January 26, 2017

Gary Trombly, Jr.
Department of Energy and Environmental Protection
Storage Tank and PCB Enforcement Unit
79 Elm Street
Hartford, Connecticut 06106

Craig Bobrowiecki
Department of Energy and Environmental Protection
Remediation Division
79 Elm Street
Hartford, Connecticut 06106

Re: Partial Consent Order #COWSPCB 15-001
Soil and Groundwater Report – Parcel A (North)

Dear Messrs. Trombly and Bobrowiecki:

Pursuant to the Partial Consent Order (PCO) between the Commissioner of Energy and Environmental Protection (the "Commissioner") and The United Illuminating Company ("UI"), UI is submitting the Soil and Groundwater Report – Parcel A (North) for your review.

Should you have any question regarding any of the above, please don't hesitate to contact Charles Eves at (203) 926-4632 or (203) 535-7461.

UNITED ILLUMINATING COMPANY

Anthony Marone
President and Chief Executive Officer
United Illuminating Company

Charles Eves
Senior Project Manager
United Illuminating Company

CERTIFICATION

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53a-157b of the Connecticut General Statutes and any other applicable law.

Anthony Marone

Charles Eves

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REPORT

North Side Investigation Summary Report

Former English Station Facility
510 Grand Avenue
New Haven, Connecticut

January 2018

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EXECUTIVE SUMMARY

Weston & Sampson Engineers, Inc. (Weston & Sampson), on behalf of the United Illuminating Company (UI), has prepared this Investigation Summary Report for a portion of the Former English Station facility located at 510 Grand Avenue in New Haven, Connecticut (hereinafter referred to as "the Site"). The Site occupies approximately 9-acres of land located south of Grand Avenue in New Haven and consists of two parcels identified as Parcels A and B. The Mill River borders the Site to the east, west and south. UI operated a former electric power plant (English Station) at the Site between 1929 and 1992. Vacant buildings associated with English Station are located on Site. See Figure 1 for Site location and Figure 2 for an aerial view of the Site.

As a requirement of the change of control from UI to Iberdrola Electric Utility (Final Decision Docket No. 15-07-38), UI is required to investigate and remediate certain environmental conditions of the Site. TRC Environmental (TRC) has been retained by UI to provide Licensed Environmental Professional (LEP) services associated with investigation and remediation of the Site. Weston & Sampson has been retained by UI to provide Site investigation services. The Site investigation activities were performed in accordance with the Connecticut Department of Energy and Environmental Protection (CT DEEP) Partial Consent Order COWSPCB 15-001 (PCO) and applicable federal and state regulations.

Weston & Sampson performed Site investigation between July and September 2017. The investigation described in this report included the collection of soil, sediment and porous media (concrete, wood and asphalt) samples for laboratory analysis. The investigation was performed in accordance with TRCs Scope of Study (SOS), English Station, revised July 2017, which was reviewed and approved by the CT DEEP.

To expedite implementation of potential remedial actions, two separate Investigation Summary Reports have been prepared; one to address the northern portion of the Site (see Figure 2) and the other to address the southern portion of the Site. This report applies to the Areas of Concern (AOCs) within the North Side of the Site as shown on Figure 3. Specifically, this report applies to results for soil, sediment, and porous media for AOC- 2, AOC-5, AOC-6, AOC-12 (split into AOC-12E, 12W, and 12N), AOC-14 and AOC-15. Two AOCs on the northern portion of the property are not addressed in this report. A0C-1 is being addressed in a separate report and AOC-3 has already been sufficiently investigated.

Major findings of the investigation for the above AOCs are provided below:

<u>AOC-2 Station B Former UST Area</u>

- Four petroleum USTs were previously removed from this area in 2002 and a remedial excavation was performed to remove impacted soil. Post excavation soil sampling identified petroleum impacts.
- Analysis of soil samples did not identify concentrations of petroleum hydrocarbons, volatile organic compounds (VOCs), or Polychlorinated Biphenyls (PCBs) above remedial criteria. Polycyclic Aromatic Hydrocarbons (PAHs) were identified at concentrations above remedial criteria but are associated with Site-wide fill material. Additional investigation or remediation in this AOC is not required.

AOC-5 Bulkhead PCB Remediation Area

- In 1998, Oil-impacted soil was identified within this area after a section of the bulkhead constructed around the Site gave way. The bulkhead was repaired, and soil was excavated and removed.
- Weston & Sampson collected surficial soil samples to assess potential impacts from tracking. Deeper soil samples were collected from select boring locations to confirm the previous excavation was successful in removing impacted soil. Analysis of soil samples did not identify concentrations petroleum hydrocarbons, PAHs, or PCBs above remedial criteria. Based on these results and review of historic data, remediation is not required in AOC-5. However, to complete the scope of work in the TRC SOS, two more deep samples are required for analysis of ETPH and PAHs.

AOC-6 Capacitor Release/Outdoor Capacitor Banks 1-3 (PCB Area 3.1)

- In 1984, Capacitor Bank 1 suffered damage which resulted in a release to the environment. Impacted soils and asphalt in the area were subsequently remediated. However, elevated concentrations remain in the concrete pad and surrounding asphalt. Potential tracking of PCBs from Capacitor Banks 1 and 2 was also a concern.
- Weston & Sampson collected surficial soil samples to assess potential impacts from tracking and deep soil samples to confirm previous excavation was successful in removing impacted soil. Four concrete samples were also collected from concrete pads for PCB analysis.
- Analysis of the soil samples did not identify concentrations above remedial criteria except for three samples where PCBs were detected above 1 milligram per kilogram (mg/kg), one sample location where PCBs were detected above 10 mg/kg, and one sample location where PAHs were detected above remedial criteria. Analysis of the concrete samples did not identify PCBs.
- Based on the above data and review of historic data, additional investigation is required to define the extent of soil with PCB impacts within the central and western portion of the area of AOC-6 and soil remediation will be required to address PCB impacts to soil.

AOC-12E (PCB Area 6.2)

- AOC-12E (PCB Area 6.2) is located within the northeastern portion of the Site in an area historically used for coal storage. Weston & Sampson performed investigation in an area where petroleum-impacted soil was previously identified and to further assess an area of previously identified PCB-impacted soil.
- Analytical results of soil samples indicate petroleum impacts appear to be delineated such that additional investigation will not be required but active soil remediation is anticipated in this area.
- Based on review of historical data, there is an area of PCB-impacted soil within AOC-12E with concentrations above 50 mg/kg that will require remediation but additional investigation to delineate these impacts is not required.

AOC-12N Former Coal Storage

- AOC-12N is located south of Station B. Petroleum-impacted soil was previously identified in a historical soil boring within this area.
- Analysis of soil samples did not identify petroleum impacts above remedial criteria, and sufficient

data exists for remedial design and no additional soil investigation is required. Soil remediation will be required to address the petroleum impacts.

- PAHs and arsenic were detected above remedial criteria in two soil samples collected at depth and are associated with site-wide fill.

AOC-12W PCB Areas 2.1, 2.2 and 3.2

- This area is a large area south of Station B where sampling was performed to characterize soil and to delineate previously identified PCB and petroleum impacts to soil.
- Historical sample results indicate areas of PCB impacts that will require remediation (PCBs greater than 10 mg/kg and areas greater than 50 mg/kg) but 2017 investigation has completed the delineation to the extent where remediation can be designed.
- ETPH concentrations that exceed applicable remedial criteria may be rendered inaccessible and no additional sampling or remediation will be required.
- PAHs and arsenic were detected above remedial criteria in multiple soil samples. The detected concentrations appear to be associated with Site-wide fill or former coal storage. Additional delineation is not required for PAHs but additional sampling to delineate arsenic impacts on the north side of this AOC.

AOC-14 Cooling Water Tunnel

- AOC-14 consists of a former Cooling Water Discharge Tunnel that is located within the North Side of the Site. Weston & Samson performed sediment and porous media sampling in the tunnel every 10 feet, where accessible, to characterize potential impacts.
- Sediments were found to be impacted with petroleum hydrocarbons, PCBs, PAHs and remediation is anticipated to mitigate these materials. Impacts to concrete where less than applicable remedial criteria and concrete can be left in place and rendered inaccessible. The delineation of impacts to sediments and concrete within the tunnel is considered complete.

AOC-15 Oil Stained Area North of English Station / Release to Catch Basin 4

- AOC-15 is located adjacent to and north of the English Station building. During demolition and asbestos abatement of the building in 2011 and 2012, spillage and subsequent tracking resulted in a large oil stain on pavement adjacent to the north side of the building. Catch Basin 4 is located within the oil stained area.
- PCBs were identified above 1 mg/kg at one asphalt sample location. Additional sampling is not required to delineate this limited area of PCBs and sufficient data are available to plan remedial activities.
- Elevated concentrations of petroleum hydrocarbons were identified in two soil samples above remedial criteria but these impacts are sufficiently delineated to plan remediation. PAHs were also detected above remedial criteria at one of these locations but the PAHs are part of the impacted Site-wide fill.
- Analysis of a sediment sample collected from catch basin CB-4 identified arsenic and lead at concentrations above remedial criteria. Remediation of this sediment is anticipated.

1.0 INTRODUCTION

Weston & Sampson has prepared this Investigation Summary Report which includes a detailed description of investigation activities, soil, sediment, and porous media data generated, and a summary discussion of remediation options for environmental impacts on the northern portion of the property (consisting of two legal parcels) at 510 Grand Avenue in New Haven, Connecticut. The property is also referred to in its entirety as "English Station" and is hereinafter referred to as "the Site". The Site locus is shown on Figure 1.

The northern portion, or North Side, is that portion of the facility north of the main building (English Station Power Generation Plant) at the Site as shown on Figure 2. Previously identified Areas of Concern (AOCs) included in the North Side are AOC-1, AOC-2, AOC-3, AOC-5, AOC-6, AOC-12E, AOC-12N, AOC-12W, AOC-14, and AOC-15. AOC-1 is being addressed in a separate report to be prepared by TRC and AOC-3 has already been sufficiently investigated. The data collected from the other AOCs, as shown on Figure 3, are discussed within this report. Data associated with the AOCs located on the southern portion of the Site and Site-wide groundwater will be presented in separate reports.

Prior to preparation of this report, Weston & Sampson collected samples of soil, sediment, and porous media from AOCs within the North Side of the Site as prescribed in the Scope of Study (SOS) which was prepared for UI by TRC (attached as Appendix A). The SOS was prepared for UI to execute the obligations of Partial Consent Order (PCO) COWSPCB 15-001 issued by the Connecticut Department of Energy & Environmental Protection (CT DEEP). The CT DEEP reviewed and approved the scope of work in the SOS and TRC, on behalf of UI, oversaw all investigation activities performed by Weston & Sampson.

Weston & Sampson investigations subject to this report were performed between July and September 2017. The investigation activities described in this report are limited to AOC- 2, AOC-5, AOC-6, AOC-12, AOC-14, and AOC-15. AOC-12 was split into three separate AOCs in the SOS (AOC-12E, AOC-12N, and AOC-12W) and the data are presented within as described in the SOS.

Samples collected were analyzed for potential chemicals of concern (COC) at the Site including polychlorinated biphenyls (PCBs), semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), extractable total petroleum hydrocarbons (ETPH) and Remediation Standard Regulation (RSR) 15 metals. Selected analyses for samples collected were determined based on TRC's SOS and field observations. Select samples were also analyzed for leachable concentrations of contaminants via the Synthetic Precipitation Leachate Procedure (SPLP) and subsequent analysis of the leachate.

The investigation activities were conducted to further characterize areas of the Site not previously investigated, to identify other potential sources of impacts, and to delineate horizontal and vertical extents of previously identified impacts to the Site. Analytical results were compared to applicable remedial criteria found in Section 22a-133k-1 through -3, inclusive, of the Remediation Standard Regulations (RSRs) of the Regulations of Connecticut State Agencies (RCSA). Because federal PCB regulations are also applicable, remedial standards contained within Chapter 40 of the Code of Federal

Regulations Part 761 (40 CFR Part 761) were also taken into consideration in the data evaluation.

For the purposes of this report, the characterization and delineation of Site impacts are compared to applicable criteria from the RSRs groundwater classification "B" pollutant mobility criteria (GB PMC), the industrial/commercial direct exposure criteria (I/C DEC), and the federal PCB standard for high-occupancy use following construction of a cap, 10 mg/kg total PCBs. Further discussion and application of the federal PCB regulations found in 40 CFR Part 761 will be included in the remedial action plans to be developed for the Site.

Remedial requirements for soil at the Site are established in the PCO and include:

- To address the direct exposure and volatilization requirements under the RSRs for all contaminants (other than PCBs which are addressed below), UI will not be obligated to evaluate alternatives for remedial actions other than those required to comply with the commercial/industrial provisions in the RSRs;
- For PCBs, for direct exposure, a) outside the buildings, UI will not be obligated to evaluate alternatives for remedial actions other than those required to comply with 40 CFR Part 761 and with the inaccessible soil provisions of §22a-133k-2(b)(3) of the RSRs; and
- The RSR Pollutant Mobility provisions, for both PCBs and for releases into fill, apply in full to all alternatives; the Fill Variance exempts the Pollutant Mobility provisions with respect to the fill itself.

1.1 Location and Description

The Site is located at 510 Grand Avenue in New Haven, Connecticut. The Site, in total, is comprised of approximately 9-acres of land which is located on a man-made island (Ball Island) situated within the Mill River which flows north to south into the Long Island Sound. The Site has been split into two parcels (Parcel A and Parcel B) which are owned by two separate entities. The island is retained via steel bulkhead which encompasses the Site to the east, west and south. The Site can be further located by the following coordinates:

UTM Coordinates:	675239.9 meters North
	4574883.6 meters East
	Zone 18
Latitude/Longitude:	41° 18' 23" North
	72° 54' 24" West

The North Side of the Site is the subject of this report and covers an area of approximately 3.6 acres in size as shown on Figure 2. This portion of the Site is developed with a two-story former electrical generating plant (also called Station B). In addition to Station B, the North Side of the Site also includes former locations of concern including a coal bin storage area, a storm water surge basin, cable houses and a subsurface cooling water tunnel which historically operated on Site.

The South Side of the Site will be discussed in a separate Investigation Summary Report, and is comprised of approximately 5.3 acres of land located at the southern tip of Ball Island with an access way located along the eastern-most portion of the Site. Several structures currently stand within this portion of the Site including the former English Station power generating plant. Of the 5.3 acres of land in the Southern Side of the Site, the former power plant foundation encompasses approximately 2.3 acres. Several other buildings exist within this portion of the Site including a former assembly hall, a storage building, and a foam house.

1.2 Site History

As indicated in the SOS prepared by TRC, the Site was first occupied by Enos S. Kimberly and Company in the late 1880s and was utilized as a coal and lumber facility. In 1890, New Haven Electric Company purchased the Site and began the construction of Station B. As part of this construction, Ball Island's footprint was expanded via the filling of the portion of the Mill River south of the Site. Station B reportedly operated as a coal-fired power plant until 1903.

UI purchased the property in 1914 and began the construction of the English Station Power Plant in 1924. The initial construction consisted of a coal-fired, low-pressure boiler and turbine system which was completed in 1929. Sometime between 1948 and 1952, two additional coal-fired, high-pressure boilers and turbines were constructed at the southern end of English Station. At that time, Ball Island was further expanded to the south by the additional filling of the Mill River. The English Station power plant operated as a coal-fired power plant until sometime in the mid-1950s when the plant was converted into an oil-fired plant. English Station then operated as an oil-fired plant until 1992 when it was placed on deactivated reserve status.

In 2000, UI transferred the Site to Quinnipiac Energy, LLC (QE). At that time, an escrow of $1,900,000 was established by UI to support environmental investigation and cleanup of the Site. From 2000 through 2008, Advanced Environmental Interface, Inc. (AEI) performed environmental assessment activities on behalf of QE. Assessment activities were ceased in 2008, when the escrow funds were depleted. In 2006, prior to depleting the escrow funds, QE filed for bankruptcy and divided the property into two parcels (Parcels A and B). Subsequently, QE sold Parcel A to Evergreen Power, LLC (Evergreen) and Parcel B to ASNAT Realty, LLC (ASNAT).

In 2011, the new Site owners (ASNAT and Evergreen) contracted Grant Mackay Company (Grant Mackay) and Classic Environmental Inc. (Classic Environmental) to demolish the existing structures on-Site with the intention of generating enough money through selling scrap-metal steel to fund the future environmental investigation and eventual cleanup of the Site. The initial focus of this project was at the main English Station power plant building. In 2012, CT DEEP conducted an on-Site inspection which concluded that there was potential for tracking and spreading PCB contamination from source areas to other uncontaminated areas of the Site. In February 2012, CT DEEP issued a Cease and Desist Order (CDOWSUST 12-001) which terminated all on-Site remedial activities.

1.3 Current Site Conditions

In July 2017, Weston & Sampson was granted Site access to observe current on-Site conditions. The

Site is primarily improved with decaying impervious surfaces (asphalt and concrete), as evident by vegetative growth throughout the Site. Brushy vegetation had been allowed to grow in some areas of the Site and the brush was removed from above the ground surface only to allow access to certain areas. The brush removed was collected on poly-sheeting and not allowed to contact potentially PCB-impacted ground surfaces. The brush was then disposed of as clean vegetative debris and the poly-sheeting was disposed as PCB Remediation Waste.

Several large and small debris piles (scrap metal, wood, etc.) were noted throughout the Site and some had to be moved to allow access to investigation areas. None of this debris was removed from the Site and was moved as little as required to gain access to investigation locations.

Directly in front of the English Station power plant building (north of the building) were field trailers, Conex boxes, truck trailers, portable restrooms, an excavator and black contractor bags with asbestos containing material (ACM). Evidence of oil staining on the asphalt directly in front of the English Station power plant was also observed. The equipment and materials observed in front of the power plant building, including those that were oil-stained, have subsequently been properly decontaminated and removed from the Site or properly disposed of by others under contract to UI as prescribed in a work plan approved by CT DEEP.

1.4 Historical Site Filling

On March 27, 2003, the CT DEEP issued "Approval of Widespread Polluted Fill Variance" for the Site based on an application prepared by AEI on behalf of QE. The application noted that the Site subsurface includes widespread polluted fill from historic dredging operations and that:

- Sediments impacted by historical industrial use along the Mill River had been used to construct Ball Island. Prior to 1886, there were sand bars present in the current location of Ball Island. The grades of these sand bars were raised enough to allow for commercial development of Ball Island after 1886. Grades were subsequently further raised to allow for construction of Station B on the northern portion of the Site in 1901 and subsequently, fill was placed on the southern portion of the Site to allow for construction of the English Station Power Generation Facility by 1935. Construction of final grades at the Site using sediments appears to have been completed by 1953.
- Sediments in the Mill River had been impacted by historical industrial operations which included coal gasification, storage and burning of coal in electrical generating facilities, metal processing, and lumber storage. These activities had impacted sediment within the Mill River with petroleum hydrocarbons and associated SVOCs, polynuclear aromatic hydrocarbons (PAHs), and metals.
- These impacted sediments were used to construct Ball Island above the mean low water level in the Mill River.

The CT DEEP approval of the Widespread Polluted Fill Variance application applies to the entire English Station Site and is based on meeting the following provisions of RCSA 22a-133k-2(f)(1):

(A) geographically extensive polluted fill is present at such parcel and at other parcels near the subject parcel; There have been no changes in site conditions that might change the Approval;

(B) such fill is not polluted with volatile organic substances; Weston & Sampson's sampling efforts did not identify additional VOC impacts at the Site and there was nothing found that might change the Approval;

(C) such fill is not affecting and will not affect the quality of an existing or potential public water supply resource or an existing private drinking water supply; There have been no changes in site conditions that might change the Approval;

(D) the concentration of each substance in such fill is consistent with subsection (b) of this section; There have been no changes in site conditions that might change the Approval;

(E) the placement of such fill was not prohibited by law at the time of placement. There have been no changes in site conditions that might change the Approval; and

(c)… whether the person requesting the variance is affiliated with any person responsible for such placement through any direct or indirect familial relationship or any contractual, corporate or financial relationship other than that by which such person's interest in such parcel is to be conveyed or financed; No change from original application.

Thus, soil impacted with metals, PAHs, and petroleum hydrocarbons that are believed to be present in the fill materials and not because of releases at the Site after the fill was placed are subject to the approved variance request. As such, the pollutant mobility criteria (PMC) are not applicable to these chemicals. However, remediation to address direct exposure criteria (DEC) is still required.

Weston & Sampson investigation data are discussed in Section 4. As detailed in Section 4, results of the investigation identified petroleum hydrocarbons, PAHs and metals in soil within AOC-2, AOC-6, AOC-12E, AOC-12N, AOC-12W and AOC-15 and that some of these analytical results exceeded remedial criteria (i.e., PMC and DEC). As PAHs and metals are ubiquitous in fill material at the Site, delineation of exceedances is not considered feasible. u

1.5 Investigation Objectives

The purpose of this Investigation Summary Report is to present the findings of Weston & Sampson's Site investigation. This report includes the following items which will be discussed and evaluated:

1. Detailed description of the investigation activities performed.
2. Evaluation relative to the nature and extent of on-Site soil, sediment, and porous media impacts within the AOCs.
3. Update the Conceptual Site Model for each AOC.
4. A preliminary evaluation of the Data Quality Objectives (DQOs) to determine if the data obtained from on-Site investigations meet the requirements of the CT DEEP Laboratory Quality Assurance and Quality Control Data Quality Assessment and Data Usability Evaluation (DQA/DUE) Guidance Document dated May 2009 and revised in December 2010 as well as the Revised

SOS prepared by TRC.

5. A preliminary evaluation of remedial action alternatives that address on-Site impacts relative to future industrial/commercial (I/C) Site use. Remedial action alternatives are evaluated based on COCs determined within each AOC and the applicable regulations which include:
    a. I/C DEC; and
    b. GB PMC.

1.6 Pre-Investigation Activities

In preparation for the Site investigation, Weston & Sampson contracted ACS Underground Solutions from Redding, Connecticut to perform ground penetrating radar (GPR) surveys throughout the Site to locate on-Site utilities and other subsurface structures. In addition to utilities, GPR was also used to locate tie-backs and deadmen that are used to support Ball Island's bulkhead. Obstructions and utilities were marked out utilizing spray paint and flagging, where applicable. The focus of the GPR survey was conducted in areas where soil borings were planned to be advanced. Additional Site utility location was performed by UI in support of the investigation. Call Before You Dig (CBYD) was also notified in advance of the investigation activities to be performed by the drilling contractors.

Prior to the commencement of environmental sampling and generating investigation derived waste (IDW), Weston & Sampson had an anti-tracking pad and IDW drum storage area constructed. An anti-tracking pad was installed within the North Side of the Site between AOC-2 and AOC-12N. The 12-foot-wide by 50-foot-long anti-tracking pad was constructed utilizing synthetic geofabric covered with angular stone (ASTM C-33 size No 2/3). All equipment that accessed the Site was decontaminated on the anti-tracking pad following procedures specified in 40 CFR Part 761 in §761.79(c)(2)(i) or (ii). The decontamination solvent used was a commercial-grade terpene hydrocarbon solution containing greater than ninety percent terpene hydrocarbon.

The drum storage area was constructed utilizing polyethylene sheeting and orange construction fencing and an M_L mark was placed on the fencing. Open top and Department of Transportation (DOT)-rated 55-gallon drums were utilized to store solid IDW on Site which included personal protective equipment (PPE) and all soil wastes generated from the soil investigation. Closed top and DOT-rated 55-gallon drums were utilized to store all liquid decontamination wastes generated and water removed from the cooling water tunnel during sampling. All drums were properly labeled with M_L marks prior to off-Site disposal arranged for by UI.

Areas of previously identified Significant Environmental Hazards (SEHs) were marked at the Site and barriers established around the perimeters of each SEH area. These demarcation boundaries had to be maintained and reestablished during the investigation and new areas were marked as identified during the course of the investigation.

Anti-tracking measures employed during the soil investigation included removal of dirt from sampling equipment (e.g., treads on drill rig) prior to movement between boring locations. Poly sheeting was installed over areas with oil impacts or known high concentrations of COCs in surficial materials. The poly sheeting was removed and stored as PCB wastes following use. Overall, the investigation of soil

was performed by starting at AOCs with lesser impacts to soil and then moving to more heavily impacted AOCs.

2.0 FIELD WORK METHODOLOGY

Weston & Sampson personnel collected environmental media samples including soil and sediment. Porous media samples, including concrete, asphalt, and wood, were also collected to assess the potential for on-Site tracking and deposition of PCBs. Sample collection was performed in accordance with the SOS prepared by TRC and approved by the CT DEEP and sampling activities were conducted under the supervision of an inspector from TRC. Laboratory-provided containers were used to store samples collected and the samples were placed into a cooler with ice upon sample collection. Where VOC analysis was not conducted, samples were homogenized utilizing dedicated mixing spoons and aluminum foil. To reduce the potential for any tracking of contamination, investigation work commenced in areas with less contamination (typically found on the north side of the property) and progressed toward areas previously identified as having more significant impacts.

2.1 Soil Sampling

On-Site soil sampling was performed primarily via GeoProbe® with some surficial soil samples being collected via disposable spoons and/or decontaminated shovels/trowels. Deeper soils were assessed via direct push GeoProbe® Macro-Core methodology. Soil samples were collected continuously, from the ground surface to depths up to 20 feet below ground surface (bgs). A five-foot dedicated acetate Macro-Core® liner was utilized to collect samples. Each soil core was logged with respect to its soil characteristics (i.e., color, grain size, moisture content, fill material, etc.) and were noted for any indications of potential environmental impacts. Each soil core was field screened using a Photo-Ionization Detector (PID) for total volatile organic vapors (TVOVs). At sample locations where VOC analysis was to be performed, the sample was collected from the location that exhibited the highest concentration of TVOVs, and/or that exhibited signs of environmental impacts. In the absence of obvious environmental impacts VOC samples were collected from the water table interface.

