Samples***: Follow the appropriate USEPA procedures for collecting composite samples.

7. Secure container with Teflon-lined cap.

8. Label the samples in accordance with SOP FD-01-00.

9. Preserve the samples collected at 4 °C.

10. Decontaminate sampling equipment as needed in accordance with SOP FC-01-00.

11. Describe sample lithology on soil boring logs or in field log book based on field observations.

After Sampling:

1. Backfill the hole with excess cuttings or neat cement grout, or install a well or piezometer as stipulated by the site-specific work plan.

2. Place used plastic sheeting and other disposable sampling equipment in the designated drum for disposal.

3. Record all relevant information in the field logbook before leaving the site.