Any excess soil, acetate liners, PPE, and polyethylene sheeting generated from soil boring activities were stored within 55-gallon drums properly labeled with M_L marks. All bore holes were backfilled using S-2 silica filtration sand and were compacted as necessary.

Where applicable, the following decontamination procedure, performed in accordance with the requirements of 40 CFR Part 761 Subpart S – Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces, were employed to limit the potential for cross contamination between sampling locations. Outer steel casing of each GeoProbe® and other metal sampling equipment used for sampling were decontaminated between each sample location utilizing the double wash/rinse methodology as follows:

1. Rinse with aqueous detergent solution.
2. Rinse with deionized water.
3. Rinse with aqueous detergent solution.
4. Rinse with deionized water.

All soil sample locations, sample collection depths, and analytical parameters were determined from TRC's SOS, revised in July 2017 and approved by CT DEEP. Minor alterations to the sampling plan were

made based upon observations, in the field which included obstructions, refusal and indications of other potential environmental impacts discovered during investigation.

A soil boring log was created for each GeoProbe® boring conducted on Site. Soil boring logs are included in Appendix B of this report.

2.2 Porous Media Sampling

As part of this investigation, porous media (concrete, wood and asphalt) samples were collected and analyzed for PCBs. Concrete and asphalt samples were collected following the Environmental Protection Agency (EPA) standard operating procedure (SOP) for sampling porous media (Revision 4) using a rotary hammer drill with 1" drill bits. The drill was advanced ½" into the porous media surface and the associated dust/chips generated from the holes were collected for analysis. Weston & Sampson utilized wooden tongue depressors to collect porous media samples from the drill holes. The depressors were disposed of after a one-time use.

Part of the on-Site investigation also included the collection of porous media samples from the bottom of an existing cooling water tunnel. During the investigation, it was determined that the cooling water tunnel was partially flooded at all times with water at depths ranging from six inches to two feet and unsafe to enter. Therefore, direct access to the sample locations was not possible. Access to sediments within the tunnel and concrete at the base of the tunnel was gained by coring through the top of the concrete tunnel at each proposed sampling location. Once an access port was created, a large diameter polyvinyl chloride (PVC) pipe was advanced into the hole. A seal at the base of the pipe was created by either advancing the pipe into the sediment or by using a gasket if sediments were not present at the sampling location. Water and sediment was pumped from within the pipe and the sediment collected on a filter placed over the front end of a vacuum so that the sediment would not contact the sampling equipment. The sediment collected was submitted for analysis and the water was drummed for off-Site disposal. After removal of the sediment and water, the concrete at the base of the tunnel was chipped using metal tooling. Concrete chips were removed from the tunnel using a vacuum with a filter over the front end of the vacuum so that the concrete chips would not contact the sampling equipment. The chips were then crushed further as necessary for analysis.

Drill bits and other metal sampling equipment were decontaminated between each location using the following methodology in accordance with the EPA SOP referenced above:

1. Rinse with aqueous detergent solution.
2. Rinse with deionized water.
3. Rinse with hexane.
4. Rinse with deionized water.

In addition to the procedures described above, a swab with hexane was included in the decontamination of drill bits and other equipment used in porous media sampling equipment because this is prescribed in the EPA SOP. The PVC pipe was not reused and the sections of pipe were disposed with waste soils generated during the investigation.

2.3 Sediment Sampling

Sediment sampling was conducted from the cooling water tunnel as described above with the addition of the following procedures. Sediment samples consisting of very fine materials were dewatered as necessary using dedicated filters for each sample. Any decanting or straining of excess water was done in a method and manner to maintain the amount of fines present in the sediment.

Collection of sediment samples from catch basins and other subgrade structures at the Site was completed utilizing a Ponar dredge claw or dedicated ¼" PVC piping. After accessing a subgrade structure that contained sediment of an adequate depth, the Ponar dredge claw was dropped into the structure and a sample was collected, placed in a dedicated sample jar, and analyzed for parameters as specified in the TRC SOS. If sediment within a structure was not deep enough to support collection with the Ponar dredge, a section of ¼" PVC piping was advanced into the structure. Samples collected within the PVC was done via the "straw" sampling method. Sediment was collected with the PVC by blocking the top end of the PVC piping as the bottom end is advanced into sediment. This allowed the PVC to retain sediment from within the piping and brought back to the surface where it could be decanted over filter material and a sample collected. Not all the subgrade structures were determined to contain sediments. However, the two sampling methods described above were employed at each location prior to determining that a sample could not be collected.

The Ponar dredge claw was decontaminated using the following methodology:

1. Rinse with aqueous detergent solution.
2. Rinse with deionized water.
3. Rinse with aqueous detergent solution.
4. Rinse with deionized water.

All excess sediment generated was placed directly into an open top 55-gallon drum properly labeled with a M_L mark.

2.4 Sample Nomenclature

Sample nomenclature was applied as described in TRC's SOS. Samples collected were identified first with a distinguishable letter to show what company collected the sample (i.e., WS for Weston & Sampson), followed by the AOC identification number (AOC numbers and boundaries were predetermined by figures provided by TRC), followed by a matrix code to note the sample media (i.e., SO for soil, AS for asphalt, CO for concrete, and SED for sediment). After the sample media ID, a number was used to identify sample location within that AOC. Where applicable, a dash (-) followed by an additional number was applied to display vertical sample depth. At locations where both porous media and soil samples were collected, the porous media sample number matches the soil boring number and it is the matrix code that distinguishes them from one another.

3.0 DATA QUALITY

The following provides a discussion of the data quality for data generated during the investigation of soil, sediment, and porous media Site-wide. As described below, data quality objectives (DQOs) for the frequency of the collection and analysis of field and laboratory quality assurance/quality control (QA/QC) samples were met. In addition, none of the data reported in this Investigation Summary Report exceeded applicable acceptance criteria in a manner that would require that the data be rejected. Thus, the data reported are acceptable for the purposes of this investigation which were the characterization of soil, sediments, and porous materials and the delineation of impacts to these environmental media.

3.1 Data Quality Objectives

For the purposes of this Site investigation, DQOs were established for the evaluation of the accuracy, precision and representativeness of the data generated. These DQOs included the collection of field QA/QC samples and the analysis of these field samples and additional laboratory QA/QC samples. The overall quality assurance objective for laboratory analysis of samples was to provide a laboratory QA/QC program that is sufficient to measure data quality objectives. To aid in reaching this goal, analytical data for the Site was generated following the Reasonable Confidence Protocols (RCPs).

3.2 QA/QC Samples and Data Evaluation

QA/QC samples for evaluation of data involve both field-collected samples and laboratory QA/QC. Field QA/QC samples were collected at the frequency prescribed in the SOS prepared by TRC. In addition, a narrative was completed by ConTest Laboratories (ConTest) of East Longmeadow, Massachusetts for each of the analytical data batches. This narrative provides relevant comments, data anomalies and non-conformances with laboratory-related QA/QC. These narratives can be found within each individual laboratory report and work order. All laboratory reports are included in Appendix C.

3.2.1 Precision

Precision is a measurement of the reproducibility of analytical data through analysis of duplicate samples. According to CT DEEP Laboratory QA/QC Guidance RCP Guidance Document, the precision of the data is measured by the following calculation to determine the relative percent difference (RPD):

$$RPD = \frac{|A-B|}{((A+B)/2)} \times 100$$

Where:

A = Analytical results from the first duplicate measurement
B = Analytical results from the second duplicate measurement

For this investigation, the goal for RPD was less than or equal to 50% for solid samples, and less than or equal to 30% for aqueous samples. Duplicate samples can be found adjacent to their parent sample within the data summary tables for each AOC.

Field duplicates were collected during sampling and these data are used to evaluate effects of field sampling and laboratory analytical procedures on data reproducibility. Additional duplicate samples

are analyzed by the laboratory and include matrix spike/matrix spike duplicates (MS/MSDs) and laboratory control spikes/laboratory control spike duplicates (LCS/LCSDs). The MS/MSDs are used to evaluate the effect of Site matrices and laboratory procedures on the reproducibility of analytical data. The LCS/LCSD samples are used to evaluate the effect of laboratory procedures only on data precision.

3.2.2 Accuracy

Accuracy is a measurement of the analytical data versus known concentrations. For this investigation program, accuracy is evaluated using spiked samples which include MS/MSDs and LCS/LCSDs. The MS/MSDs are used to evaluate the effect of Site matrices and laboratory procedures on the accuracy of analytical data. The LCS/LCSD samples are used to evaluate the effect of laboratory procedures only on data accuracy.

3.2.3 Representativeness

Data representativeness is a determination of the data collected and the ability to use the data set to characterize the Site.

3.3 Field and Laboratory QA/QC

The following is a description of the field QA/QC samples collected as part of this investigation.

3.3.1 Equipment Blanks

The purpose of the collection of equipment blanks is to assess the adequacy of the decontamination process conducted on Site. Additionally, it is used to assess the potential contamination from dedicated sampling items like the Macro-Core® acetate liners. Equipment blanks were collected using laboratory-provided, high performance liquid chromatography grade ASTM Type II water that was poured over sampling equipment and collected into a laboratory-provided container appropriate to the analysis for which the sample was being collected.

For purposes of this investigation, equipment blanks were collected each day samples were collected, for each media type and parameter analyzed. In total, 71 equipment blanks were collected throughout the entirety of the project (North Side and South Side investigations) completed to date. Equipment blanks were collected from the following sampling devices:

1. Ponar Dredge Claw
2. ¼" PVC
3. Macro Core® Acetate Liners
4. 1" Rotary Hammer Drill Bit
5. Breaker Bar

Analytes detected in equipment blanks are compared to samples associated with that equipment blank to determine if contamination is present in a sample because of improper equipment decontamination.

A review of equipment blank data obtained reveals that detections of COCs were found in two of the equipment blank samples submitted (EB-23 and EB-67). The analytes detected in the equipment blanks were not found in sample analyses so there is no effect on data quality.

3.3.2 Field Duplicates

Field duplicates were collected during the on-Site investigation to assess accuracy of sample methodology and laboratory analysis. Field duplicates were collected as replicate or split samples and submitted to the laboratory without indication to the duplicate's partner sample. For the purposes of this investigation, field duplicates were collected at a rate of approximately one per twenty samples collected, for each sample media, for each parameter analyzed as prescribed in CT DEEP Laboratory QA/QC and DQA/DUE Evaluation Guidance Document, Appendix B-3 (revised December 2010).

Duplicate samples can be found adjacent to their parent sample within the data summary tables. The following summarizes the numbers of duplicate samples collected by analysis across the entire Site:

- PCBs, 1215 soil samples with 60 duplicates, 89 sediment samples with 4 duplicates, and 426 porous media samples with 21 duplicates.
- ETPH, 32 sediment samples with 1 duplicate and 242 soil samples with 12 duplicates.
- VOCs, 22 soil samples with 1 duplicate.
- Metals, 22 sediment samples with 1 duplicate and 27 soil samples with 2 duplicates.
- SVOCs, 20 sediment samples with 1 duplicate and 18 soil samples with 1 duplicate.
- PAHs, 12 sediment samples with 1 duplicate and 18 soil samples with 1 duplicate.

Duplicate samples were collected at a frequency of approximately 1 duplicate for every 20 samples collected. Sample numbers for each matrix and analysis were specified in the TRC SOS and preliminary goals for the total number of duplicates by analysis and media were established based on these numbers. However, the actual number of samples collected were modified based upon field observations and the total number of duplicates was changed from that originally planned.

The RPD for the sample results for soil field duplicate samples were typically less than 50% and no systematic bias was indicated by the results. Thus, the duplicate sample results indicate that the analytical data are acceptable.

3.3.3 Matrix Spike and Matrix Spike Duplicate (MS/MSD)

The purpose of MS/MSD samples is to determine if the sample matrix effects accuracy and bias in the analytical results. MS/MSD samples are collected as duplicate or split samples, the pair is then spiked by the laboratory with a known quantity of target analytes. Through MS/MSD analysis, one can evaluate precision and accuracy of laboratory analytical methodology.

MS/MSD samples were collected per 20 samples collected, per sample media, per parameter analyzed for as prescribed in CT DEEP Laboratory QA/QC and DQA/DUE Evaluation Guidance Document, Appendix B-3 (revised December 2010) and the TRC SOS.

Like field duplicate samples, MS/MSDs were compared to its partner sample to determine the precision of sampling, handling, shipping, storage, preparation and analysis. Precision of the data was measured by evaluating the sample's RDP (see Field Duplicate section above).

The goal RDP was less than or equal to 50% for solid samples, and less than or equal to 30% for aqueous samples. The following summarizes the numbers of duplicate samples collected by analysis:

- PCBs, 1215 soil samples with 60 MS/MSDs, 89 sediment samples with 4 MS/MSDs, and 426 porous media samples with 21 MS/MSDs.
- ETPH, 32 sediment samples with 1 MS/MSD and 242 soil samples with 12 MS/MSDs.
- VOCs, 22 sediment samples with 1 MS/MSD.
- Metals, 22 sediment samples with 1 MS/MSD and 27 soil samples with 2 MS/MSDs.
- SVOCs, 20 sediment samples with 1 MS/MSD and 18 soil samples with 1 MS/MSD.
- PAHs, 12 sediment samples with 1 MS/MSD and 18 soil samples with 1 MS/MSD.

MS/MSD samples were collected at a frequency of approximately 1 duplicate for every 20 samples collected. Sample numbers for each matrix and analysis were specified in the TRC SOS and preliminary goals for the total number of duplicates by analysis and media were established based on these numbers. However, the actual number of samples collected were modified based upon field observations and the total number of MS/MSDs was changed from that originally planned.

The RPD for the sample results were typically less than 50% and spike recoveries were within lab specific limits. No systematic bias was indicated by the results for the MS/MSDs. Thus, the MS/MSD sample results indicate that the analytical data are acceptable.

3.3.4 Laboratory Control Spike and Laboratory Control Spike Duplicate (LCS/LCSD)

The purpose of LCS/LCSD samples is to determine if the laboratory procedures effect accuracy and bias in the analytical results. LCS/LCSD samples are prepared by the laboratory by spiking a blank matrix with a known quantity of target analytes. Through LCS/LCSD analysis, one can evaluate precision and accuracy of laboratory analytical methodology.

LCS/LCSD samples were analyzed with each analytical batch which did not exceed 20 samples, per sample media, per parameter analyzed for as prescribed in CT DEEP Laboratory QA/QC and DQA/DUE Evaluation Guidance Document, Appendix B-3 (revised December 2010).

Like the other duplicates, LCS results were compared to its partner LCSD to determine accuracy and precision of the analysis. Precision of the data was measured by evaluating the sample's RPD and accuracy was measured by comparison to the known value. Accuracy and precision limits for LCS/LCSD samples are established by the analytical laboratory.

LCS/LCSD samples were analyzed at the required frequency and the accuracy and RPDs were typically within laboratory-established acceptance criteria and no systematic bias in the data are indicated. Thus, the LCS/LCSD sample results indicate that the analytical data are acceptable.

3.3.5 Trip Blanks

Trip blanks are laboratory-provided sample containers that have been filled with analyte-free reagent (e.g., water, methanol) that are shipped with the sample bottles and are contained with samples collected. The purpose of the trip blank is to evaluate if there are any external environmental effects on the samples being collected (e.g., cross-contamination from something having spilled in the cooler or vehicle/equipment exhaust). For the purposes of this investigation, trip blanks were collected and submitted for analysis whenever VOC soil samples were collected. Trip blanks accompanied VOC soil

samples inside the same cooler. Trip blank vials submitted for analysis consisted of one methanol 40 milliliter (mL) vial and two deionized water 40 mL vials. No COCs were detected in the trip blanks and no bias in the data are indicated.

3.3.6 Temperature Blanks

Temperature blanks are used to determine that proper preservation of samples has been maintained during sample storage and shipment. Temperature blanks must be 4° Celsius +/- 2° to demonstrate preservation of submitted samples. All temperatures noted on the chains of custody upon sample receipt were within this acceptable range. Thus, no bias in the data are indicated.

3.4 DQA/DUE Conclusions

QA/QC samples were collected at the frequencies established as part of the DQOs for the site. Analysis of these QA/QC samples were generally within established acceptance criteria. For those QA/QC samples that did exceed acceptance criteria, no systematic bias was indicated. Thus, the data collected during this field investigation are considered to be acceptable for their intended purpose which is characterization of the Site.

4.0 INVESTIGATION RESULTS

Weston & Sampson performed Site investigation activities between July and September 2017. The investigation included the collection of soil, sediment and porous media (concrete, wood and asphalt) samples for laboratory analysis. The investigation was performed in accordance to with TRC's SOS, English Station, October 2016 and revised July 2017, which was reviewed and approved by the CT DEEP. For further historical details, please see TRC's SOS which is attached electronically in Appendix A.

In this Section, the following is provided for each AOC:

1) Conceptual Site Model (CSM) developed for each AOC prior to sampling;
2) Sampling performed within each AOC to delineate impacts;
3) Evaluation of the delineation of impacts within each AOC; and
4) Evaluation of the CSM based upon the most recent sampling data.

Generally, the sampling was conducted as indicated in TRC's SOS and sample parameters and depths were followed. However, modifications to the sampling program in the SOS were made based upon field observations and prescribed sample collection depths may have been changed. Additionally, at some locations where refusal was encountered, the original prescribed sample total may have been reduced because the prescribed sample depth could not be reached. It is noted that concrete obstructions up to 24-inches thick were penetrated to collect samples beneath the concrete so occasions where refusal limited collection of additional samples are limited.

The 2017 investigation sample locations are provided by AOC on Figures 4 through 11 along with historical sample locations. Interpretation of sample results at each soil boring location is provided in the same manner as that which was shown in the TRC SOS. Specifically, each soil boring location has color-coding indicating the sample result for any analytical parameter collected at that boring location. This data presentation gives a representation of the extent of impacts to the media sampled in the horizontal. Multiple figures are provided for each AOC to depict the depths of impacts identified and to provide information regarding vertical delineation. Figures 12-1 through 12-3 present data obtained during this investigation and historical data by depth (i.e., 0 to 2 feet below grade, 2 to 4 feet below grade, and deeper than 4 feet below grade) for the entire North Side of the Site.

A summary of analytical results is provided in Tables 1 through 8. Porous media sample results at each location where they were collected are included with the soil data at the same location. Grouping data in this manner allows for an evaluation of impacts to porous media and soil at each location in the vertical.

Soil boring logs for locations included in this report are provided electronically in Appendix B. Laboratory analytical reports for data included in this report are provided electronically in Appendix C.

The goals of the investigation program were to characterize areas of the Site where data gaps existed and to delineate the extent of releases to the environment. Characterization of impacts to soil, sediments, and/or porous media were performed within AOC-2, AOC-5, AOC-6, AOC-12, AOC-14 and

AOC-15. Sampling within these areas was performed on grid patterns with multi-depth sampling and for analytical parameters specified in the TRC SOS. Sampling was also performed to delineate the extent of releases or the effectiveness of previous remedial efforts. Extensive sampling of surface cover materials (i.e., concrete, asphalt, and soil) was also performed to determine if tracking of PCB impacts from one area to another had occurred at the Site.

Delineation of Site impacts is judged against two criteria. The first is a determination of whether releases to the environment have been delineated to the extent where remedial criteria are no longer exceeded. This level of delineation is sufficient to allow for the design of remedial actions. The second is a determination of whether the entire release area has been defined; which is the requirement of the CT DEEP Site Characterization Guidance Document (CT DEEP, September 2007 and Revised December 2010). This second level of delineation for non-naturally occurring COCs (e.g., PCBs) is typically performed until PCBs are reported as "non-detect" in the samples analyzed. However, this level of delineation is not possible for naturally occurring COCs (e.g., metals) or COCs that are present in the widespread fill (e.g., petroleum hydrocarbons, metals and PAHs).

Remedial criteria included in the data summary tables and used to judge the level of delineation for this report include:

- I/C DEC – Use of this criteria assumes that an industrial/commercial environmental land use restriction (ELUR) will be applied to the Site as part of the overall remedial efforts. The criteria used are those provided in Appendix A of the CT RSRs.
- GB PMC – The criteria used are those provided in Appendix B of the RSRs. Where SPLP extraction and analysis was performed, the leachate concentration is compared to: (1) ten times the Groundwater Protection Criteria (GWPC) for organic chemicals, excluding PCBs given that no non-aqueous phase liquid (NAPL) is present in the soils; or (2) the listed GB PMC for inorganic chemicals and PCBs.

The industrial/commercial volatilization criteria were potentially applicable for determination of delineation of impacts and need for remediation. However, VOCs were typically reported as "non-detect" or were detected at very low concentrations. Therefore, these criteria were not listed in the analytical summary tables as VOCs in soil will not require remediation on the North Side of the Site.

The Federal PCB remedial standards specified in §761.61(a)(4) of 40 CFR Part 761 are also applicable. The Federal high occupancy standard of 1 mg/kg is used to determine the need for remediation and locations with PCBs less than 10 mg/kg may be left in place with a cap.

For chemicals detected at the Site that do not have established remedial criteria in the RSRs, remedial criteria were selected from "Technical Support Document: Recommended Numeric Criteria for Common Additional Polluting Substances and Certain Alternative Criteria," CT DEEP December 10, 2015 and Revised January 27, 2017. Use of these remedial criteria will require application to and approval from the CT DEEP.

4.1 AOC-2: Station B Former UST Area

AOC-2 is located adjacent to the western side of Station B. Four gasoline USTs were formerly located

in this area but have been removed. Based on information presented in a 1998 Phase I investigation report, there were initially two steel, 2,000-gallon USTs which were removed in June 1991. Following removal of the tanks, two fiberglass reinforced plastic, 1,000-gallon gasoline USTs were installed in the same location. These tanks were subsequently removed in October 1996.

Investigations were performed following the tank removal and soil sampling and analysis confirmed the presence of petroleum impacts to the soil. In 2002, soil excavation was performed to remove impacted soil from the area. Post-excavation confirmatory soil samples were collected which indicated the presence of ETPH and PAHs. While there are PAHs inherent to the fill material, the presence and magnitude of the PAHs may also have been linked to this known historic release.

Releases directly to the surface during filling operations or releases from the buried tanks, piping and other associated equipment to the subsurface may have occurred at this AOC. Releases of product to the surface or subsurface could migrate through the vadose zone, on the surface of the groundwater table, or in a dissolved phase within groundwater.

Weston & Sampson documented the advancement of four soil borings (AOC-2-1 through AOC-2-4) within AOC-2 as prescribed in the TRC SOS. The borings were advanced via GeoProbe® drilling techniques to depths of 15 feet bgs. Pursuant to the SOS, the borings were installed around the approximate perimeter of the 2002 excavation. Soil samples were collected from two sample intervals, near the surface of the groundwater table (7-8.5' bgs) and a deeper depth (13-14' bgs) and submitted for laboratory analysis of VOCs, PAHs, ETPH and PCBs. See Figures 4-1 through 4-3 for sample locations and Table 1 for a summary of soil analytical results.

The following summarizes the findings of the AOC-2 investigation:

- Field screening of soil samples did not identify evidence of impacts.
- The only VOC detected was benzene in a single soil sample at a concentration well below applicable remedial criteria.
- PAHs were detected at concentrations exceeding applicable remedial criteria in samples collected at 7-8.5' bgs, at or near the groundwater table. SPLP analyses indicate that the PAHs do not exceed the GB PMC.
- ETPH was detected in each of the samples analyzed but at concentrations less than the applicable remedial criteria.
- PCBs were not detected in any of the samples collected or during previous investigations.

With one notable difference, the results of the investigation in AOC-2 support the previous CSM for this area. The PAHs identified above remedial criteria are believed to be associated with the fill that comprises the Site and not the petroleum release. This is because the PAHs detected are heavier and similar to those detected in manufactured gas plant (MGP) wastes rather than the lighter PAHs (e.g., naphthalene) that might be indicative of a petroleum release.

Based on the results of the investigation, the horizontal extent of petroleum impacts appears to be limited to the former excavation area and have been delineated by the sampling performed during this

investigation. Therefore, additional investigation is not required. It is anticipated that the soil may be left in place with land use restrictions and no additional remedial measures are anticipated for this AOC.

4.2 AOC-5 Bulkhead PCB Remediation Area

This former soil remediation area is located along the western side of Site, to the northwest of the English Station building. A remediation effort was conducted in 1998 in response to a 1997 report of oil-impacted soil falling from the Site into the Mill River through a collapsed portion of the metal bulkhead that surrounds the island.

The exact release mechanism that led to the oil-impacted soil is unknown, however, it is most likely from:

1) Application of oil as a form of dust suppression conducted in areas where coal was handled which would produce direct application of oils to the ground surface; or
2) Based on the reported presence of NAPL in this area during the historic remedial activities, leakage from a subsurface source may have occurred. It is noted that no NAPL was identified during the soil investigation.

Tracking of PCBs is considered a secondary release mechanism. Releases directly or indirectly to the subsurface may have been entrapped in the soil pore spaces in the vadose zone. Any product that may have infiltrated into the subsurface would have been subject to migration to the groundwater through the infiltration of rainwater and the fluctuating water table.

Weston & Sampson documented the advancement of nine soil borings (AOC-5-1 through AOC-5-9) within AOC-5. The borings were advanced via direct push drilling techniques to depths ranging from 5 to 15 feet bgs. The borings were advanced to assess surficial soil and potential impacts from PCB tracking and to assess deeper soil to confirm that the previous excavation was successful in removing impacted soil.

Soil samples were collected from the surface (ranging from 0-0.70' bgs) at all nine locations and a deeper depth (12-13' bgs) from three locations. All samples were submitted for laboratory analysis of PCBs, with one of the deeper samples also subjected to PAH and ETPH analyses. See Figures 5-1 through 5-3 for sample locations and Table 2 for a summary of soil analytical results.

The following summarizes the findings of the AOC-5 investigation:

- Field screening of soil samples did not identify evidence of impacts.
- PCBs were detected in one surface sample at a concentration 1 mg/kg.
- PAHs and ETPH were detected in the one soil sample subjected to those analyses in this area (AOC-5-3 (12-13')) at concentrations less than applicable remedial criteria.

Results of the investigation in AOC-5, in general appear to support the previous CSM for this area in that the soil impacts were removed from this area. The data indicate that tracking of PCBs did not occur and additional remediation for PCBs is not necessary. At this time, there are no additional remedial measures anticipated for AOC-5. However, the TRC SOS required three deep samples to be collected and analyzed for PCBs, ETPH, and PAHs. This was misinterpreted in the field and three deep samples

were submitted for PCBs but only one deep sample to ETPH and PAHs. Thus, two additional borings are required to complete the proposed scope of work.

4.3 AOC-6 Capacitor Release / Outdoor Capacitor Banks 1-3 (PCB Area 3.1)

Capacitor Banks 1 through 3 were formerly located in the central portion of the Site and north of the English Station building. In 1984, Capacitor Bank 1 suffered damage which resulted in a release to the environment. Impacted soils in the area were subsequently remediated. Subsequent evaluation of asphalt and soil surrounding Capacitor 1 indicated the need for additional PCB remediation which was completed in 2002. Results depicted in a February 2005 figure prepared by AEI indicate that there are elevated PCB concentrations remaining in the concrete pad and surrounding asphalt. Capacitors 2 and 3 were situated on elevated pedestals. Historically, concrete samples collected from the pedestals at Capacitors 2 and 3 did not exhibit concentrations of PCBs above of 1 mg/kg. However, potential tracking of PCBs at these locations remained a concern ahead of this investigation.

The primary release mechanism identified for this AOC was leakage from the oil-filled equipment onto the concrete bases/foundations for the Capacitors. Secondary release mechanisms included seepage into the asphalt and surrounding soil from the surface of the concrete or through cracks in the concrete structures. Tracking of surficial contamination was also a concern due to the movement of equipment and materials associated with nearby demolition activities performed by a contractor for the current Site owner. Releases directly or indirectly to the subsurface may have been entrapped in the soil pore spaces in the vadose zone and potential product that that may have infiltrated would have been subject to migration via the infiltration of rainwater and the fluctuating water table.

Weston & Sampson documented the collection of four porous media (concrete) samples (AOC-6 CO-1 through 4) for PCB analysis and the advancement of 13 soil borings (AOC-6-5 through 17) within AOC-6. See Figures 6-1 through 6-3 for sample locations. Soil samples were selected at depth intervals ranging from 0 to 6 feet bgs and submitted for analysis of PCBs, PAHs and/or ETPH. See Table 3 for a summary of analytical results.

The following summarizes the findings of the AOC-6 investigation:

- Analysis of the concrete samples did not identify reportable concentrations of PCBs.
- Field screening of soil samples did not identify evidence of impacts from the release.
- PCBs were detected above 1 mg/kg in three soil samples: (AOC-6-12 (0-0.5'), 14 (0-0.5'), and 15 (0-0.5'). PCBs were detected above 10 mg/kg in one soil sample (AOC-6-13 (0-0.5'). PCBs were not detected in SPLP leachate analysis of the samples from borings 12 and 13 were.
- PAHs were detected above remedial criteria one sample (AOC-6-8 (0.5-1.5') but were not detected above the PMC in the SPLP leachate analysis.
- ETPH was not detected above remedial criterial in any of the soil samples analyzed.

Results of the investigation in AOC-6 appear to generally support the previous CSM for this area for surface soils which appear to have been impacted from the historic capacitors. Tracking of PCBs within this AOC may also have occurred but to only a limited extent. Impacts were not identified at depth and

indicate that vertical migration has not occurred.

Based on the above data and review of historic data, additional investigation is required to define the extent of soil with PCB impacts within the central and western portions of AOC-6. The most significant data gap is at the location of the AEI investigation where samples were only collected from surface intervals (see Figures 6-1 through 6-3). Additional sampling is required beneath this area to complete the vertical delineation of PCB impacts.

4.4 AOC-12: Former Coal Storage

AOC-12 is located south of the Station B Building. This area was historically used for coal storage from the late 1880s to the early 1960s. Previous investigation of the area identified PAH and metals- impacted soils in excess of the applicable remedial criteria. In general, these detections were attributed to the widespread presence of polluted fill material throughout the Site. This AOC was subdivided into three main areas (AOC-12E, AOC-12N, and AOC-12W). Additionally, these AOCs were further subdivided into the following PCB Areas:

- AOC-12E / PCB Area 6.2: Site access driveway to the east of the coal yard
- AOC-12N / PCB Area 6.1: Coal yard area immediately to the south and west of Station B, including the location of the former boiler house for Station B
- AOC-12W / PCB Area 2.1: Elevated hopper track system for the former coal handling equipment
- AOC-12W / PCB Area 2.2: Coal storage area between the elevated hopper track system
- AOC-12W / PCB Area 3.2: Coal yard area at the southwestern corner of the North Side of the Site.

4.4.1 AOC-12E / PCB Area 6.2

AOC-12 E is located within the northeastern portion of the Site and extends to the north of the English Station building. Previous investigations within AOC-12E / PCB Area 6.2 identified concentrations of PAHs and metals above remedial criteria which are attributed to fill. One sample location also exhibited elevated concentrations of ETPH that is suspected to be due to a release following the placement of fill materials.

Early investigations concluded that PCBs were primarily absent throughout AOC-12E, except in the area to the immediate north of the English Station Building. Further PCB investigations were conducted along the access road between the eastern access gate and English Station. PCBs were detected in samples collected, but concentrations were all less than 1 mg/kg. However, soil samples from the area abutting the English Station building exhibited PCBs present at concentrations greater than 50 mg/kg. The primary release mechanism that led to impacts within AOC-12E is potential direct releases to the ground surface from dust suppression (spraying of oils) and the secondary release mechanism is seepage into the surrounding or underlying soils. Tracking of surficial contamination was also a concern as this area is the main point of access to the Site. Releases directly or indirectly to the subsurface may have been entrapped in the soil pore spaces in the vadose zone.

Weston & Sampson documented the advancement of 64 soil borings within AOC-12E/PCB Area 6.2 with the collection of soil samples from each boring and porous media samples at the surface for each boring location. The borings were advanced via direct push drilling techniques to depths ranging from 5 to 10 feet bgs. Four of the borings (AOC-12E-1 through 4) were advanced to delineate a previous ETPH detection. See Figure 7A-1 through 7A-3 for these locations. Sixty boring (AOC-12E-5 through 64) were advanced on an approximate10-foot by 10-foot sampling grid directly in front of English Station. See Figures and 7B-1 through 7B-3 for sample locations.

- Field screening of soil samples did not identify evidence of impacts.
- ETPH was identified above laboratory reporting limits in several samples. However, concentrations were above the remedial criteria in only one soil sample WS-AOC12E-2 (5-6'). Low level ETPH detections at depths below surface is common at the Site and is likely due to widespread polluted fill.
- PCBs were identified above laboratory reporting limits in several samples. However, PCBs were found above of 1 mg/kg in only one soil sample (WS-AOC12E-31 (0.5-1') and two asphalt samples WS-AOC12E-AS-32 and AS-54).
- PAHs were detected at concentrations exceeding the applicable remedial criteria at five soil sample locations (WS-AOC12E-1 (0.5-1.5'), 3 (5-6'), 11 (1.5-2'), 31 (1-1.5') and 47 (2-3') and are likely present due to widespread polluted fill because PAHs are heavier and more associated with MGP wastes. Analysis of SPLP leachates did not find PAHs at concentrations exceeding the PMC.

Results of the investigation in AOC-12E support the previous CSM for this area. Isolated petroleum impacts may be from dust suppression (spraying of oils) and seepage into underlying soils or present in the widespread polluted fill. PCB impacts are limited and tracking of surficial contamination does not appear to have occurred. PAH impacts are associated with the widespread fill.

Based on the results of the investigation for AOC-12E, the extent of ETPH impacts exceeding applicable remedial criteria shown on Figures 7A-1 through 7A-3 has not been defined in the western direction. However, additional investigation is not required to define the extent of impacts because the presence of subsurface structures limits the investigation. Active soil remediation is anticipated in this area.

The extent of PCB impacts exceeding applicable remedial criteria of 1 mg/kg appears to have been defined within the actual AOC area, except for impacts identified at soil sample location (WS-AOC12E-SO-31-2 (0.5-1') and two asphalt sample locations WS-AOC12E-AS-32 and AS-54. Active remedial measures are anticipated for these PCB impacts.

Additionally, based on review of historical data, there is an area of elevated PCB-impacted soil (shallow soils as seen on Figure 7B-1) that has been defined within AOC-12E with concentrations above 50 mg/kg. Active remedial measures are anticipated for this area.

PAHs were detected above remedial criteria in limited soil samples. However, the detected PAHs are associated with the widespread fill.

4.4.2 AOC-12N Former Station B Boiler House and Coal Storage (PCB Area 6.1)

AOC-12N is located to the south of the Station B building. The area includes the footprint of the former Boiler House for Station B that was demolished sometime prior to 1939. After demolition of the Boiler House, the area was used for the storage of coal. Previous investigations performed in this area identified the presence of the constituents that relate to the widespread fill that comprises Ball Island. An area of petroleum-impacted soil was also identified in this area, adjacent to the cooling water discharge tunnel. The primary release mechanism that led to the impacts is attributed to a direct release to the ground surface from coal storage, dust suppression (spraying of oils) and the secondary mechanism is seepage into underlying soils from the surface. Tracking of surficial contamination was also a concern in this area.

Weston & Sampson documented the advancement of four soil borings (AOC12N-1 through 4) within AOC-12N. The borings were advanced surrounding an area where elevated petroleum impacts were previously identified. See Figure 8-1 through 8-3 for these boring locations. Drilling refusal on concrete was encountered at three of the four sample locations which limited sample depths and the total number of samples collected. Soil samples could not be collected from boring ACO12N-2 due to drilling refusal. Soil samples were selected at depth intervals ranging from 3 to 11 feet bgs and submitted for varying analyses including PCBs, PAHs, ETPH, and arsenic. In addition to soil sampling, one porous media sample (asphalt) was collected adjacent to each boring location and submitted for PCB analysis. See Table 5 for analytical results.

The following summarizes the findings of the AOC-12N investigation:

- Field screening of soil samples did not identify evidence of impacts.
- PCBs were not detected above laboratory detection limits in any of the samples including the porous media samples collected in this area.
- ETPH was detected at concentrations below the applicable remedial criteria.
- Several PAH compounds were identified above the applicable remedial criteria in soil sample (AOC12N-4 (3-4')).
- Arsenic was identified at concentrations above remedial criteria in sample (AOC12N-3 (6-7').

In general, results of the investigation in AOC-12N appear to support the previous CSM for this area. Petroleum impacts from historic dust suppression appear to be isolated. PAHs and arsenic are associated with widespread fill. PCBs are not a COC for the area and tracking of PCBs does not appear to be a release mechanism. Based on the results of the investigation, additional investigation is not recommended to further delineate petroleum impacts, but active remedial measures will be required.

4.4.3 AOC-12W Former Coal Storage Area (PCB Areas 2.1, 2.2 and 3.2)

AOC-12W is located within the central portion of the North Side of the Site. This area was historically utilized for the storage and distribution of coal. The primary release mechanism for AOC-12W was determined to be direct releases to the ground surface from coal storage and dust suppression (spraying of oils). Secondary mechanisms identified include seepage to underlying soils from the

surface and potential tracking of surficial contamination. Contaminants of concern for this AOC include PCBs, ETPH, PAHs and arsenic.

This AOC was previously subdivided into the following PCB Areas:

- AOC-12W (PCB Area 2.1 - Elevated Railroad Tracks and Foundation)
- AOC-12W (PCB Area 2.2 - Former Coal Storage Area)
- AOC-12W (PCB Area 3.2 - Bulkhead PCB Remediation Area)

Previous investigation of AOC-12W (PCB Area 2.1) identified minimal impacts, however, additional investigation was proposed to evaluate potential impacts from tracking. Previous soil remediation was performed within AOC-12W (PCB Area 2.2). Despite the remediation, additional investigation was to further assess this area and potential impacts from tracking. Previous investigation within AOC-12W (PCB Area 3.2) identified PCB hotspots (both greater than 10 mg/kg and 50 mg/kg) that required additional delineation. Additional investigation was proposed to perform further delineation and assess for potential tracking. AOC-12W is depicted in Figures 9A, 9B and 9C.

4.4.4 AOC-12W (PCB Area 2.1 - Elevated Railroad Tracks and Foundation)

Weston & Sampson documented the advancement of a total of 87 borings (AOC12W-1 through 87) within AOC-12W (PCB Area 2.1). The borings were advanced on an approximate 20 foot by 20-foot sample grid to a maximum depth of 10 feet bgs. See Figure 9A-1 through 3 for boring locations.

Soil samples were selected at various intervals including from surface (0-0.5'), shallow (0.5-1.5'), intermediate (3-4') and deep (7-8') intervals to 10' bgs. Each sample was submitted for PCB analysis and select samples were submitted for ETPH, PAHs, and arsenic analysis. In addition to soil sampling, one porous media sample (asphalt) was collected adjacent to each boring location and submitted for PCB analysis. Weston & Sampson also collected 18 concrete samples (AOC12W-CO-113 through 130) from the area of the former elevated railroad foundations. The samples were collected from 0-0.5' and submitted to the laboratory for PCB analysis. See Table 6 for a summary of analytical results.

The following summarizes the findings of the AOC-12W (PCB Area 2.1) investigation:

- Field screening of soil samples did not identify evidence of impacts.
- PCBs were identified above laboratory reporting limits in several soil samples. Total PCB concentrations were identified above 1 mg/kg in one sample (AOC12W-39 (7-7.5').
- PCBs were detected in two asphalt samples (AOC12W AS-54 and AS-69) but at concentrations less than 1 mg/kg.
- ETPH was identified above laboratory reporting limits in several samples. However, ETPH was found above the remedial criteria in only one soil sample AOC12W-33 (1-1.5'). ETPH analysis via SPLP of this sample identified a concentration of ETPH at 1.4 milligrams per liter (mg/l which is below remedial criteria.
- PAHs were detected at concentrations exceeding the applicable remedial criteria in three samples AOC12W-42 (1-2'), 83 (1-1.5'), and 85 (1-1.5').

- Arsenic was identified at concentrations above remedial criteria in samples AOC12W-3 (0.5-2'), 5 (1-1.5'), 11 (1-2'), 13 (1-1.5'), 16 (1-2'), 23 (1-1.5'), 33 (1-1.5'), 35 (1-1.5'), 42 (1-2'), 49 (1-2.5'), 60 (0.5-1'), 70 (1-2'), 75 (1-1.5'), 83 (1-1.5'), 84 (1-1.5'), and 87 (1-1.5').
- Analysis of the concrete samples collected from the elevated railroad track foundations did not identify detectable concentrations of PCBs.

Results of the investigation appear to support the previous CSM for this area. PCB and ETPH impacts identified are limited and appear to be isolated. PAHs are prevalent throughout the Site and are associated with widespread fill material that comprise Ball Island. The PAHs identified are heavier and typically found in MGP wastes.

Arsenic identified may be associated with fill or with coal storage. All but two of the samples analyzed for arsenic were collected from sample intervals between 0.5 and 2 feet bgs. As such, they may be representative of releases to the surface of coal stored in the area or may be present in the widespread fill used to construct Ball Island. Additional sample results are needed for shallow samples (0 to 0.5 feet bgs) and from deeper intervals to evaluate these two potential sources for arsenic.

Review of historic data indicates that there are a few other locations where PCBs were identified in soil above 1 mg/kg. Additional investigation is not required but active remedial measures are anticipated.

4.4.5 AOC-12W (PCB Area 2.2 - Former Coal Storage Area)

Weston & Sampson documented the advancement of a total of 14 borings (AOC12W-99 through 112) within AOC-12W (PCB Area 2.2). The borings were advanced to depths ranging from 5 to 15 feet bgs. See Figure 9B-1 through 3 for sample locations. Soil samples were selected at various intervals ranging between 0 and 14 feet bgs and submitted for varying analyses including PCBs, ETPH, PAHs, and/or arsenic. See Table 6 for a summary of analytical results.

The following summarizes the findings of the AOC-12W (PCB Area 2.2) investigation:

- Field screening of soil samples did not identify evidence of impacts.
- PCBs and ETPH were not identified above remedial criteria in any samples.
- PAHs were identified above remedial criteria at sample locations WS-AOC12W-SO 106 (5-7') and WS-AOC12W-SO 108 (5-7'). However, SLPLP analyses of these samples did not identify exceedances of remedial criteria.
- Arsenic was identified at concentrations above remedial criteria in sample WS-AOC12W-SO 102 (0.5-1.5').

Results of the investigation in AOC-12W (PCB Area 2.2) appear to support the previous CSM for this area. Impacts identified are limited. PAHs appear to be prevalent throughout the Site and appear to be associated with fill material at the Site. Arsenic identified may be associated with fill or with coal storage. Based on the results of the investigation, data appears to be sufficient for delineation to support remedial planning purposes.

4.4.6 AOC-12W (PCB Area 3.2 - Bulkhead PCB Remediation Area)

Weston & Sampson documented the advancement of a total of 11 borings (AOC12W-SO-88 through 98) within AOC-12W (PCB Area 3.2). The borings were advanced to a maximum depth of 10 feet bgs. See Figure 9C-1 through 3 for sample locations. Soil samples were selected at various intervals including ground surface (0-0.5'), shallow (1-2'), intermediate (3-4'), and deep (7-8'). The samples were submitted for varying analysis including PCBs, ETPH, PAHs and Arsenic. See Table 6 for a summary of analytical results.

The following summarizes the findings of the AOC-12W (PCB Area 3.2) investigation:

- Field screening of soil samples collected from borings AOC12W-89 and 90 identified petroleum impacts between 5 and 10 feet bgs.
- ETPH was identified above the remedial criteria in soil samples AOC12W-89 (7.5-8'), and 90 (7.5-8').
- PCBs were identified above laboratory reporting limits in several soil samples. Total PCB concentrations were identified above the remedial criteria of 1 mg/kg in samples (AOC12W-89 (7-7.5'), 91 (0-0.5'), 92 (7-7.5'), 93 (0.5-1'), 94 (0.5-1') and 98 (7-7.5'). The maximum total PCB concentration detected in soil was 7.1 mg/kg.
- PAHs were detected at concentrations exceeding the applicable remedial criteria at sample location AOC12W-97 (1-1.5').

Results of the investigation in AOC-12W (PCB Area 3.2) support the previous CSM for this area. PCB impacts above remedial criteria have been confirmed within the southwestern portion of the AOC along with an isolated area of petroleum impacts. Additionally, previous investigations identified PCB hotspots (both greater than 10 mg/kg and 50 mg/kg) within this AOC which will require further delineation. Additional sampling should be performed to delineate PCB and petroleum impacts for remedial planning purposes. PAHs detected appear to be prevalent throughout the Site and are believed to be associated with fill material. The PAHs detected in the are heavier and typically associated with MGP wastes and not with petroleum hydrocarbons.

4.5 AOC -14 Former Cooling Water Discharge Tunnel

AOC-14 is a former cooling water discharge tunnel which is located within the North Side of the Site. Historical plans indicate that this former cooling water discharge tunnel ran from the south side of Station B, through the former coal yard, to an unidentified discharge point at a location along the eastern side of the Site. The tunnel was reported to be sealed off at both ends and no longer discharging to the Mill River. Two catch basins, identified as CB-1 and CB-2, located within the former coal yard, were reported to discharge into the tunnel.

The SOS indicates PCBs, ETPH and PAHs are potential contaminants of concern for AOC-14. Potential release mechanisms to the tunnel are identified as impacts from storm water run-off from catch basins connected to the tunnel, and/or potential infiltration through the concrete of the discharge tunnel or to cracks, seams or joints in the tunnel.

Weston & Sampson performed sampling of concrete and sediment within the cooling tunnel as part of

the investigation. Prior to sampling the following activities were performed and observations obtained. See Figure 10A for the overall tunnel location.

- The tunnel was confirmed to extend along the southwestern face of Station B approximately 70 feet. Investigation performed during the sampling found that all inlets/outlets to the tunnel had been filled and there was no apparent flow of water into or out of the tunnel.
- The tunnel extends to the south and then turns to the southeast and extends beneath those areas designated as AOC-12W and AOC 12E as shown on Figure 9A. The construction of the tunnel was similar along this extent and was approximately 3 feet tall and 4 feet wide.
- Catch basins designated as CB-1 and CB-2 were confirmed to be constructed directly over the tunnel at the locations shown on Figures 10B and C. Water still enters the tunnel through these catch basins. Without a discharge point, the water accumulates within the tunnel.
- Beyond the former coal bins, the tunnel extends to the north, up to the southeastern corner of Station B. At the northernmost extent of this section of tunnel, concrete was not found at the base and therefore only sediment samples were collected at these locations. All inlets/outlets to the tunnel at the northernmost extent had been previously filled and there was no flow of water into or out of the tunnel.
- The tunnel also extends to the south to near the foundation for an electrical distribution tower. The tunnel widens to approximately 4 feet tall and 4 feet wide at the southern extent. The foundation of the tower and debris completely filled the tunnel at this end of the structure and no flow of water into or out of the tunnel was observed.
- The tunnel was found to be flooded at the time of the investigation. However, the only inflow of water into the tunnel observed was storm water which would enter at the two catch basins.

Weston & Sampson collected samples of porous media (concrete and wood (1 sample)) and sediment. A total of 71 locations (AOC 14 - 1 through 71) were planned to be sampled at 10-foot intervals throughout the length of the tunnel. Locations are depicted in Figures 10B through E. Samples could not be collected from the following locations for the reasons stated:

- Locations 9 through 11: Portions of the tunnel were collapsed, and samples could not be collected.
- Locations 49 and 50: Sediment was not found and therefore not sampled.
- Locations 12, 14, 16, 17, 19 through 25, and 42: Tunnel had clay-like floor and concrete samples were not collected.
- Locations 27, 28, 31, and 35: Sample locations could not be accessed due to obstructions found in the bottom of the tunnel.

In total, 51 concrete samples, 1 wood sample and 66 sediment samples were collected from the bottom of the cooling tunnel and submitted for PCB analysis. Ten (10) selected sediment samples were also

submitted for ETPH and PAH analysis. See Table 7 for a summary of analytical results. As shown in Table 7, analysis identified the following:

- Porous Media Samples: PCBs were detected at only four sample locations at concentrations less than 1 mg/kg total PCBs.
- Sediment Samples:
    - PCBs were detected above laboratory detection limits in most of the samples. Total PCBs were detected above 1 mg/kg in 32 of the samples. There were no PCB detections that exceeded 10 mg/kg.
    - ETPH were detected above laboratory reporting limits in each sample submitted for analysis. Of the detections, only four locations (AOC14-SE-1 through 4) exhibited ETPH concentrations in exceedance of remedial criteria.
    - PAHs were detected in each sample submitted for analysis. Of the detections, nine sample locations (AOC-14-SE-1 through 8 and 63) exhibited PAH concentrations in exceedance of remedial criteria.

Results of the investigation for AOC-14 Former Cooling Water Discharge Tunnel appear to support the previous CSM for this area regarding impacts to sediments. The lack of impacts to concrete indicate that migration of PCBs into the concrete has been extremely limited.

Based on the results of the investigation, data appears to be sufficient for assessment purposes. No additional sampling is recommended because all accessible areas of the tunnel have been sampled at 10-foot intervals.

4.6 AOC-15 Oil Stained Area North of English Station / Release to Catch Basin 4

AOC-15 is located adjacent and north of the English Station building. During demolition and asbestos abatement at English Station performed by a contractor to the current owner in 2011 and 2012, the primary egress from the building was through the oil storage room which contains drums and other containers of oil. Spillage and subsequent tracking through the area resulted in a large oil stain on pavement adjacent to the north side of the building. Catch basin 4 (CB-4) is located within the oil-stained area. In 2014, the United States Coast Guard (USCG) executed response actions due to concerns that this release area was impacting the adjacent Mill River.

The primary release mechanisms were identified as direct spillage or tracking from the oil storage room, and the secondary release mechanism was identified as infiltration through asphalt and catch basin to underlying soils. Tracking of oil and surficial contamination was also a concern.

Weston & Sampson documented the advancement of 36 soil borings (AOC-15 1 through 28 and 30 through 37) within AOC-15. Additionally, 36 porous media samples were collected to assess potential tracking and one sediment sample (AOC-15 SE-29) was collected from catch basin CB-4. See Figures 11-1 through 11-3 for sample locations.

Soil samples were selected at depth intervals ranging from 0 to 9 feet bgs and submitted for varying analyses including PCBs, PAHs, and/or ETPH. Porous media samples were submitted for PCB analysis. The sediment sample collected from CB-4 was submitted for PCB, PAH and total metals analyses. See Table 8 for a summary of analytical results. The following summarizes the findings of the AOC-15 investigation:

- Field screening of soil samples did not identify evidence of impacts.
- PCBs were detected above 1 mg/kg in only one sample, asphalt sample AOC-15 AS-8.
- ETPH was detected above remedial criteria in two soil samples, AOC-15-3 (0.5-1.5') and 6 (0.5-1').
- PAHs were detected above remedial criteria in one soil sample, AOC-15-6 (1.5-2.5').
- Analysis of the sediment sample collected from CB-4 identified concentrations of arsenic and lead above remedial criteria.

Results of the investigation in AOC-15 appear to support the previous CSM for this area except that tracking is not seen as an issue. Additional sampling is not seen as necessary for remedial planning purposes. Shallow PCB and ETPH impacts are delineated to the extent necessary to plan remedial efforts. The limited PAH impacts identified are heavier PAHs that are typical of MGP wastes and do not indicate that the source was from a petroleum product. As analysis of a sediment sample collected from catch basin CB-4 identified arsenic and lead at concentrations above remedial criteria, remediation of this sediment is anticipated.

4.7 Data Gap Summary

The following is a summary of the data gaps identified following completion of the investigation:

- AOC-2 Station B Former UST Area: No data gaps were identified and remediation will not be required.
- AOC-5 Bulkhead PCB Remediation Area: Two additional samples from depth for analysis of ETPH and PAHs are required to complete the scope of work described in the TRC SOS.
- AOC-6 Capacitor Release / Outdoor Capacitor Banks 1-3 (PCB Area 3.1): Additional investigation is required to define the vertical extent of soil with PCB impacts within the area investigated by AEI.
- AOC-12E (PCB Area 6.2): Based on the results of the investigation for AOC-12E, the extent of ETPH impacts exceeding applicable remedial criteria has not been fully defined in the westerly direction (see Figure 7A-3), but sufficient data has been collected to design remediation efforts, so no additional sampling is recommended at this time. Rather, it is anticipated that confirmatory soil samples will be utilized to determine that the full extent of this release has been remediated. The extent of PCB and ETPH impacts (see Figures 7B-1 through 7B-3) exceeding applicable remedial criteria have been sufficiently delineated to design remedial efforts and confirmatory soil samples will be utilized to determine that the full extent of this release has been remediated.
- AOC-12N Former Station B Boiler House and Coal Storage (PCB Area 6.1): Based on the

results of the investigation, no additional investigation is required to further delineate petroleum impacts as the remediation can be designed based upon the data already generated.

- AOC-12W (PCB Areas 2.1, 2.2, and 3.2): Previous investigations identified PCB hotspots (both greater than 10 mg/kg and 50 mg/kg) within this AOC. However, historical and 2017 investigation data provides sufficient data to design remedial actions and no additional sampling is required. Sampling for arsenic on the northern portion of this AOC will be performed to further the delineation for this COC.
- AOC-14 Former Cooling Water Discharge Tunnel: The full length of the cooling water tunnel was exposed and sampled at ten foot intervals when Site conditions allowed. No additional sampling is required.
- AOC-15 Oil Stained Area North of English Station / Release to Catch Basin 4: Additional sampling is not required to delineate impacts to soil within this AOC and sufficient data are available for remedial planning.

4.8 Conceptual Site Model Summary

Figures 12-1 through 12-3 present a summary of the analytical data collected for the North Side of the Site. Figure 12-1 summarizes data collected from 0 to 2 feet below grade and includes the surficial porous media samples. These data indicate limited areas of impacts that are mostly limited to AOCs that were previously investigated. Tracking of PCBs is not indicated by these data and is not seen as an issue for the Site. Figures 12-2 and 12-3, which summarize data from 2 to 4 feet below grade and greater than 4 feet below grade, respectively, also indicate limited areas of releases to the subsurface.

The following is a summary of modifications to the CSM for each AOC following evaluation of Site investigation data:

- AOC-2 Station B Former UST Area: PAHs identified above remedial criteria are associated with the fill used to construct the Site and not the petroleum release. The CSM is confirmed and the impacts to soil from releases from the former USTs appear to have been remediated.
- AOC-5 Bulkhead PCB Remediation Area: Tracking of PCBs has not occurred to an extent that would require additional remediation. Thus, this aspect of the CSM is not applicable. The data indicate that the soil within AOC-5 has been remediated.
- AOC-6 Capacitor Release / Outdoor Capacitor Banks 1-3 (PCB Area 3.1): The CSM is confirmed for this AOC except the analytical data does not indicate that tracking of PCBs has occurred in this area and that releases of PCBs did not occur to the concrete pedestals.
- AOC-12E (PCB Area 6.2): The CSM is confirmed for this AOC except analytical does not indicate that tracking of PCBs has occurred. PAHs identified above remedial criteria are associated with fill.
- AOC-12N Former Station B Boiler House and Coal Storage (PCB Area 6.1): Petroleum impacts from historic dust suppression appear to be isolated. PAHs appear to be prevalent throughout the Site and are associated with the fill used to construct Ball Island. Arsenic may be associated

with fill or with coal storage. PCBs do not appear to be a COC for the area and tracking of PCBs does not appear to be a release mechanism.

- AOC-12W (PCB Areas 2.1, 2.2, and 3.2): PAHs appear to be prevalent throughout the Site and are associated with fill material. Arsenic present in this area may be associated with fill or with coal storage. The extent of PCBs within this AOC was delineated and historical release mechanisms confirmed by the newly collected data. However, tracking of PCBs is not indicated by the 2017 investigation data.
- AOC-14 Former Cooling Water Discharge Tunnel: The CSM for the cooling water tunnel was confirmed. However, limited to no penetration of PCBs was found in the concrete at the base of the tunnel and migration of PCB impacts to concrete is minimal.
- AOC-15 Oil Stained Area North of English Station: The CSM for AOC 15 was confirmed except for tracking of impacts which was not indicated by the data received.

5.0 REMEDIAL ALTERNATIVES

The following is a discussion of the chemicals of concern at the Site, the applicable regulations, and how these regulations will affect remedial decision making.

5.1 Chemicals of Concern

Chemicals of concern at the Site include PCBs, ETPH, PAHs, and metals. These COCs are present at the Site either due to historical releases or, in the case of PAHs, metals, and some petroleum hydrocarbons, are present in widespread polluted fill used to construct and expand Ball Island.

Typical remediation processes used to treat these COCs along with their applicability for these COCs are:

- Biological Treatment – In-situ or ex-situ reduction of contaminants by enhancing natural biodegradation with addition of oxygen and/or nutrients or reliance on naturally-occurring conditions.
    - PCBs – Biodegradation of PCBs is an inefficient process that requires a transition between aerobic and anaerobic conditions to achieve complete degradation. This remedial process is not typically employed for this COC.
    - ETPH and PAHs – Biodegradation of these COCs is a proven technology but heavier PAHs (3-, 4-, or 5-ring) are degraded slowly. Biodegradation occurs best under aerobic conditions and could be employed at the Site for these COCs.
    - Metals – The oxidative state of metals may be altered during biodegradation. However, this method is typically employed only if metals are dissolved in groundwater and is not typically used for treating metals in soil.
- Chemical Oxidation – In-situ or ex-situ reduction of contaminants by treating with chemical oxidants.
    - PCBs – PCBs are readily degraded by chemical oxidation. However, this is not a typically employed remediation for this COC for reasons discussed in Section 5.2.
    - TPH and PAHs – Chemical oxidation of these COCs is a proven technology for these COCs.
    - Metals – The oxidative state of metals may be altered using chemical oxidation. However, this method is typically employed only if metals are dissolved in groundwater and is not typically used for treating metals in soil.
- In-Situ Stabilization – In-situ stabilization of contaminants to either reduce their solubility or to prevent direct exposure.
    - PCBs – PCBs can be stabilized in the environment and this is a technology that has been employed. However, this is not a typically employed remediation for this COC for reasons discussed in Section 5.2.

- TPH and PAHs – These COCs can be stabilized in-situ but this process is typically applied if COCs are deep below the surface or if there are other factors that render other treatment processes technically infeasible.
- Metals – In-situ stabilization is a technology that is used for these COCs. However, this method is typically employed only if metals are dissolved in groundwater and is not typically used for treating metals in soil.

- Excavation with off-Site disposal – A commonly employed remedial technology that offers permanent solutions in a short timeframe. However, costs for implementation can be significant and these costs could drive evaluation of other alternatives.
  - PCBs – PCBs can be excavated and disposed off-Site and this technology is typically employed for PCBs.
  - TPH and PAHs – These COCs can be excavated and disposed off-Site and this technology is typically employed.
  - Metals – These COCs can be excavated and disposed off-Site and this technology is typically employed.

5.2 Applicable Regulations

Chemicals of concern at the Site are regulated under the RSRs. The remedial criteria applicable to the Site for these COCs under the RSRs include the:

- I/C DEC – Soil with concentrations of COCs exceeding the I/C DEC may be treated in-situ or ex-situ to reduce concentrations, removed from the Site, or capped in a manner that renders the soil inaccessible as per the definition in the RSRs. The exception is PCBs which must be remediated to a concentration less than the I/C DEC down to a depth of fifteen feet below ground surface. Application of the I/C DEC will require an ELUR restricting site use to industrial and commercial purposes be placed on the parcel.
- GB PMC – Soil with concentrations of COCs exceeding these criteria or with SPLP leachate results that exceed the GB PMC above the seasonal high groundwater table must be reduced in concentration or the leachability of the COC reduced. This may be done by removing soil or treating the soil in-situ or ex-situ. The widespread polluted fill variance exempts COCs from application of the GB PMC. This variance is applicable to PAHs, metals, and petroleum hydrocarbons that were in the fill material used to construct the island and not due to a release after the fill materials were placed.

PCBs at the Site are regulated under the federal PCB regulations found in 40 CFR Part 761 as PCB Remediation Waste. Under the federal PCB regulations, disposal is defined as:

> *Disposal* means intentionally or accidentally to discard, throw away, or otherwise complete or terminate the useful life of PCBs and PCB Items. Disposal includes spills, leaks, and other uncontrolled discharges of PCBs as well as actions related to

containing, transporting, destroying, degrading, decontaminating, or confining PCBs and PCB Items.

Thus, both the release of PCBs to the environment and any process that involves removal, destroying or containing PCBs are defined as a disposal. Federal regulations for the storage and disposal of PCB-containing materials are found in 40 CFR Part 761 Subpart D. The technologies allowed for disposal of PCB remediation wastes under Subpart D include excavation and removal from the Site with either incineration (§761.70), disposal in an appropriately permitted landfill (§761.75), or capping PCB remediation waste soil and disposal in place. Other remedial technologies, such as soil washing, ex-situ thermal treatment, chemical oxidation, or in-situ stabilization may be employed but must be approved on a Site-specific basis. These approvals can be difficult to obtain so excavation and removal is typically employed. PCB-impacted materials may be capped and disposed in place.

5.3 Remedial Implications

PCBs are the most common COC on the property and are driving remedial actions in many areas. For areas where PCBs are found with other COCs, the disposal requirements for PCBs control remedial selection.

As such, excavation and off-Site disposal of soil where PCB concentrations are greater than the I/C DEC for PCBs (10 mg/kg) will be the preferred remedial alternative because it can be implemented in a timely manner, is permanent, and acceptable to the regulators. However, this alternative is costly and other alternatives will be evaluated where applicable. For locations where PCB concentrations are less than the I/C DEC, these soils may be rendered inaccessible with a combination of soil and asphalt or concrete caps.

5.4 Anticipated Remedial Alternatives

The anticipated remedial alternatives for soil on the northside of the property is a mix of excavation to remove PCBs greater than 10 mg/kg and ETPH impacts due to releases that also exceed the GB PMC and capping where implementable. However, grades will need to be maintained at the buildings and the bulkhead surrounding the island. Capping of impacts near the bulkhead and the buildings will be combined with excavation of two feet of soil with asphalt or concrete placed over the surface of the clean materials used to backfill or excavation of four feet of soil with backfilling with clean materials.

Application of the I/C DEC requires that soil with total PCB concentration greater than 10 mg/kg be excavated and leaving soil with greater than 10 mg/kg total PCBs in place would require an engineered control variance which is not seen as being administratively implementable and would take extended timeframes to receive. Thus, excavation and offsite disposal of soil with PCB concentrations greater than 10 mg/kg is considered to be required.

Releases of petroleum hydrocarbons during historical site operations have been found and where these soil impacts exceed the GB PMC, excavation and offsite disposal is considered to be required. These impacts could be treated in-situ but they are typically collocated with PCBs which cannot be treated in-situ with going through a lengthy permitting process.

PCBs at concentrations less than 10 mg/kg and PAHs, metals, petroleum hydrocarbons that are present in the fill materials and not due to releases may be rendered inaccessible to comply with the I/C DEC. This can be done by constructing a cap. However, given that surface elevations at the bulkhead and

around the buildings may not be raised, this capping will likely be combined with excavation so that the required thickness of a cap may be constructed.

6.0 LIMITATIONS

This report was prepared for use by United Illuminating exclusively. The findings provided by Weston & Sampson in this report are based solely on the information reported in this document. Future investigations and/or information that were not available to Weston & Sampson at the time of the investigation may result in a modification of the findings stated in this report.

Should additional information become available concerning this Site or neighboring properties that could directly impact the Site in the future, that information should be made available to Weston & Sampson for review so that, if necessary, conclusions presented in this report may be modified.

The conclusions of this report are based on conditions observed by Weston & Sampson personnel at the time of the investigation, information provided by United Illuminating, and samples collected and analyzed on the dates shown or stated in this report. This report has been prepared in general accordance with generally accepted engineering and geological practices. No other warranty, express or implied, is made.

7.0 REFERENCES

"Scope of Study, English Station, 510 Grand Avenue, New Haven, Connecticut," TRC, October 2016, Revised July 2017.

State of Connecticut v. The United Illuminating Company, Partial Consent Order Number COWSPCB 15-001.

"Remediation Standard," Title 22a, Environmental Protection, §§22a-133k-1 through -3, inclusive, Regulations of Connecticut State Agencies, Revised August, 9, 2017.

"PCBs – Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions," Title 40 Code of Federal Regulations, Chapter 1, Part 761, July 1, 2010 edition.

"Request for Widespread Polluted Fill Variance," Advanced Environmental Interface for Quinnipiac Energy LLC, January 10, 2003.

"Approval of Widespread Polluted Fill Variance," CT DEEP, March 27, 2003.

"Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCS)," Office of Environmental Measurement and Evaluation, EPA Region 1, Revision 4, May 5, 2011.

"Technical Support Document: Recommended Numeric Criteria for Common Additional Polluting Substances and Certain Alternative Criteria," CT DEEP, December 10, 2015, Revised January 27, 2017

"Laboratory Quality Assurance and Quality Control Guidance, Reasonable Confidence Protocols Guidance Document," CT DEEP, November 2007, Revised December 2010.

"Laboratory Quality Assurance and Quality Control Guidance, Data Quality Assessment and Data Usability Evaluation Guidance Document," CT DEEP, May 2009, Revised December 2010.

FIGURES

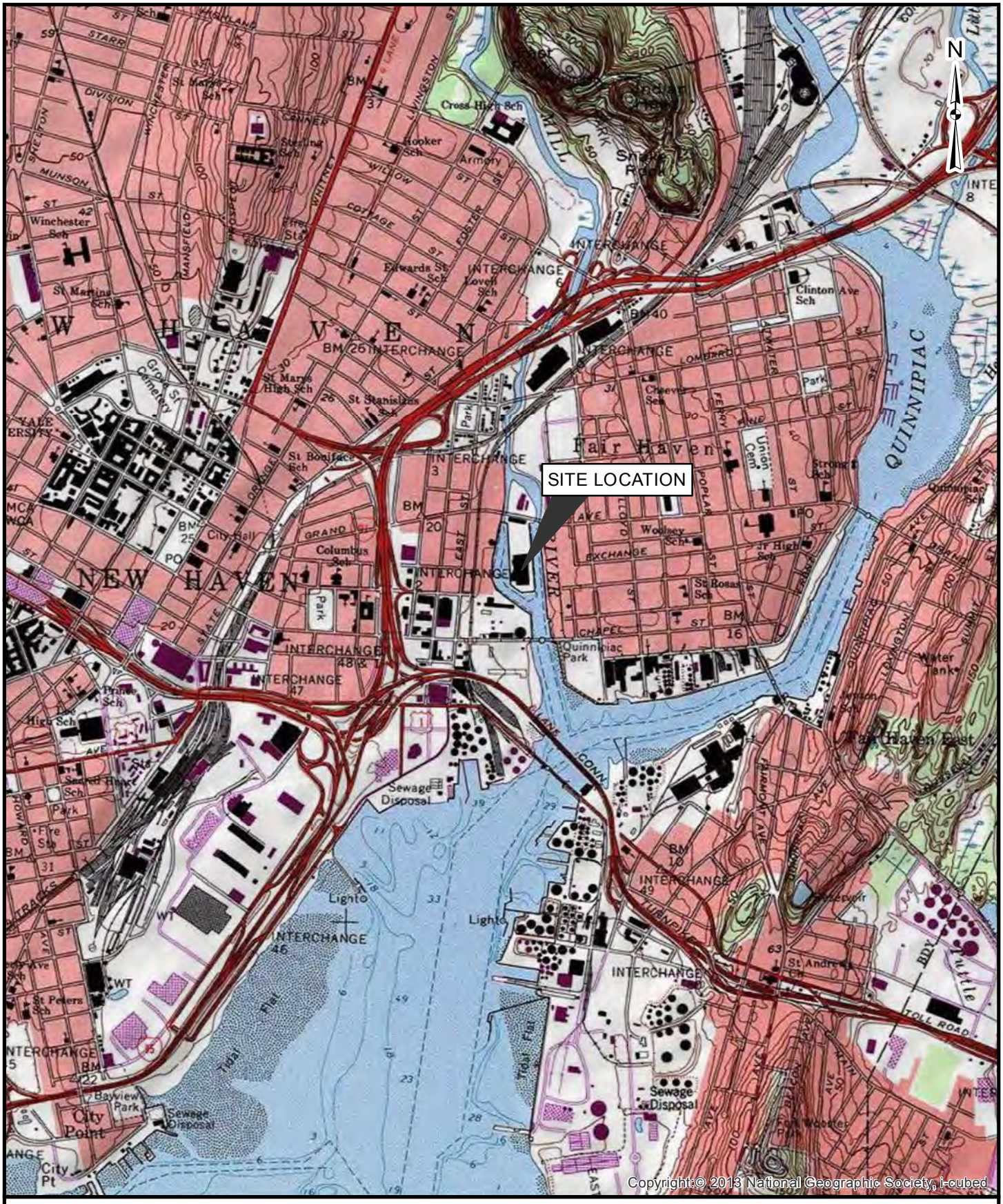


FIGURE 1
United Illuminating English Station Power Plant
510 Grand Avenue, New Haven, Connecticut

SITE LOCUS

2,000 0 2,000

Feet

Weston & Sampson

Path: \\gisdatasrv\GIS\DataStore\Client\United Illuminating\Project\English Station\Locus Map.mxd User: ozerekoz Saved: 10/17/2017 12:10:09 PM Opened: 10/17/2017 12:12:33 PM

NOTES:

1. REVISION 4 INCLUDES A PROPERTY LINE ADJUSTMENT BASED ON THE 11/28/16 SURVEY BY GODFREY–HOFFMAN & ASSOC.
2. ADAPTED FROM PLAN TITLED "SITE PLAN AND APPROXIMATE PARCEL BOUNDARIES" DATED 10/07/2016 BY TRC COMPANIES, INC..
3. AERIAL IMAGE FROM GOOGLE EARTH PRO, DATE OF IMAGE: 04/20/2016

PROPERTY BOUNDARY

PARCEL BOUNDARY

REPORT AREA BOUNDARY

N

100 50 0 100 200

SCALE: 1"=100'

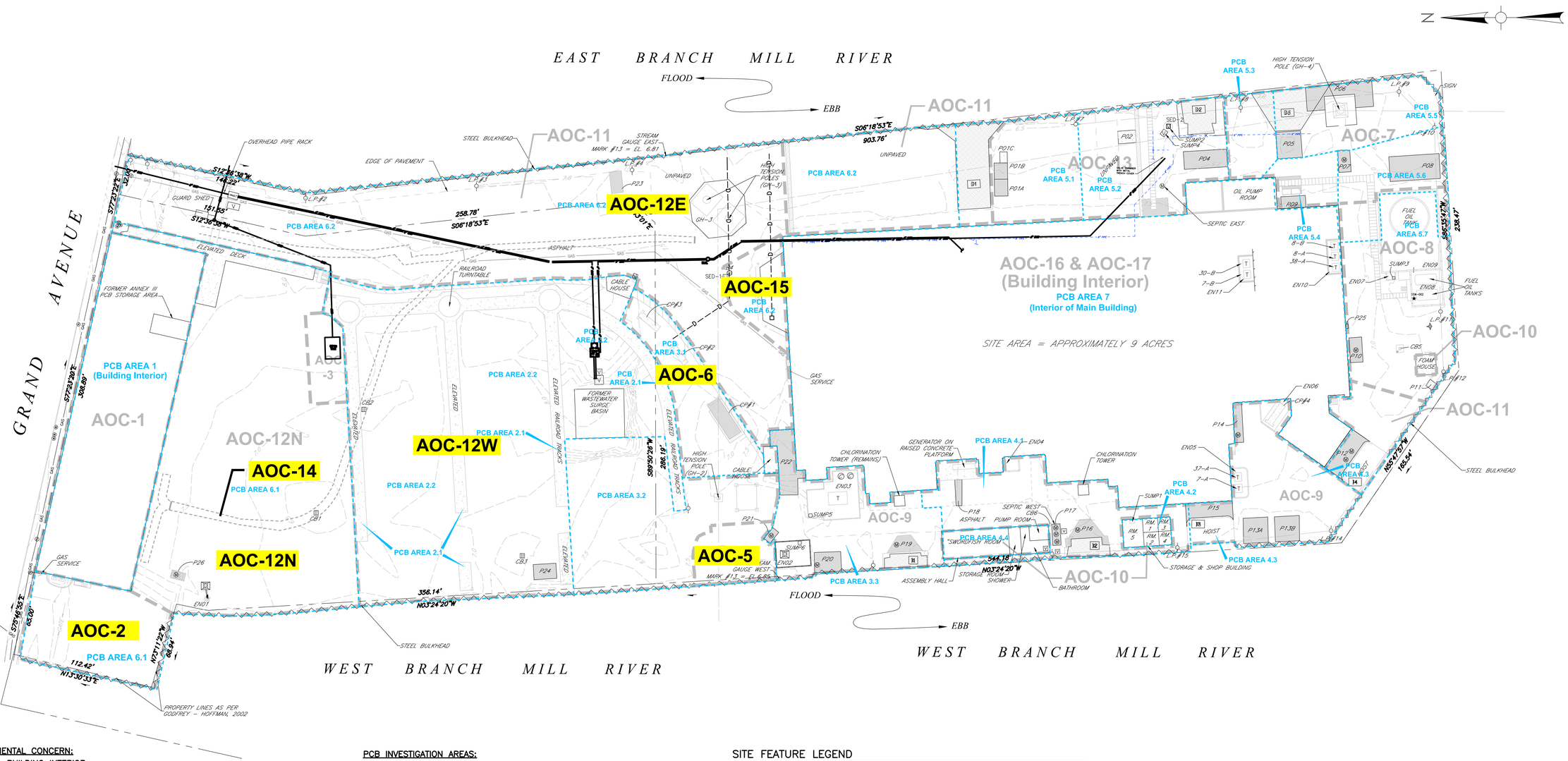
FIGURE 2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

SITE PLAN WITH PARCEL BOUNDARY

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



AREAS OF ENVIRONMENTAL CONCERN:

AOC-1 STATION B-BUILDING INTERIOR
AOC-2 STATION B UNDERGROUND STORAGE TANK AREA
AOC-3 FORMER SEPTIC SYSTEM
AOC-4 PAST SPILLS UNSPECIFIED LOCATIONS
AOC-5 BULKHEAD PCB REMEDIATION AREA
AOC-6 CAPACITOR RELEASE AREA/OUTDOOR CAPACITOR BANKS
AOC-7 FORMER WASTE OIL AST AND OIL PUMP HOUSE
AOC-8 FORMER FUEL OIL STORAGE ASTS
AOC-9 TRANSFORMER AREAS
AOC-10 INTERIOR CHEMICAL STORAGE AREAS EXCLUDING ENGLISH STATION
AOC-11 ON-SITE FILL MATERIAL SITE WIDE
AOC-12E COAL STORAGE, HANDLING, AND WASTE DISPOSAL AREAS
AOC-12N COAL STORAGE, HANDLING, AND WASTE DISPOSAL AREAS
AOC-12W COAL STORAGE, HANDLING, AND WASTE DISPOSAL AREAS
AOC-13 FORMER WASTEWATER TREATMENT FACILITY
AOC-14 FORMER COOLING WATER DISCHARGE TUNNEL
AOC-15 CATCH BASIN RELEASE & OIL STAIN AREA
AOC-16 ENGLISH STATION INTERIOR
AOC-17 DRAINAGE STRUCTURES ASSOCIATED WITH/BENEATH ENGLISH STATION

GENERAL NOTES:

1. ADAPTED FROM PLAN TITLED "SITE FEATURES, AOCs, AND PCB AREAS" DATED 10/07/2016 BY TRC COMPANIES INC..
2. NOT ALL STRUCTURAL DETAILS HAVE BEEN SHOWN WITHIN BUILDINGS AND ENCLOSURES.
3. ENCLOSURES EN01 THROUGH EN11 ARE ENCLOSED EITHER BY FOUR CONCRETE WALLS, OR BY THREE CONCRETE WALLS AND A BUILDING WALL. ENCLOSURE IS NOT SYNONYMOUS WITH CONTAINMENT.
4. FOUR CONCRETE PADS FORMERLY HELD CAPACITORS: CP#1, CP#2, CP#3, CP#4. CP#1 IS AT GRADE; THE OTHERS ARE ELEVATED.
5. IN A SURVEY OF MONITORING WELLS ON 13 APRIL 2004, AEI COULD NOT FIND THE FOLLOWING WELLS, AND THEY ARE PRESUMED EXCAVATED OR OTHERWISE DESTROYED: MW-01, MW-02, MW-13, MW-20, MW-N, AND MW-O.
6. GODFREY-HOFFMAN ASSOCIATES, LLC SUPPLIED A GENERAL LOCATION SURVEY BASE MAP: PROJECT 01-182; JANUARY 4, 2002 WITH REVISIONS TO NOVEMBER 28, 2016; SCALE 1 INCH = 40 FEET.
7. THIS FIGURE IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

PCB INVESTIGATION AREAS:

PCB AREA 1: STATION B INTERIOR
AREA 1.1 MEZZANINE AND FIRST FLOOR, EXCEPT ANNEX III
AREA 1.2 FORMER ANNEX III
AREA 1.3 BASEMENT
PCB AREA 2: FORMER COAL YARD
AREA 2.1 ELEVATED RAILROAD TRACKS AND FOUNDATIONS
AREA 2.2 REMAINDER OF FORMER COAL YARD
PCB AREA 3: ELECTRICAL INFRASTRUCTURE AND EXCAVATION
AREA 3.1 FORMER CAPACITOR AREA
AREA 3.2 UNITED ILLUMINATING REMEDIATION AREA
AREA 3.3 TRANSFORMER AND CAPACITOR AREA
PCB AREA 4: SOUTHWEST CORNER
AREA 4.1 FORMER TRANSFORMER AREA
AREA 4.2 STORAGE AND SHOP BUILDING INTERIOR
AREA 4.3 TRANSFORMER AND FORMER CAPACITOR AREA
AREA 4.4 ASSEMBLY HALL INTERIOR
PCB AREA 5: SOUTHEAST CORNER
AREA 5.1 FORMER DUMPSTER AREA
AREA 5.2 FORMER WASTEWATER TREATMENT AREA
AREA 5.3 OIL PUMP HOUSE AREA
AREA 5.4 FORMER WASTE OIL TANK AREA
AREA 5.5 TOWER GH-4 AREA
AREA 5.6 FORMER STORAGE BUILDING AREA
AREA 5.7 FUEL OIL TANK AREA
PCB AREA 6: BALANCE OF SITE, EXCEPT ENGLISH STATION
AREA 6.1 FORMER STATION B AREA
AREA 6.2 MILL RIVER EAST BRANCH AREA
PCB AREA 7: ENGLISH STATION INTERIOR

SITE FEATURE LEGEND

EDGE OF PAVEMENT
PROPERTY / STREET LINE
CHAIN LINK FENCE
GUARDRAIL
NEW BULKHEAD
GAS LINE
OVERHEAD WIRE
CONCRETE WALL
APPROXIMATE EXTENT OF HISTORICAL EXCAVATION
PCB AREA BOUNDARY
AOC BOUNDARY
PIPE TRENCH
EXISTING BUILDING
CONCRETE PAD
CONCRETE PAD (ELEVATED)
ASPHALT APRON
RECENT FILL
WATER GATE
GAS GATE
ROUND CATCH BASIN
RECTANGULAR CATCH BASIN
UTILITY POLE

FIRE HYDRANT
MANHOLE
VAULT
HATCHWAY
INTAKE CHANNEL
DISCHARGE CHANNEL
TRANSFORMER
CIRCUIT BREAKER
CATHODIC BULKHEAD PROTECTION DEVICE
4AS-007 ASPHALT SAMPLE POINT
3CO-040 CONCRETE SAMPLE POINT
CS-1 CONCRETE SAMPLE POINT - COLLECTED BY GEI
4CO-078 CONCRETE SAMPLE POINT FROM WALL
3HX-004 HEXANE WIPE SAMPLE POINT
4XX-001 MISCELLANEOUS SAMPLE POINT
3SD-001 SEDIMENT SAMPLE POINT
PCB-05 SEDIMENT SAMPLE POINT - COLLECTED BY GEI
4HA-513 SOIL SAMPLE POINT
TB-XXX SAMPLE LOCATION WHERE BOTH POROUS MEDIA (ASPHALT OR CONCRETE) AND SOIL SAMPLES WHERE COLLECTED
HA-1 SOIL SAMPLE POINT - COLLECTED BY OTHERS
3SW-001 SURFACE WATER SAMPLE POINT
MW-H / TB-W SOIL SAMPLE FROM GROUND WATER MONITORING WELL
MW-01 SOIL SAMPLE FROM GROUND WATER MONITORING WELL - INSTALLED BY OTHERS

40 20 0 40 80
SCALE: 1"=40'

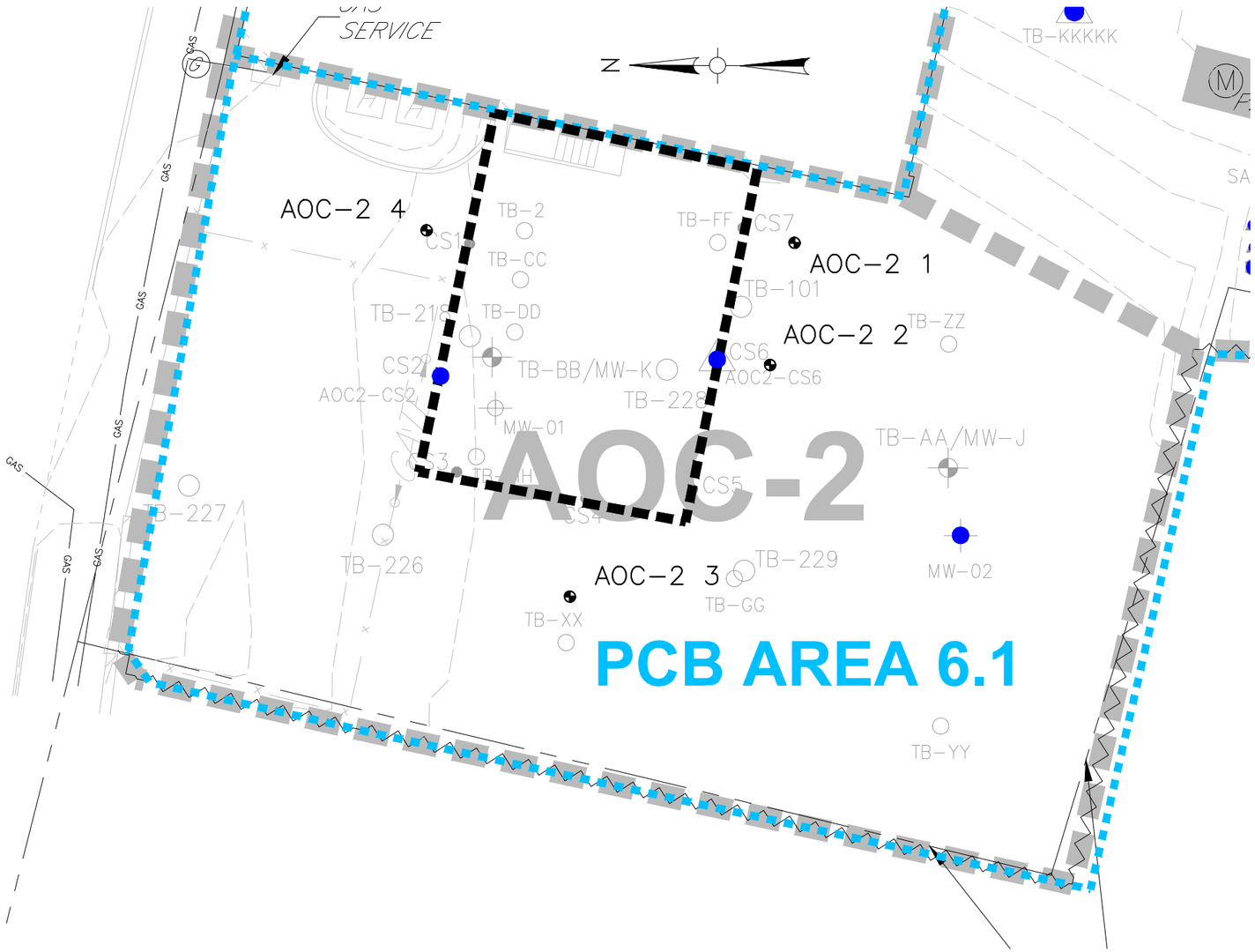
FIGURE 3
UNITED ILLUMINATING ENGLISH STATION POWER PLANT

510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

NORTH SIDE SITE FEATURES, AOCs, AND PCB AREAS

OCTOBER, 2017 SCALE: 1" = 40'

Weston & Sampson
Weston & Sampson Engineers, Inc.
273 Dividend Road, Rocky Hill, CT 06067



LEGEND:

- SAMPLE LOCATION WITH NON–DETECT PCB CONCENTRATIONS
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

15 7.5 0 15 30

SCALE: 1"=15'

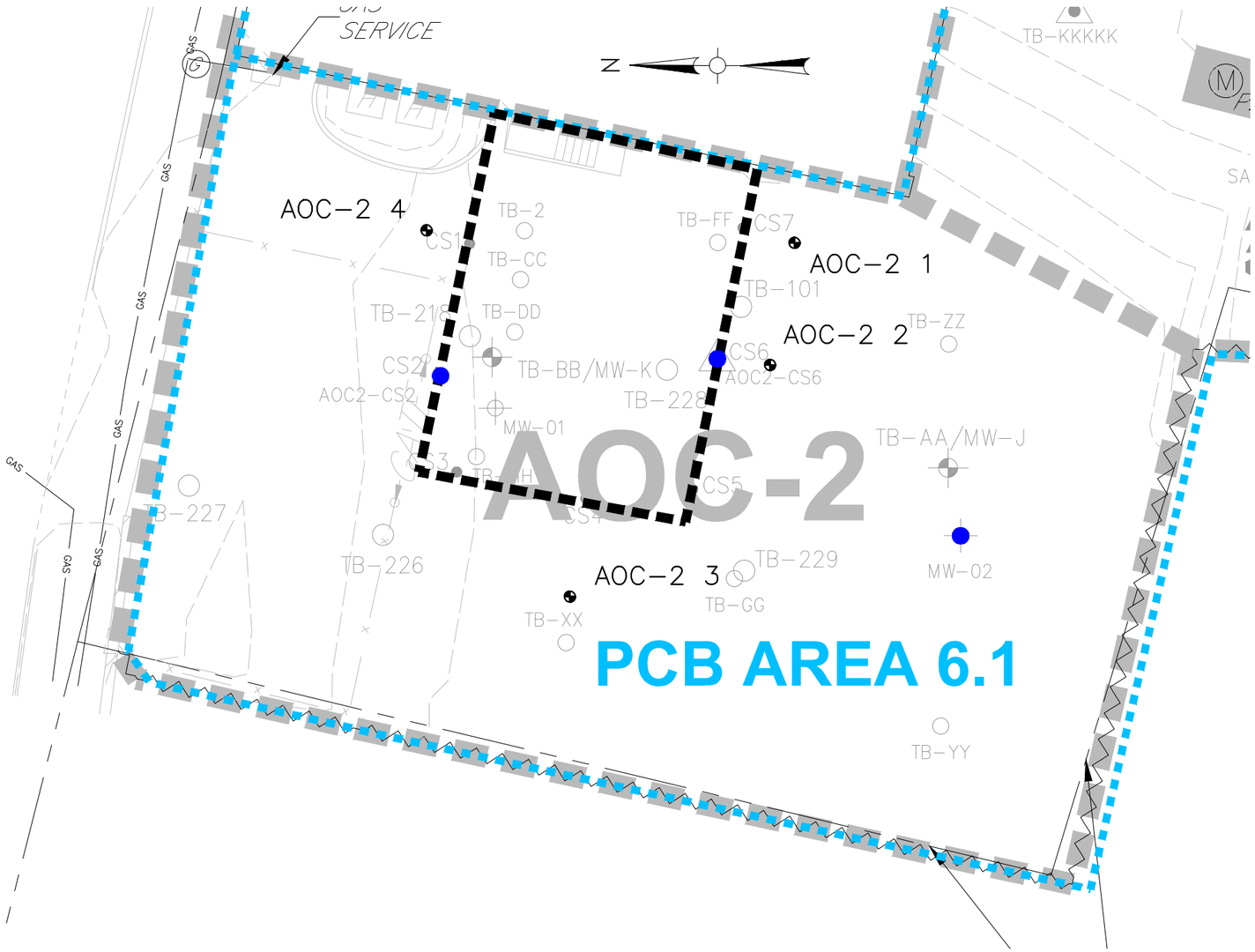
FIGURE 4–1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC–2 (PCB AREA 6.1)
2017 SAMPLE LOCATIONS: 0–2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



LEGEND:

- SAMPLE LOCATION WITH NON–DETECT PCB CONCENTRATIONS
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 4–2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC–2 (PCB AREA 6.1)
2017 SAMPLE LOCATIONS: 2–4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson

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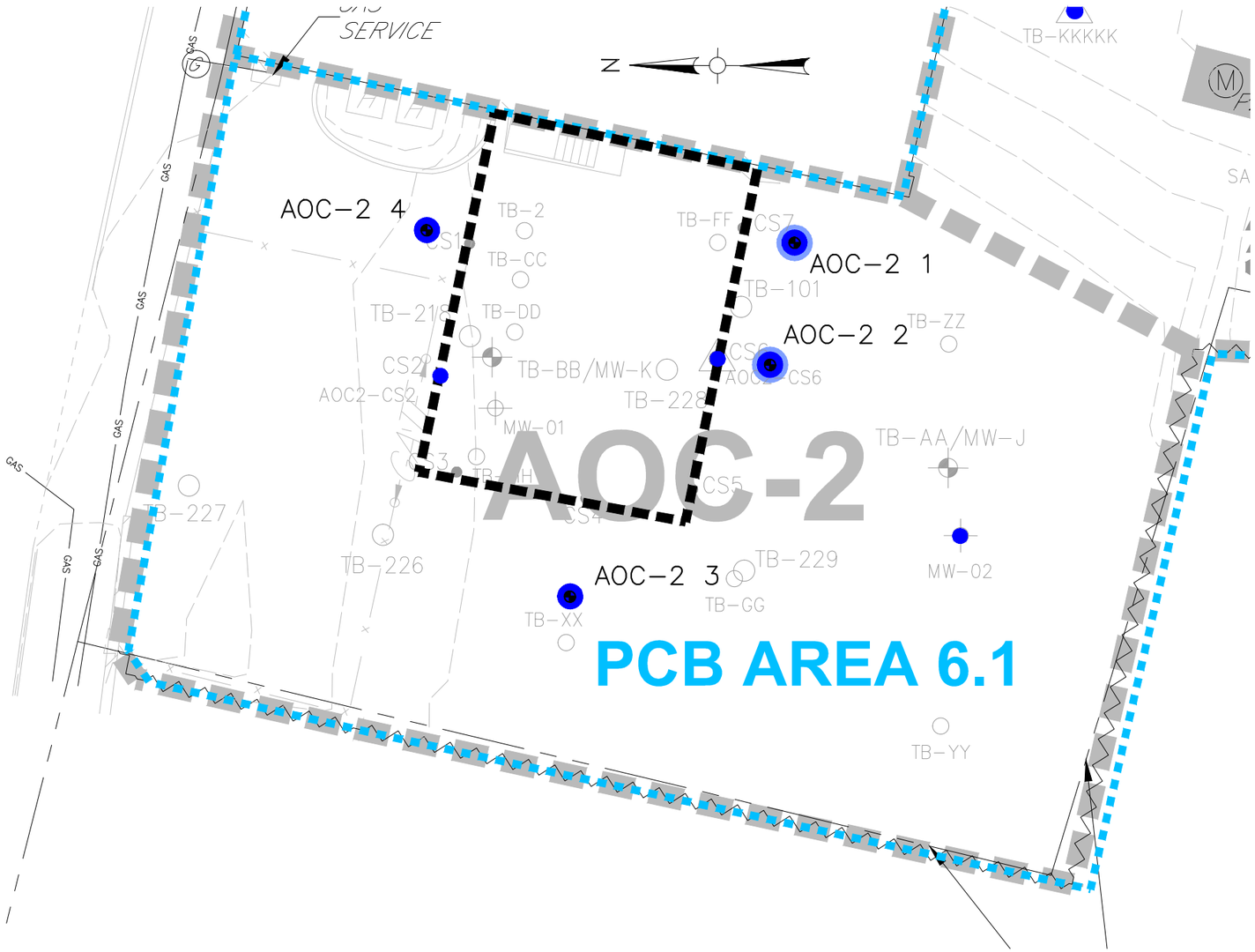


LEGEND:

- SAMPLE LOCATION WITH PAH CONCENTRATIONS ≥ I/C DEC
- SAMPLE LOCATION WITH NON–DETECT PCB CONCENTRATIONS
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.

2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

15 7.5 0 15 30

SCALE: 1"=15'

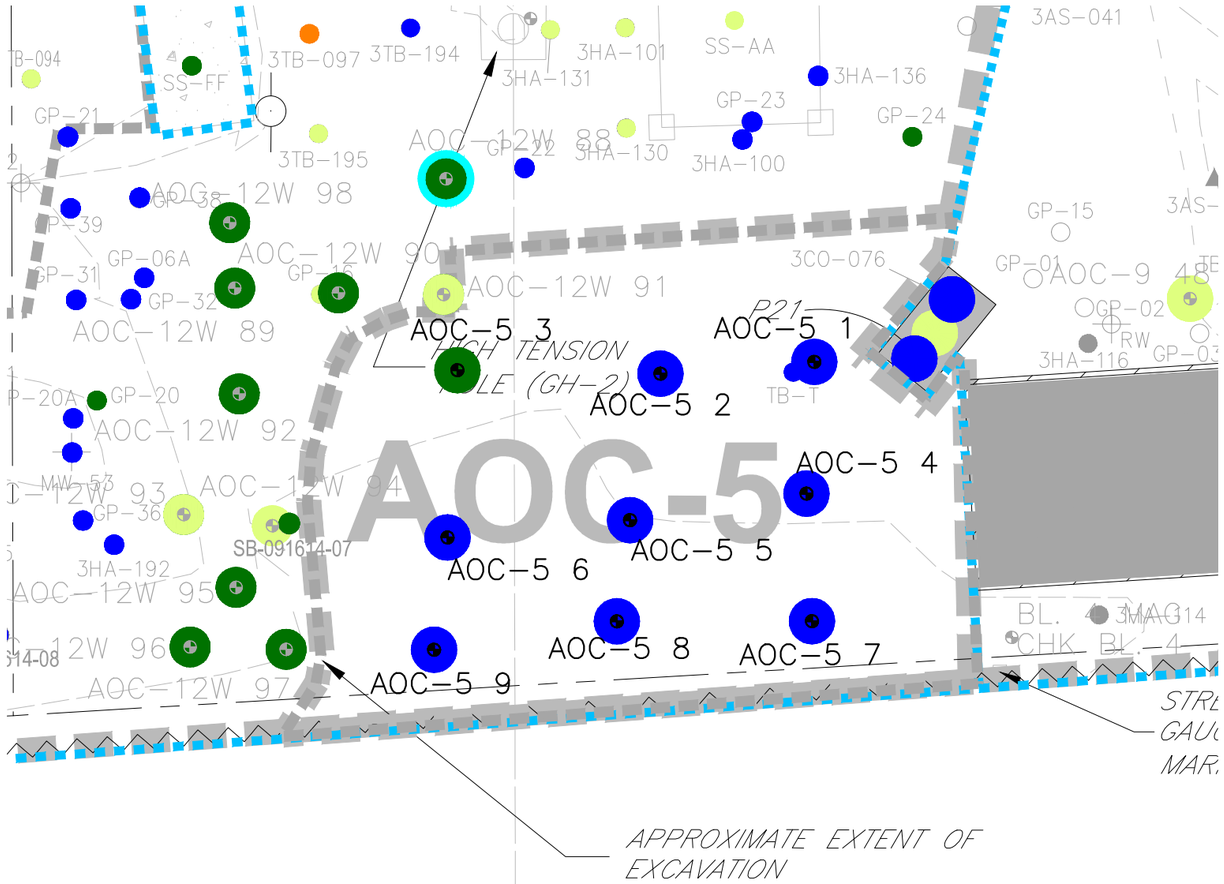
FIGURE 4–3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC–2 (PCB AREA 6.1)
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 5-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-5
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠

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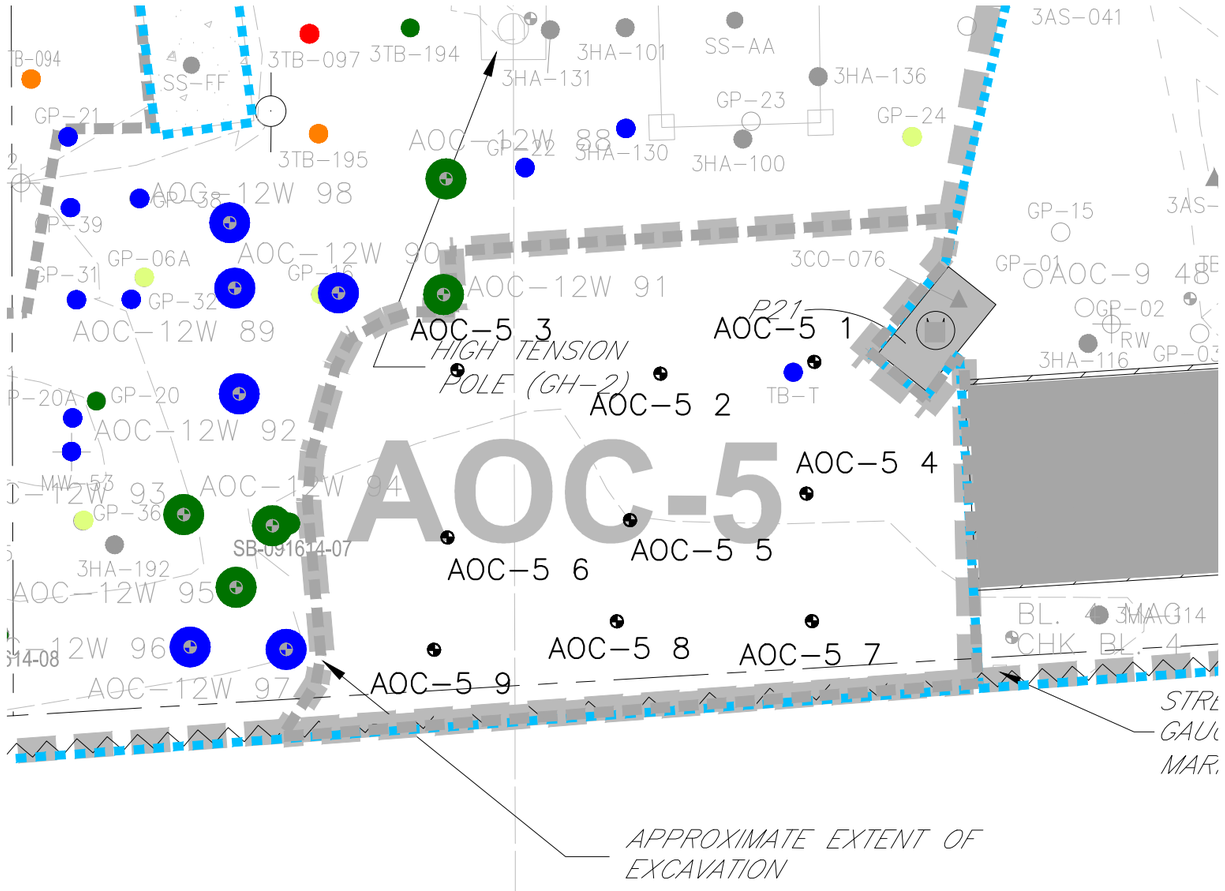

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 5-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-5
2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson

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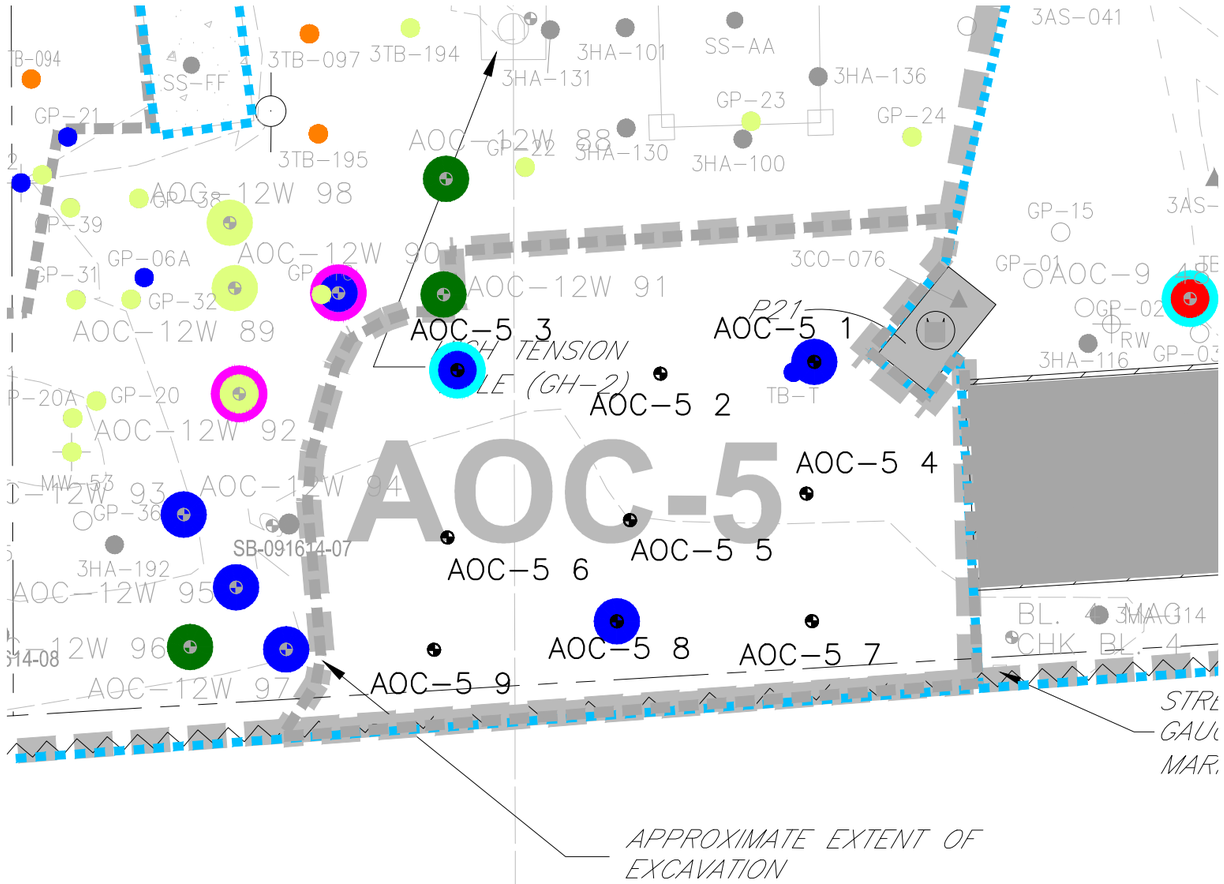

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 5-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-5
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠

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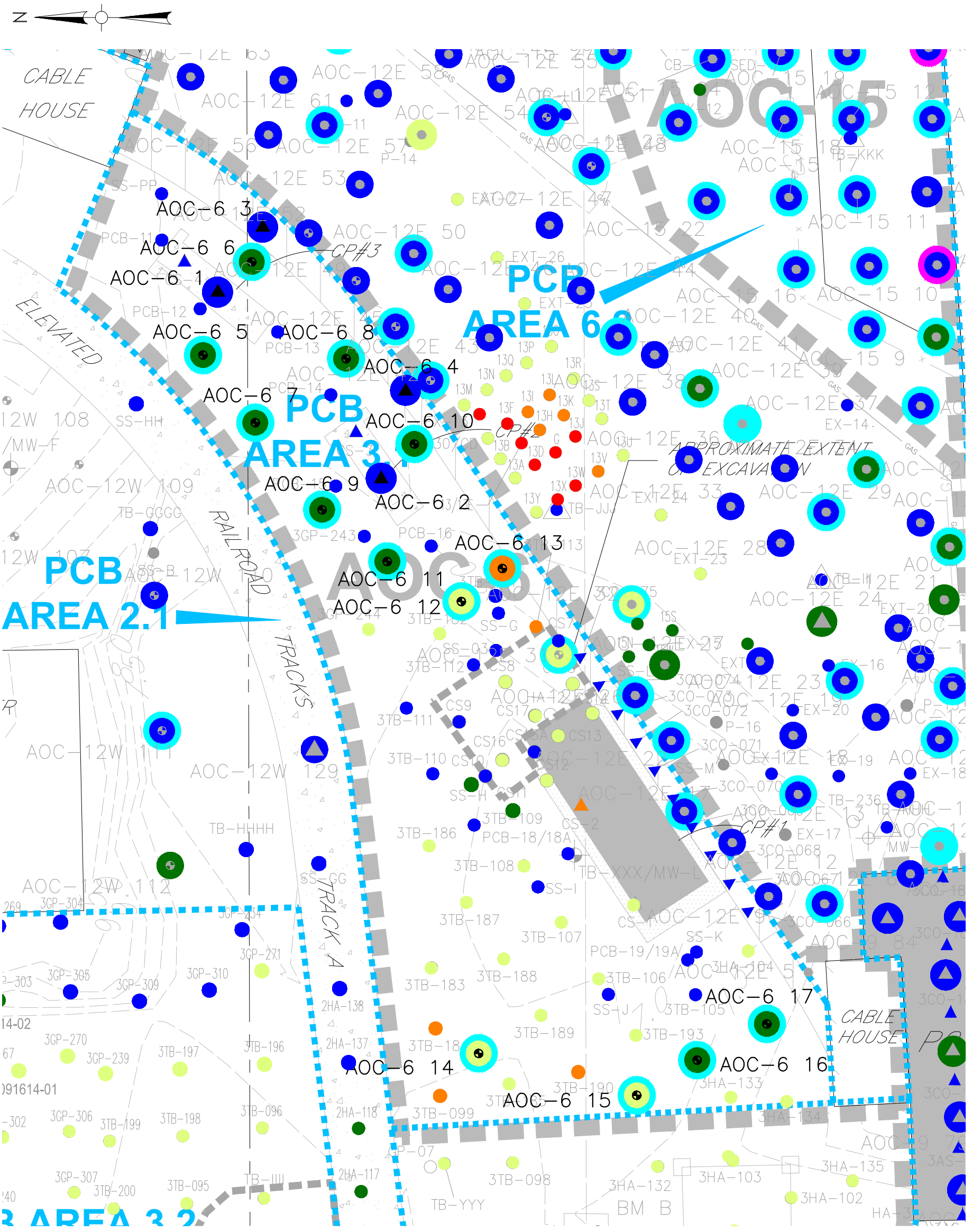


LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:
1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30
SCALE: 1"=15'

FIGURE 6-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-6 (PCB AREA 3.1) 2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠

N

CABLE HOUSE

AOC-15

PCB AREA 6.2

PCB AREA 3.1

PCB AREA 2.1

AOC-6 1
AOC-6 2
AOC-6 3
AOC-6 4
AOC-6 5
AOC-6 6
AOC-6 7
AOC-6 8
AOC-6 9
AOC-6 10
AOC-6 11
AOC-6 12
AOC-6 13
AOC-6 14
AOC-6 15
AOC-6 16
AOC-6 17

CP#1
CP#2
CP#3

ELEVATED RAILROAD TRACKS

TRACK A

APPROXIMATE EXTENT OF EXCAVATION

CABLE HOUSE

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:
1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30
SCALE: 1"=15'

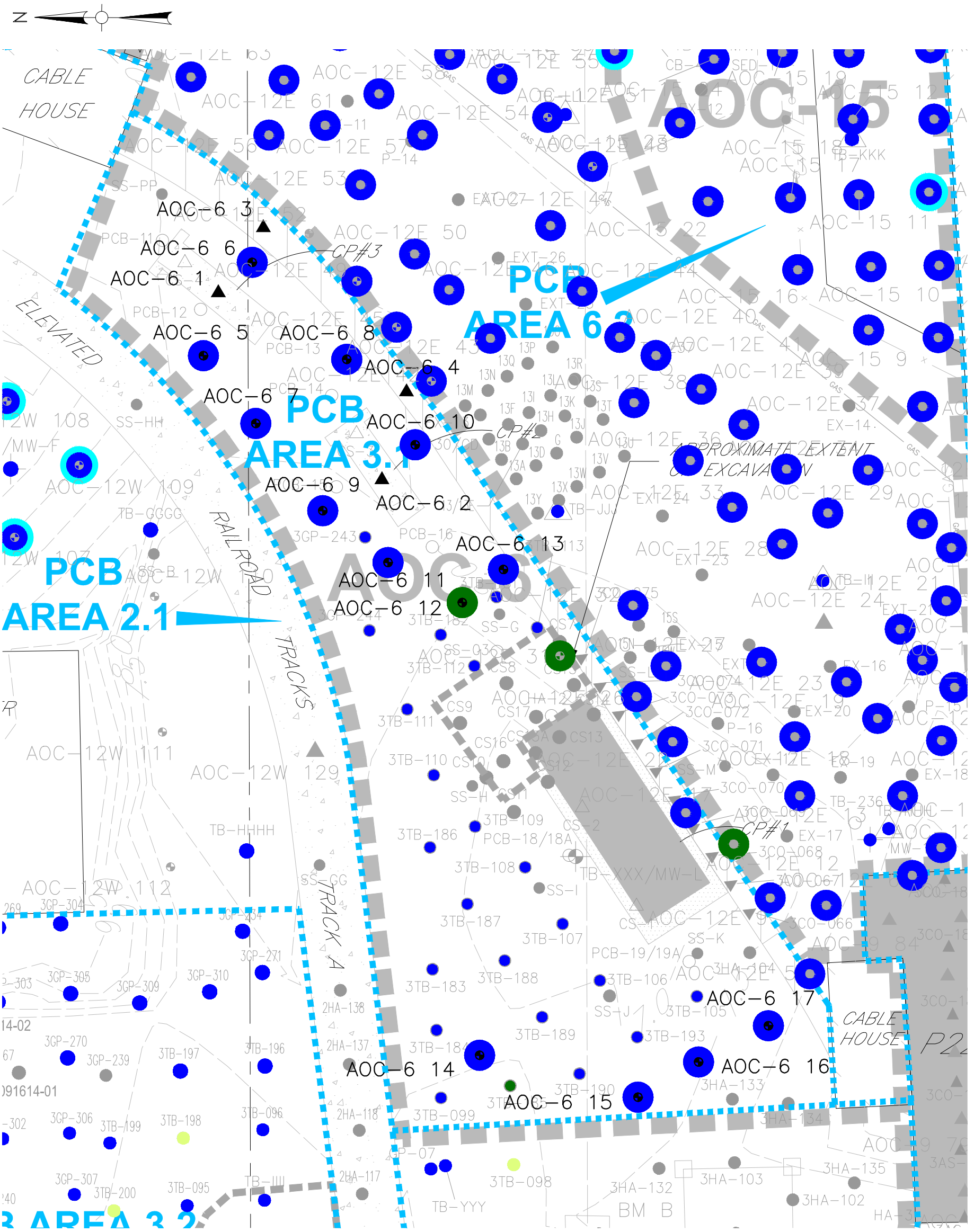
FIGURE 6-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-6 (PCB AREA 3.1) 2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:
1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30
SCALE: 1"=15'

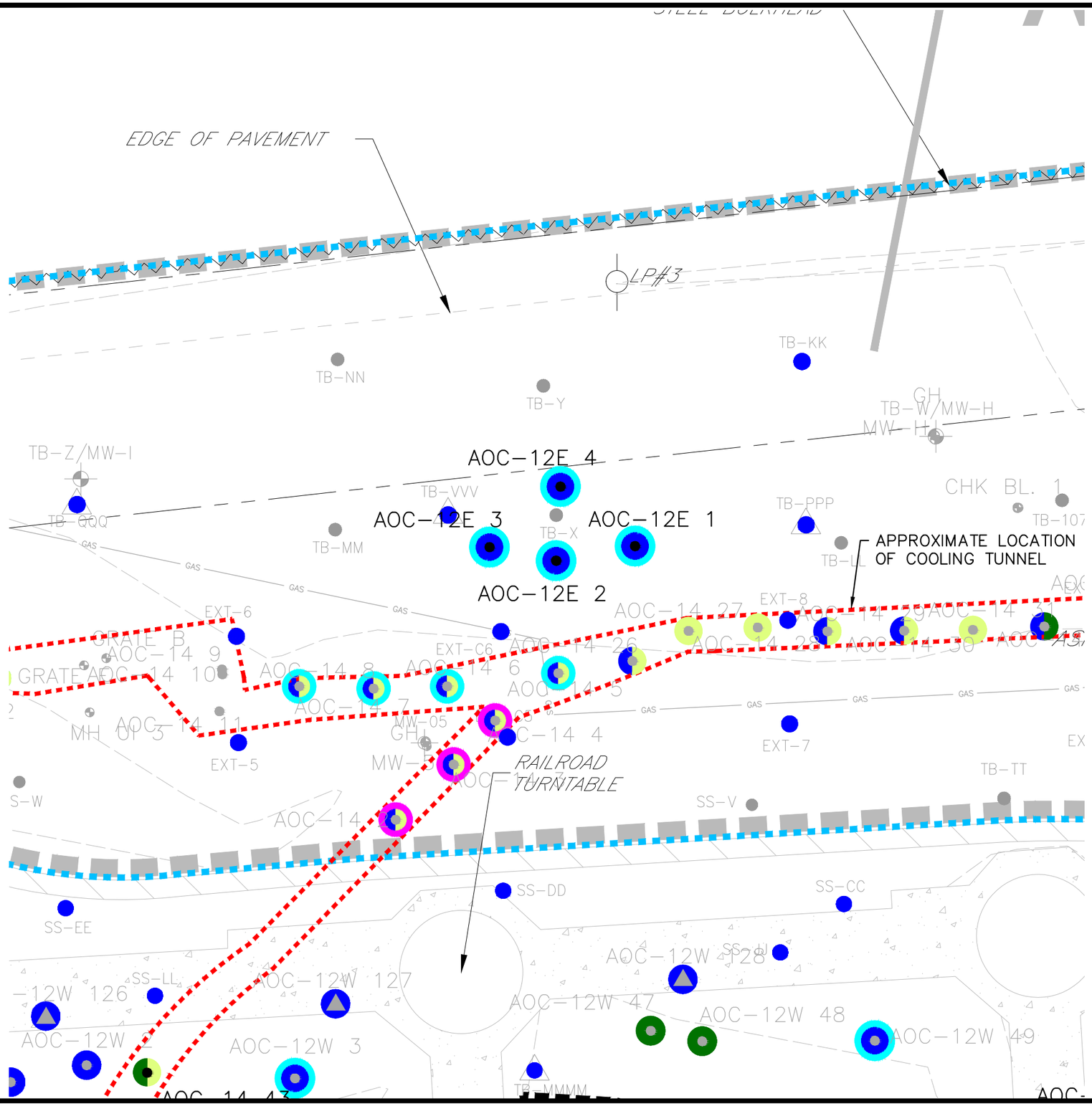
FIGURE 6-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-6 (PCB AREA 3.1)
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 7A-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12E (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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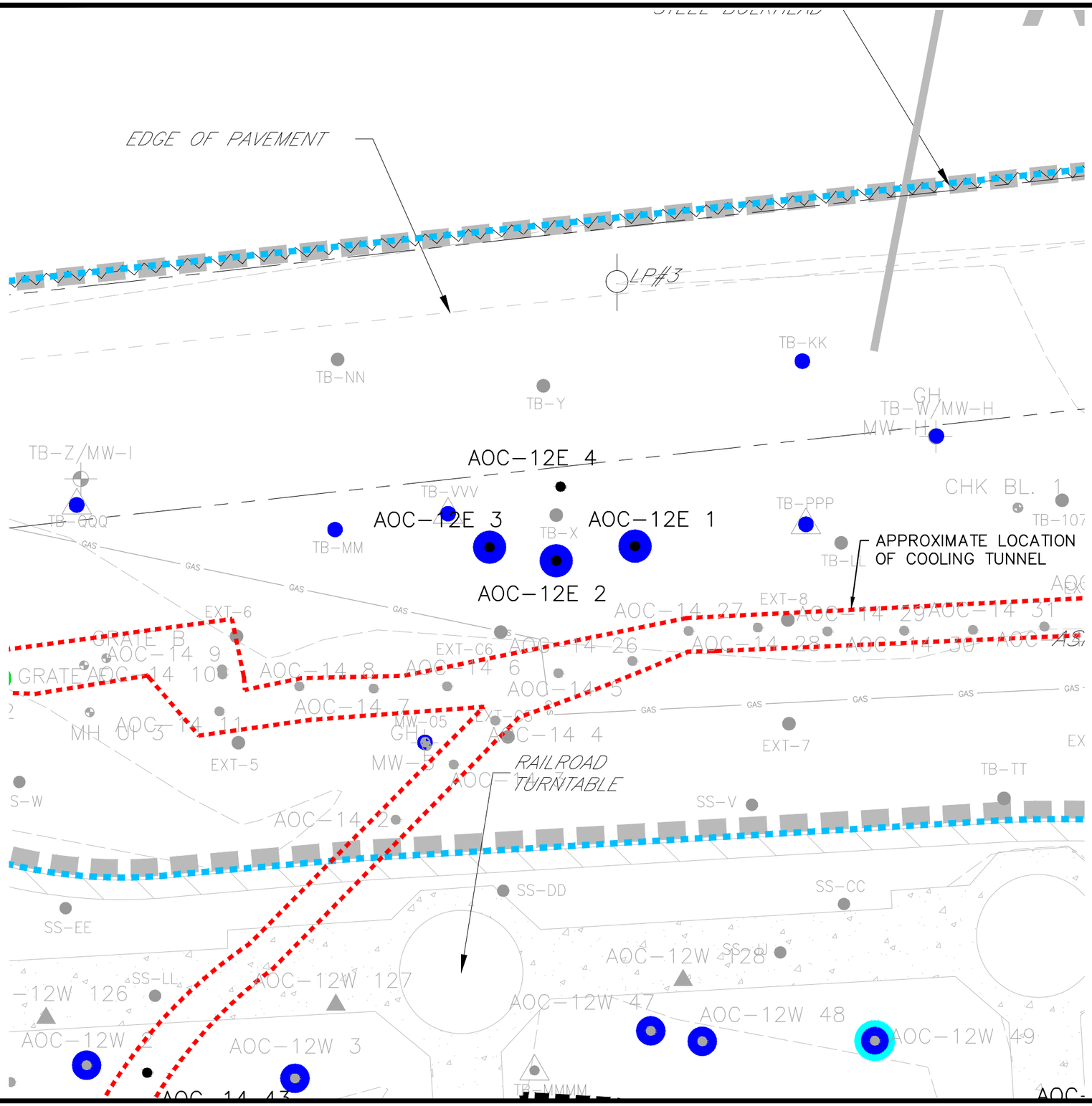

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 7A-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12E (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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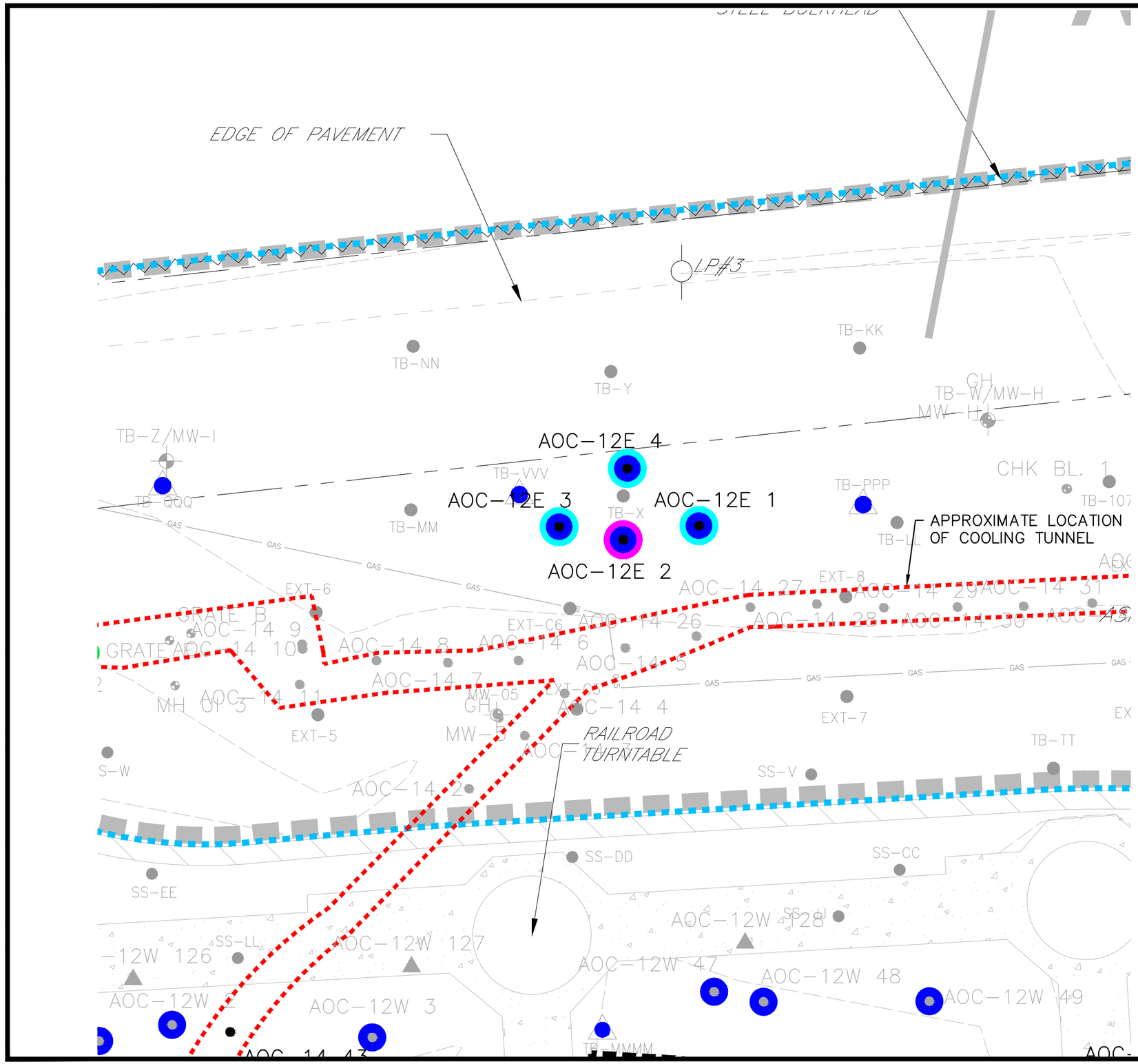

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 7A-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12E (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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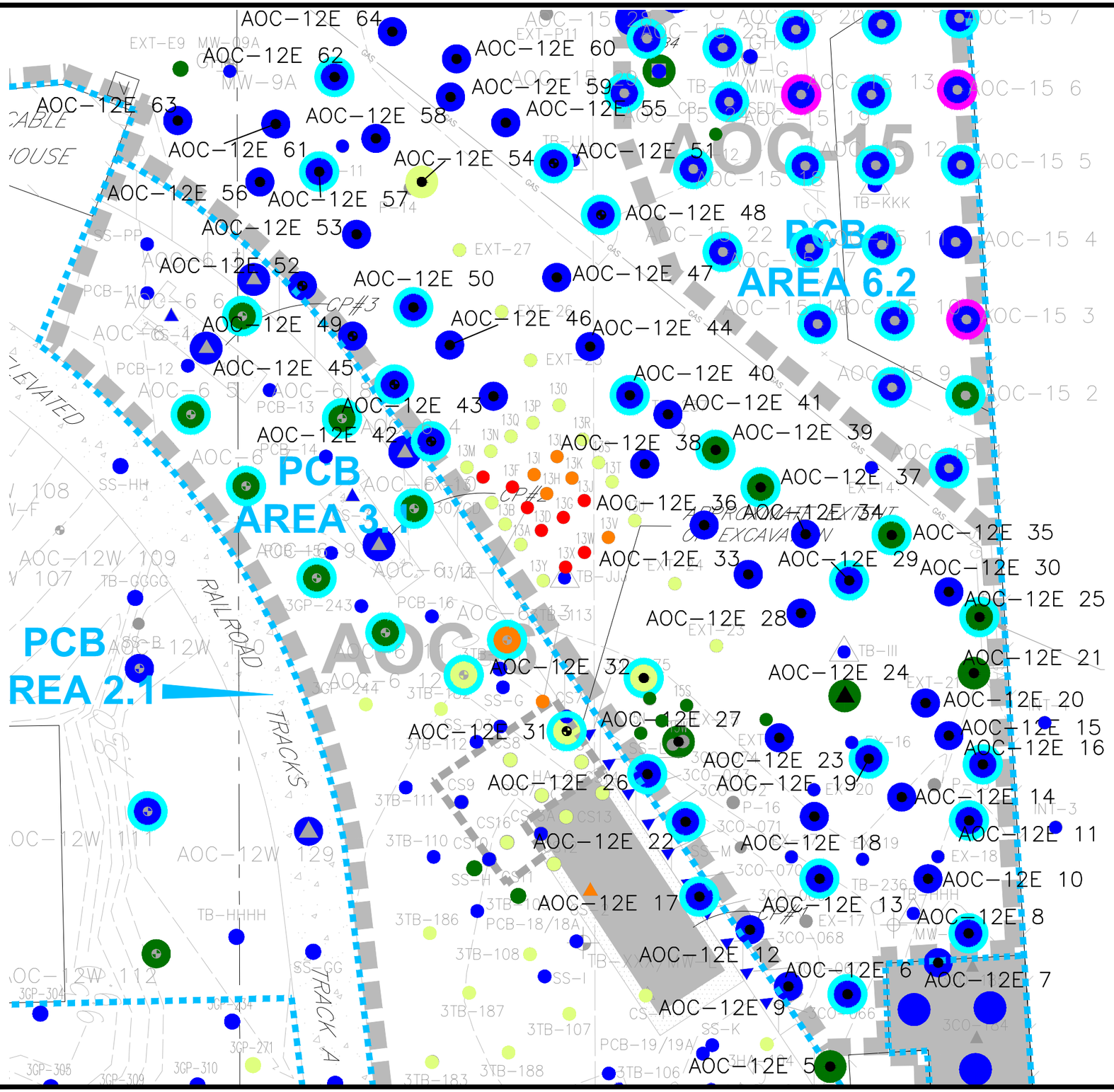

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 7B-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12E (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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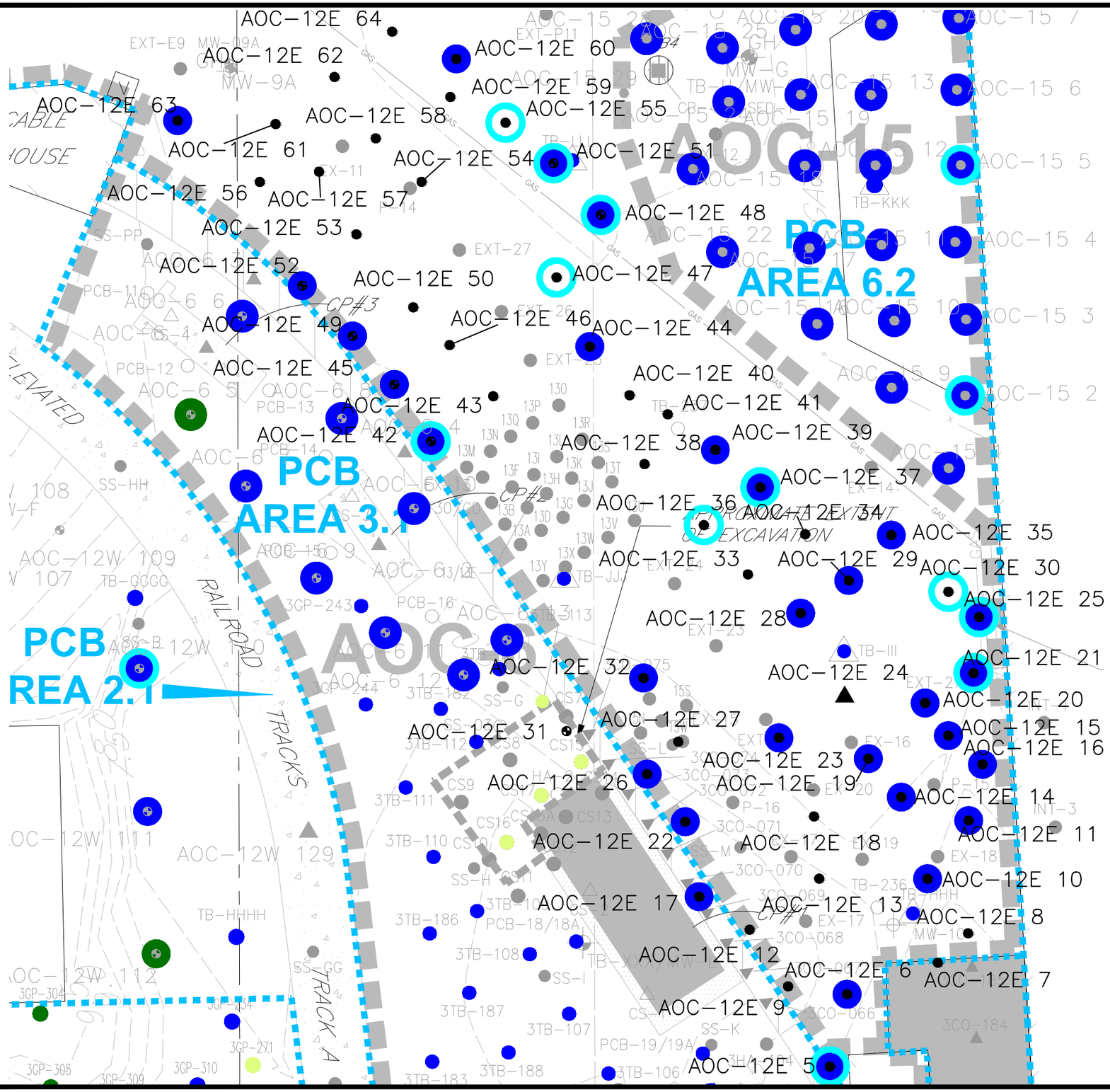

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 7B-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12E (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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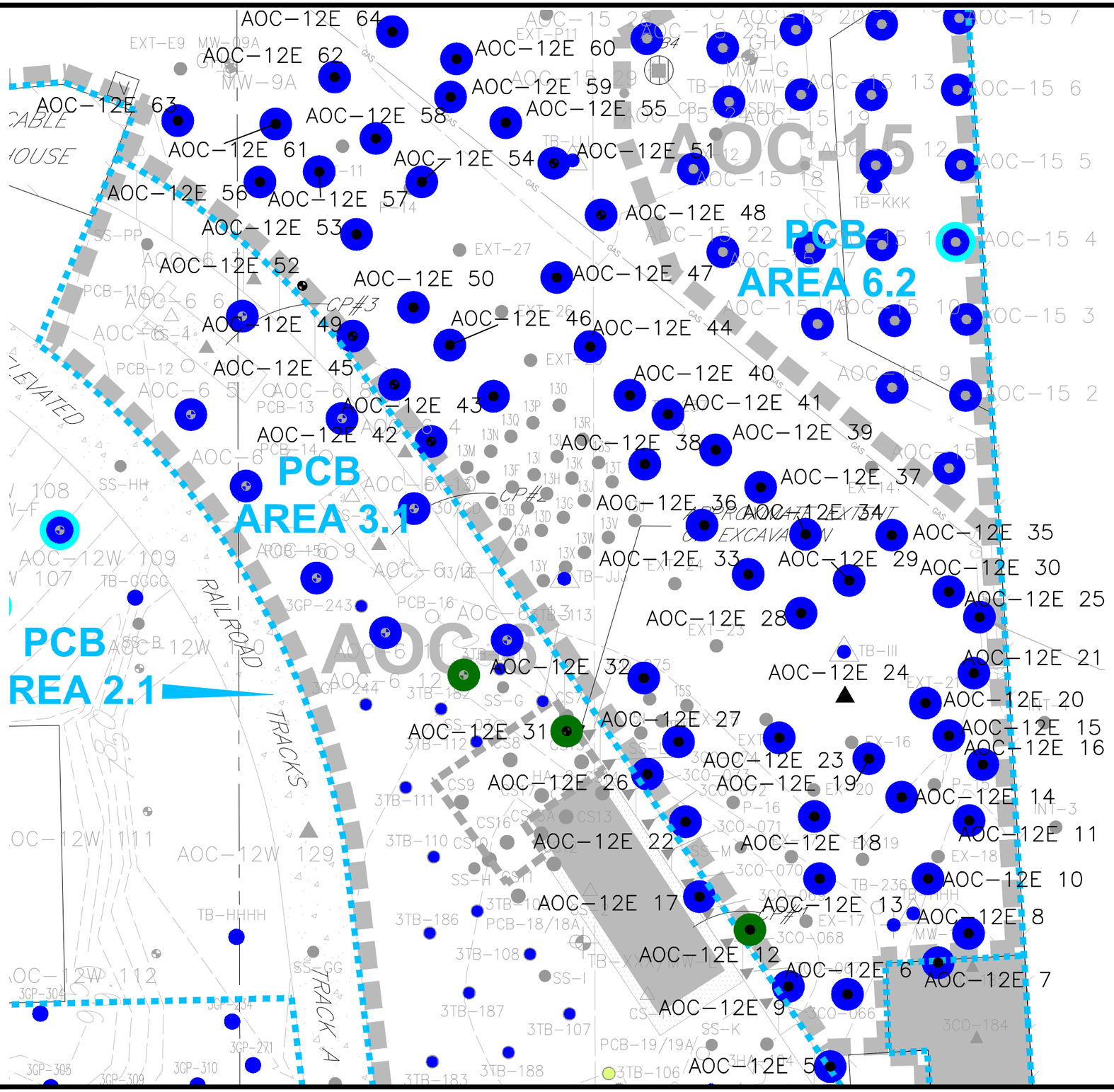

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 7B-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12E (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠

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N

'P ANNEX III PCB STORAGE AREA

AREA 1
g Interior)

-1

AOC-12N

AOC-14

PCB AREA 6.1

AOC-12N 2
AOC-12N 1
AOC-12N 3
AOC-12N 4

SHALLOW CONCRETE REFUSAL AT THIS LOCATION. SOIL BORING NOT ADVANCED.

APPROXIMATE LOCATION OF COOLING TUNNEL

ELEVATED TRACK D

SAMPLE POINTS AT ENO1:
6AS-001
6CO-065
6HX-007
ENO1

SS-N SS-O SS-P SS-Q SS-R SS-S SS-00 SS-Z SS-MM SS-W TB-SS

TB-AAAAA TB-UUUU TB-J TB-7 TB-P/MW-D TB-FFFFF TB-BBBBB TB-230 TB-8B TB-VVVV TB-7A TB-0 TB-8A TB-N TB-GGGGG TB-EFFFF TB-WWWW TB-K TB-M MW-03 TB-231 TB-104 TB-HHHHH TB-CCCCC TB-XXXX TB-L TB-103 TB-5 TB-232 TB-6 TB-Q/MW-E TB-YYYY TB-105 TB-EEEEE TB-I TB-233 TB-JJJJJ TB-KKKKK TB-102 TB-ZZ TB-ZZZZ

CS-5 P26

AOC-14 1 AOC-14 12 AOC-14 16 AOC-14 51 AOC-14 52 AOC-14 53 AOC-14 54 AOC-14 55 AOC-14 56 AOC-14 57 AOC-14 58 AOC-14 59 AOC-14 60 AOC-14 61 AOC-14 62 AOC-14 63 AOC-14 64 AOC-14 65 AOC-14 66 AOC-14 67 AOC-14 68 AOC-14 69 AOC-14 70 AOC-14 71

AOC-12W 1 AOC-12W 2 AOC-12W 3 AOC-12W 4 AOC-12W 8 AOC-12W 113 AOC-12W 114 AOC-12W 115 AOC-12W 117

CB1 CB2

20 10 0 20 40
SCALE: 1"=20'

LEGEND:
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH < I/C DEC
- CONCRETE/ASPHALT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION

NOTES:
1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

FIGURE 8-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12N (PCB AREA 6.1)
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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N

'P ANNEX III PCB STORAGE AREA

AREA 1
g Interior)

AOC-12N

AOC-14

PCB AREA 6.1

AOC-12N 2
AOC-12N 1
AOC-12N 3
AOC-12N 4

APPROXIMATE LOCATION OF COOLING TUNNEL

SHALLOW CONCRETE REFUSAL AT THIS LOCATION. SOIL BORING NOT ADVANCED.

ELEVATED TRACK D

SAMPLE POINTS AT ENO1:
▲ 6AS-001
▲ 6CO-065
⬢ 6HX-007
ENO1

20 10 0 20 40
SCALE: 1"=20'

LEGEND:
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH < I/C DEC
- ▲ CONCRETE/ASPHALT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION

NOTES:
1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

FIGURE 8-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12N (PCB AREA 6.1)
2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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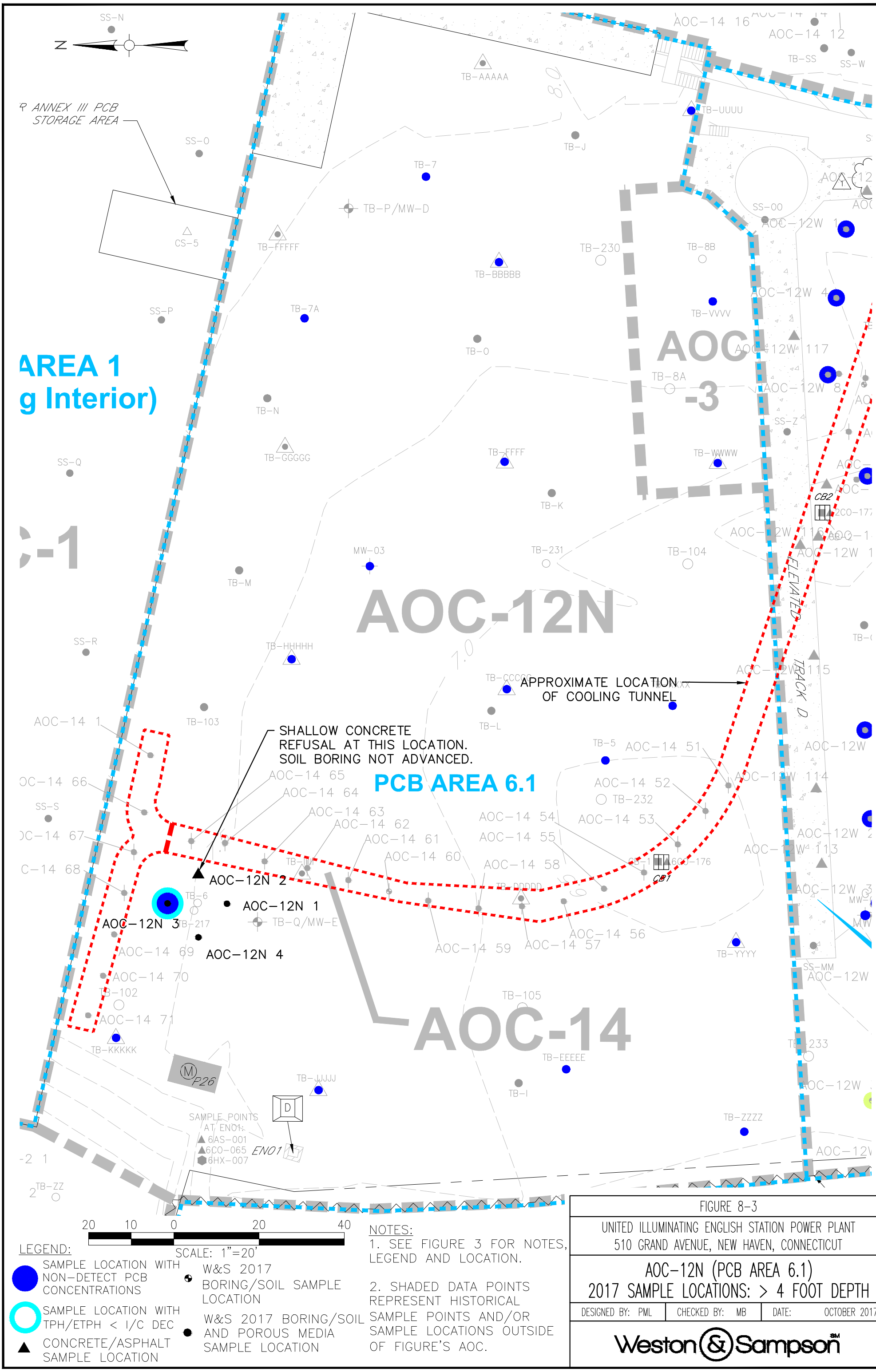

LEGEND:

- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH < I/C DEC
- CONCRETE/ASPHALT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

FIGURE 8-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12N (PCB AREA 6.1) 2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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APPROXIMATE LOCATION OF COOLING TUNNEL

PCB AREA 2.2

PCB AREA 2.1

AOC-12W

ELEVATED RAILROAD TRACKS

LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

N

20 10 0 20 40

SCALE: 1"=20'

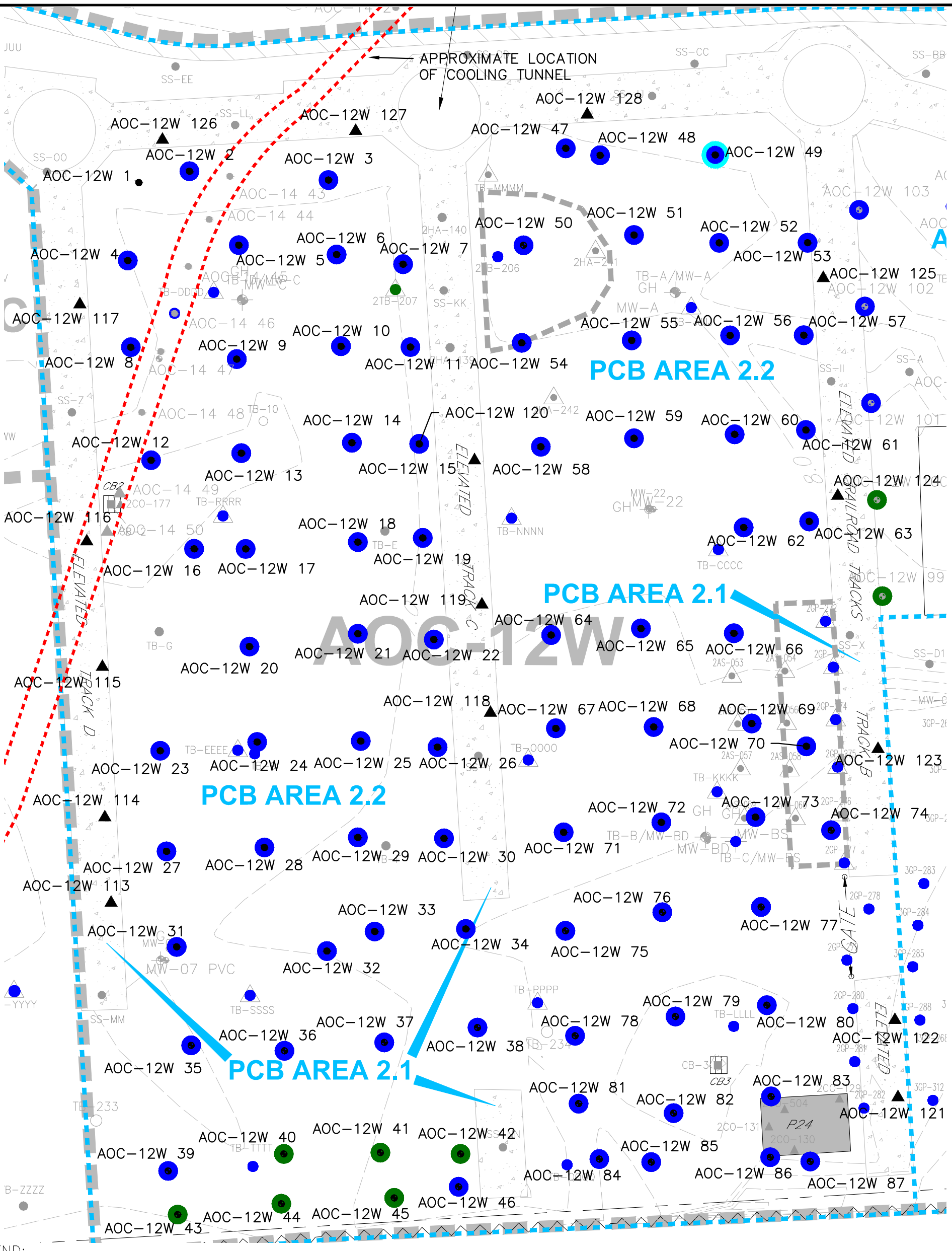
FIGURE 9A-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREAS 2.1 & 2.2)
2017 SAMPLING LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

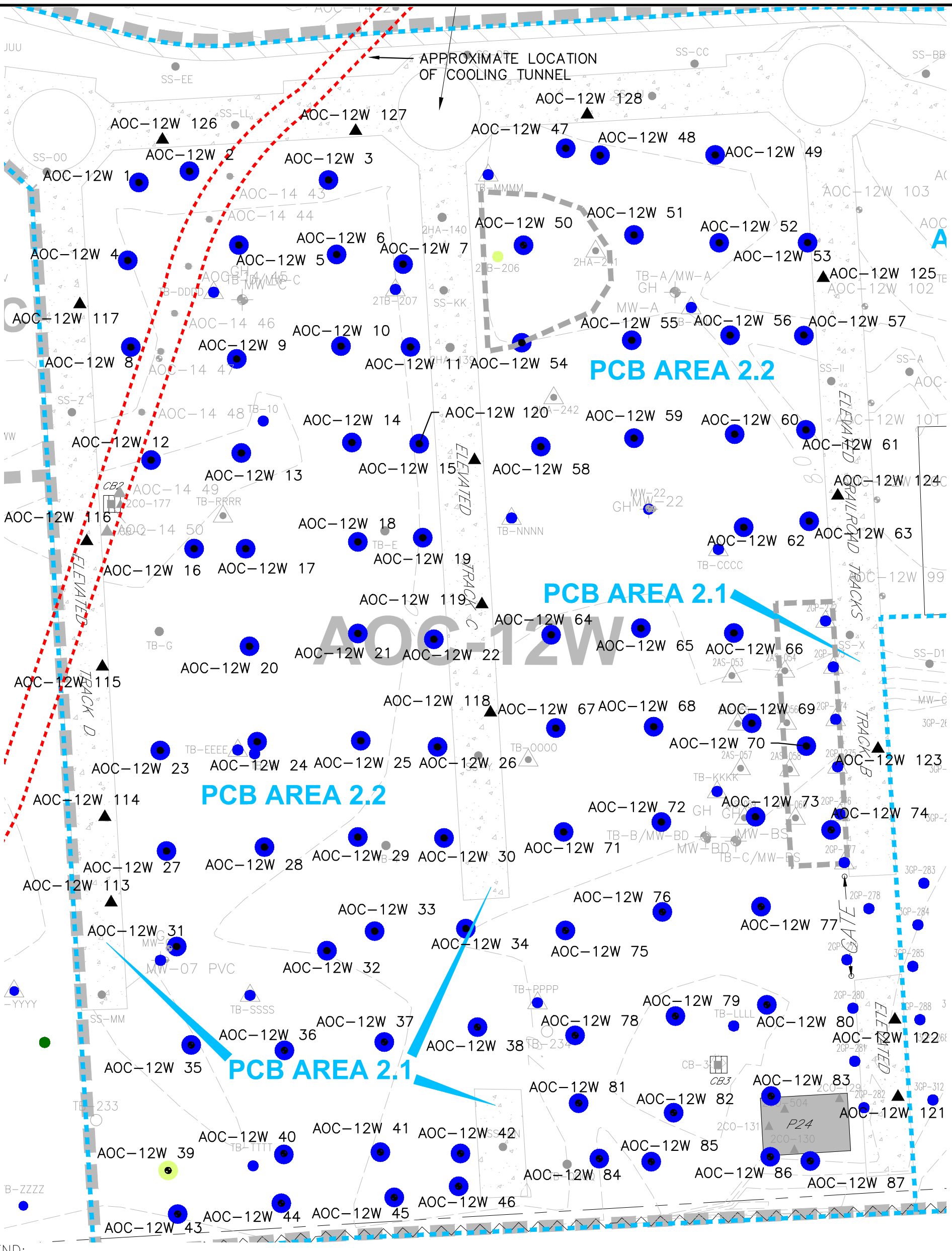
FIGURE 9A-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREAS 2.1 & 2.2) 2017 SAMPLING LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

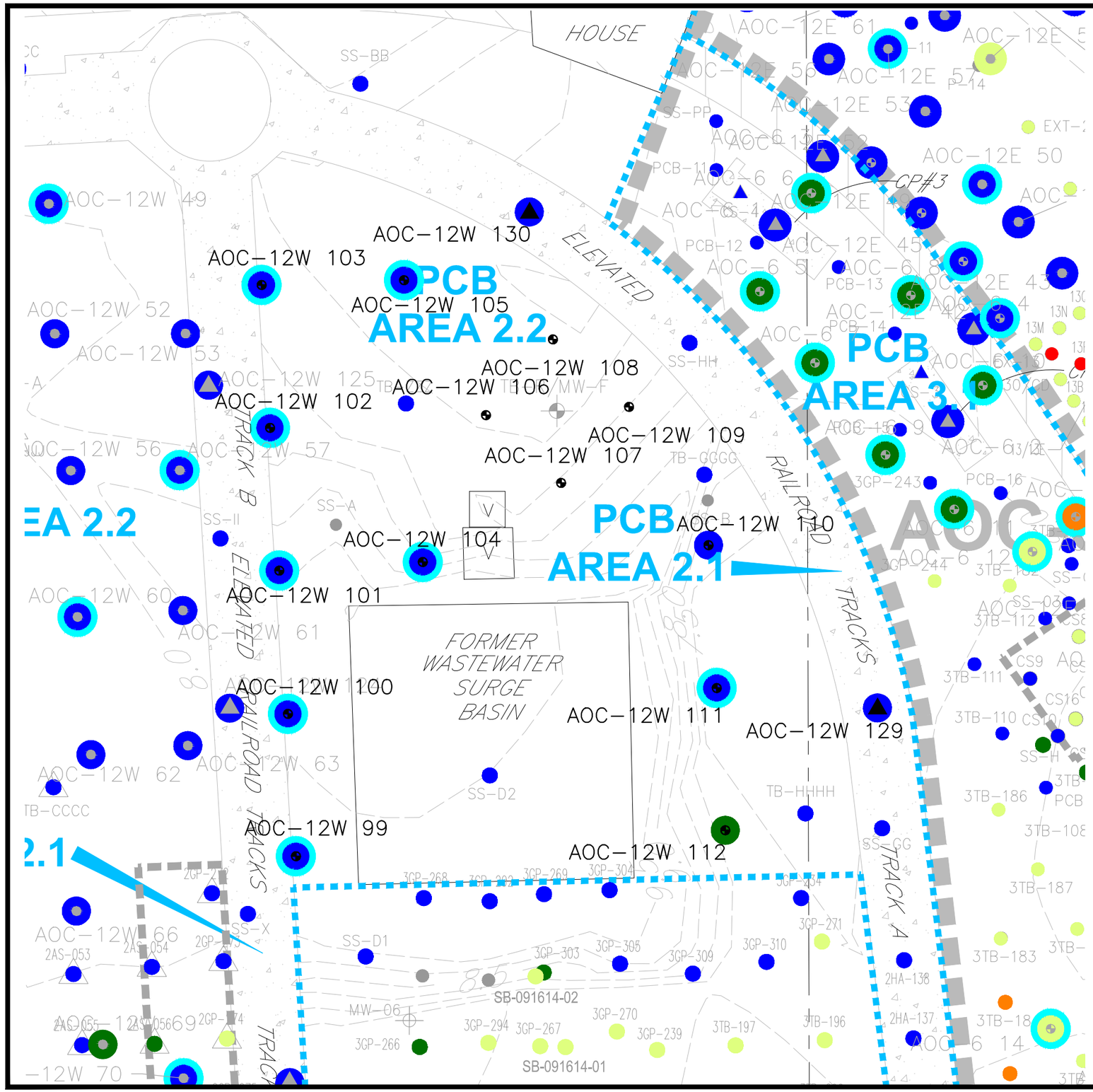
FIGURE 9A-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREAS 2.1 & 2.2)
2017 SAMPLING LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠



N

LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 9B-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREAS 2.1& 2.2)
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson

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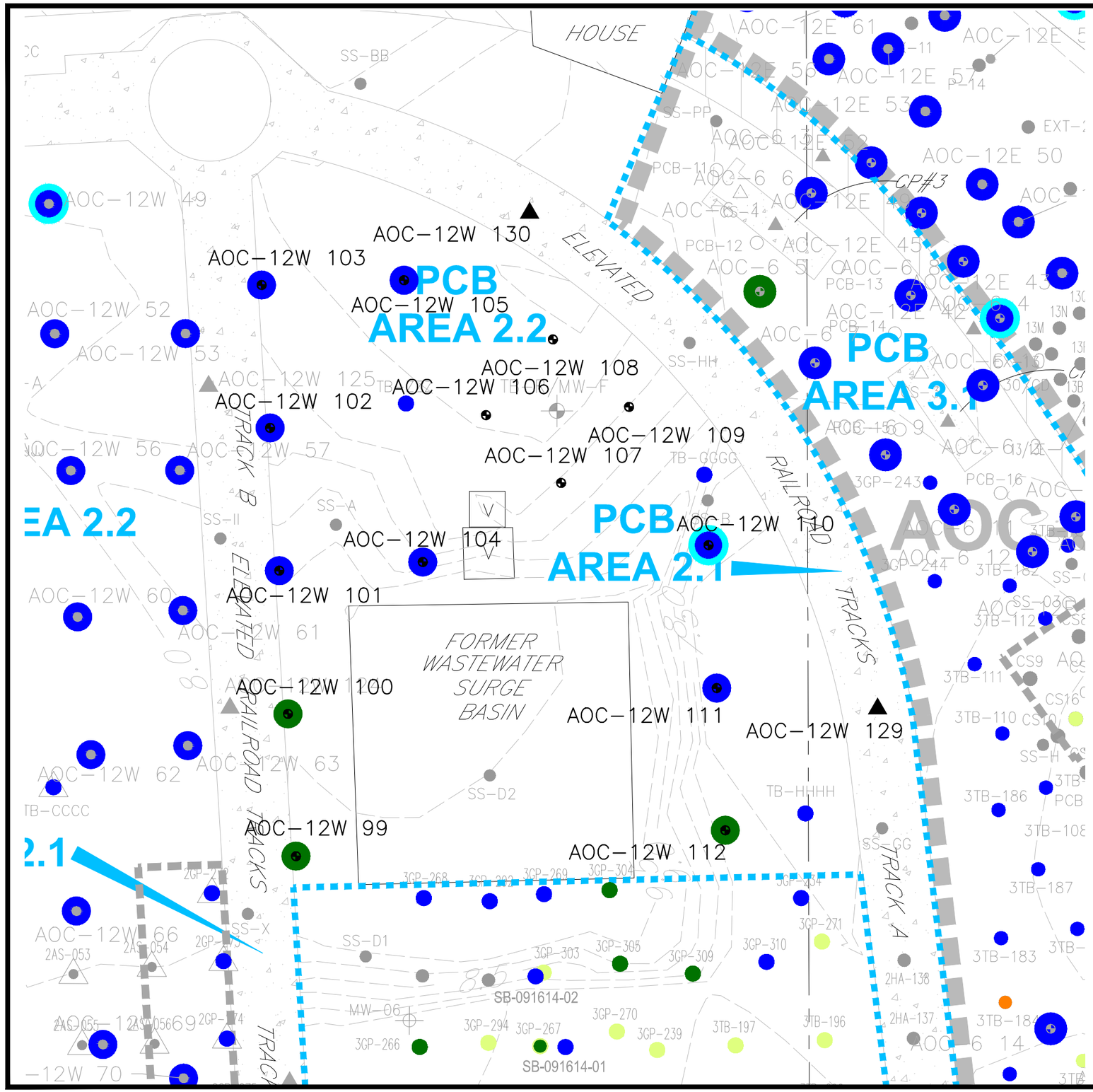

LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 9B-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREAS 2.1& 2.2)
2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠

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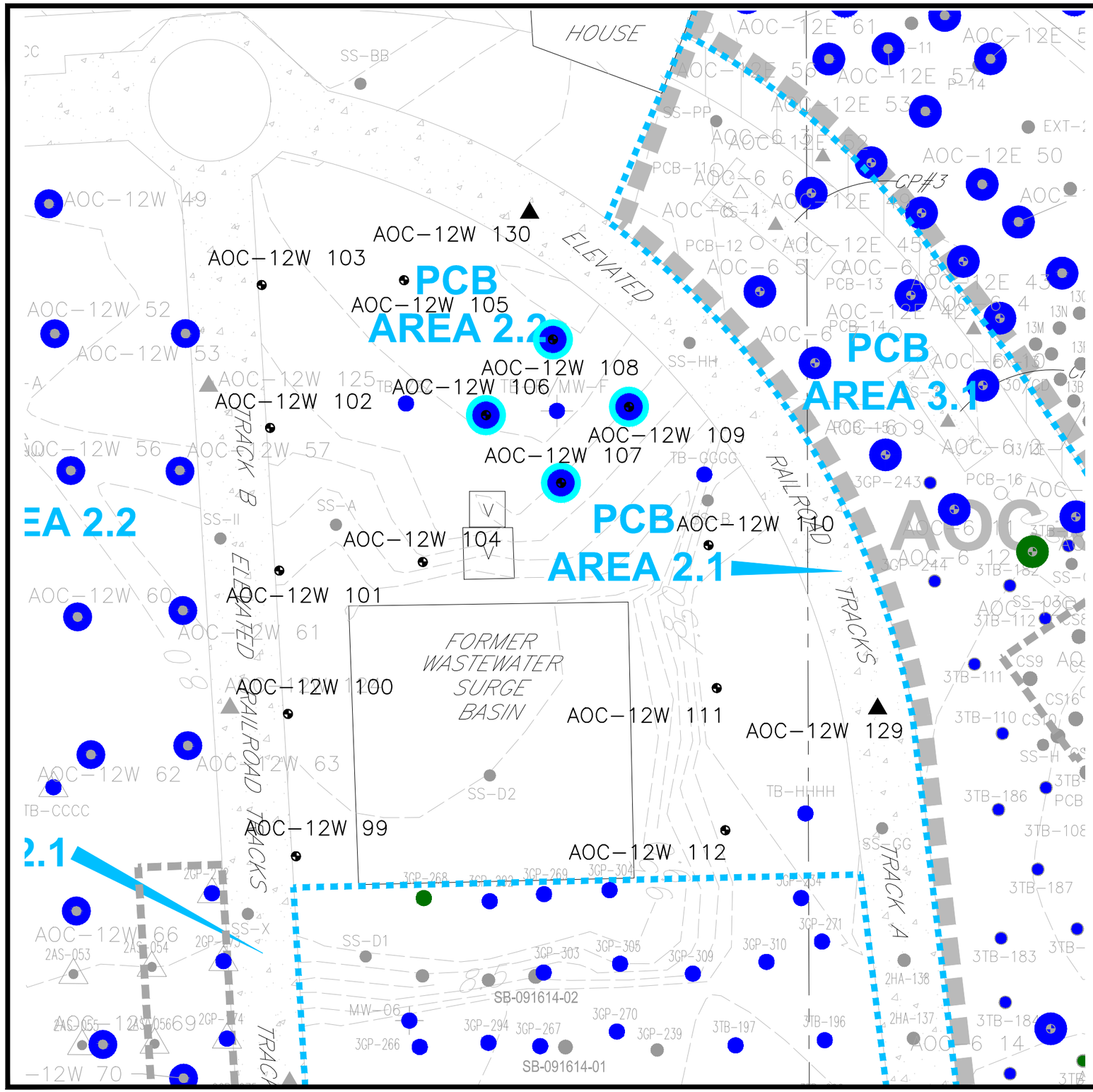

N

LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 9B-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREAS 2.1 & 2.2)
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson

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PCB AREA 3.2

LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:
1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.

2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 9C-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREA 3.2)
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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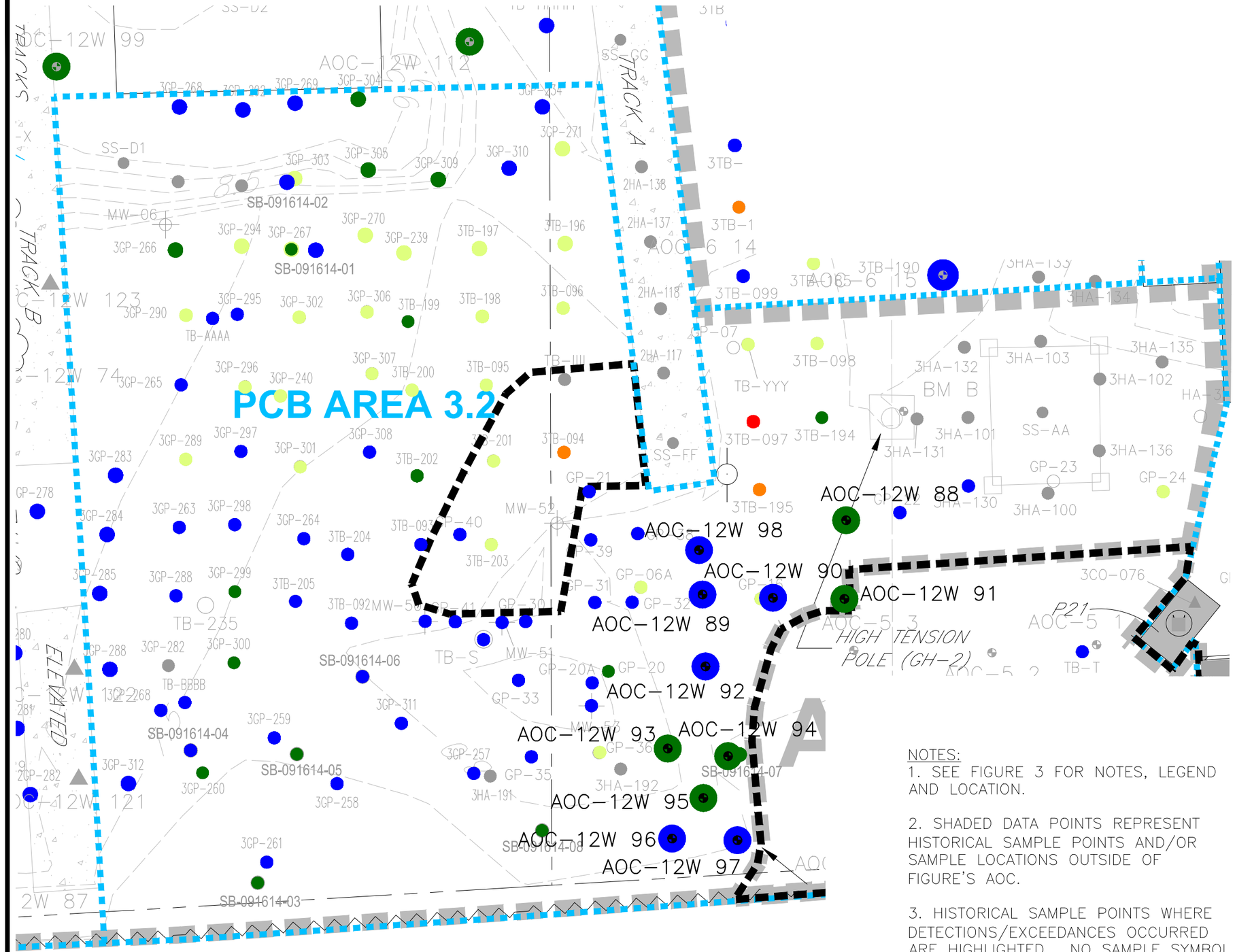

LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 9C-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREA 3.2)
2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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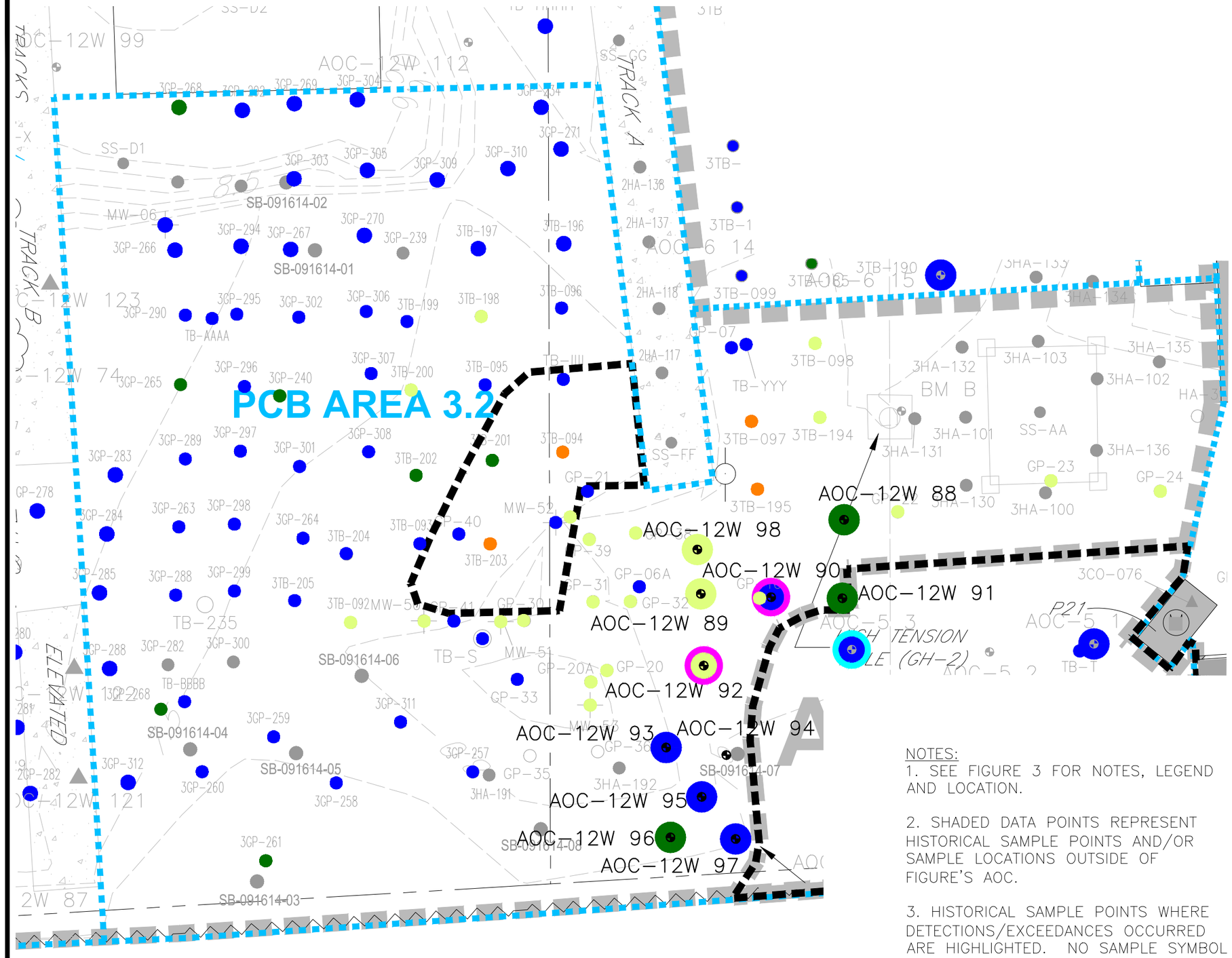

LEGEND:

- SAMPLE LOCATION WITH ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 9C-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-12W (PCB AREA 3.2)
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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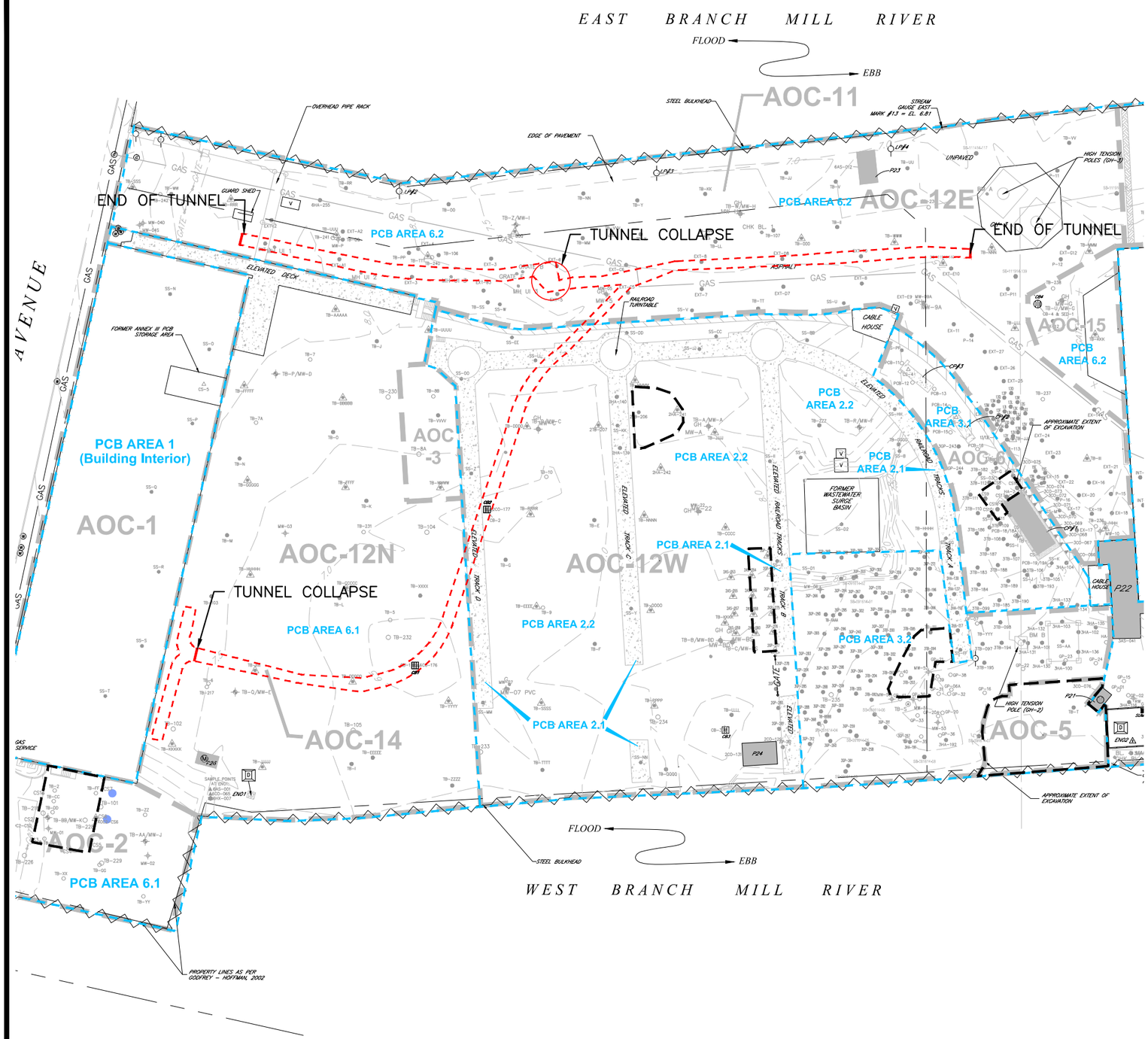

LEGEND:

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF COOLING TUNNEL

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. SEDIMENT AND CONCRETE SAMPLES WERE COLLECTED THROUGHOUT AOC-14 DEPENDING ON ACCESSIBILITY OF THE MEDIA.

N

60 30 0 60 120

SCALE: 1"=60'

FIGURE 10A

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-14 (COOLING TUNNEL) 2017 SAMPLE LOCATIONS

DESIGNED BY: NWA	CHECKED BY: MB	DATE: OCTOBER 2017

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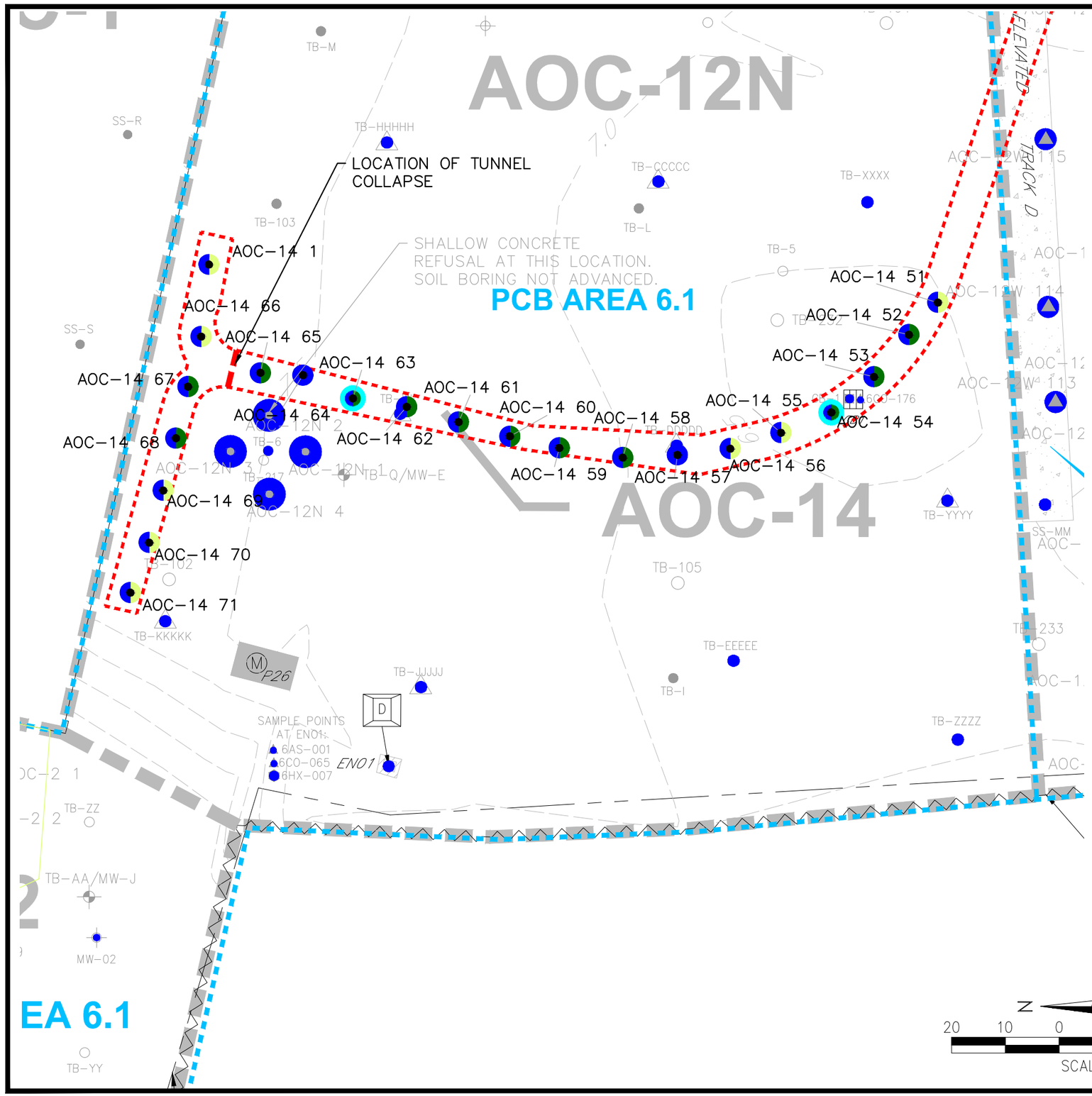

LEGEND:

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- HISTORICAL SAMPLE LOCATION WITH TPH/ETPH > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF COOLING TUNNEL

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. SEDIMENT AND CONCRETE SAMPLES WERE COLLECTED THROUGHOUT AOC-14 DEPENDING ON ACCESSIBILITY OF THE MEDIA.
4. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

FIGURE 10B

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-14 (COOLING TUNNEL) 2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: NWA	CHECKED BY: MB	DATE: OCTOBER 2017

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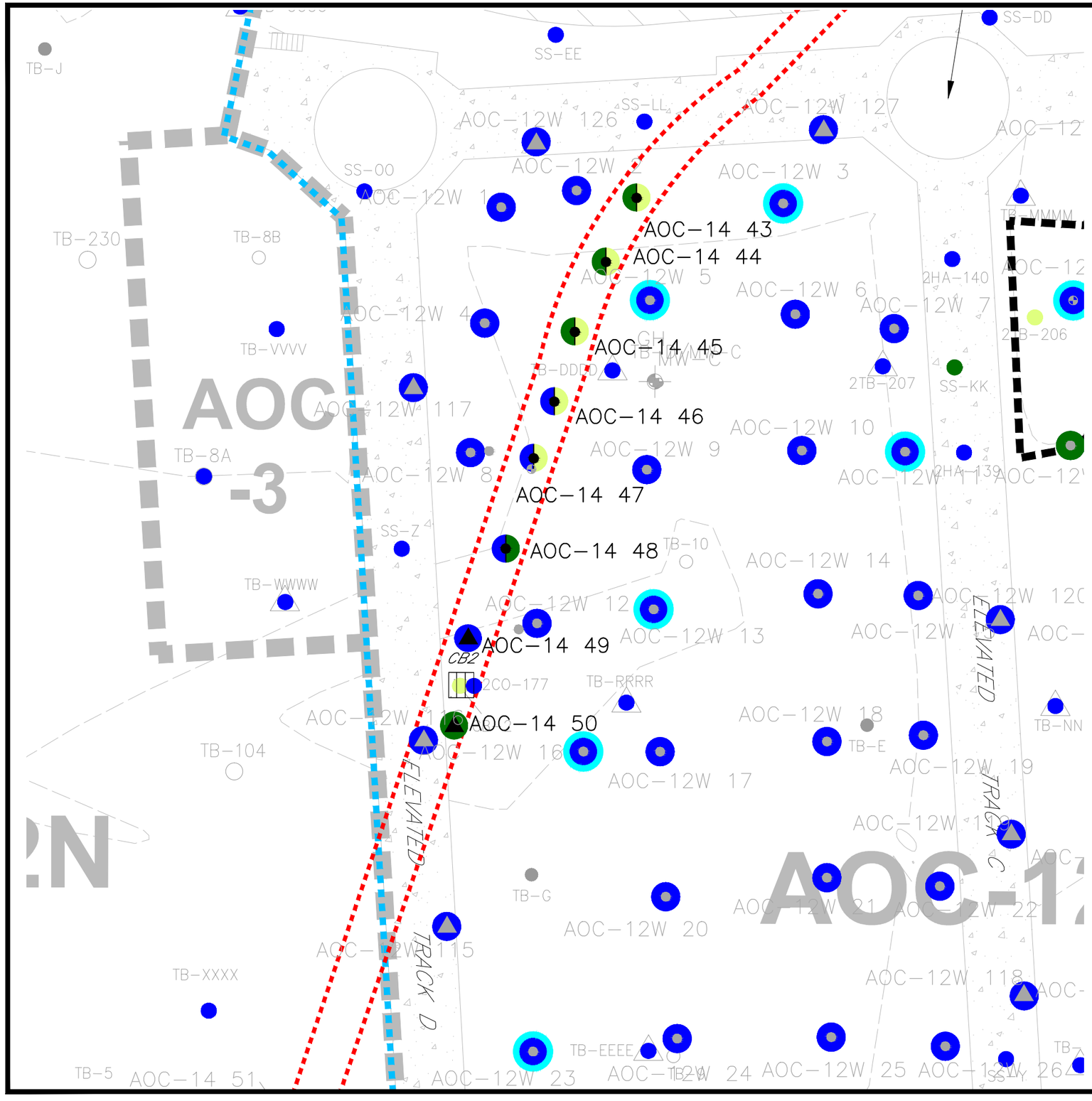

LEGEND:

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF COOLING TUNNEL

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. SEDIMENT AND CONCRETE SAMPLES WERE COLLECTED THROUGHOUT AOC-14 DEPENDING ON ACCESSIBILITY OF THE MEDIA.
4. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 10C

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-14 (COOLING TUNNEL) 2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: NWA	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson℠

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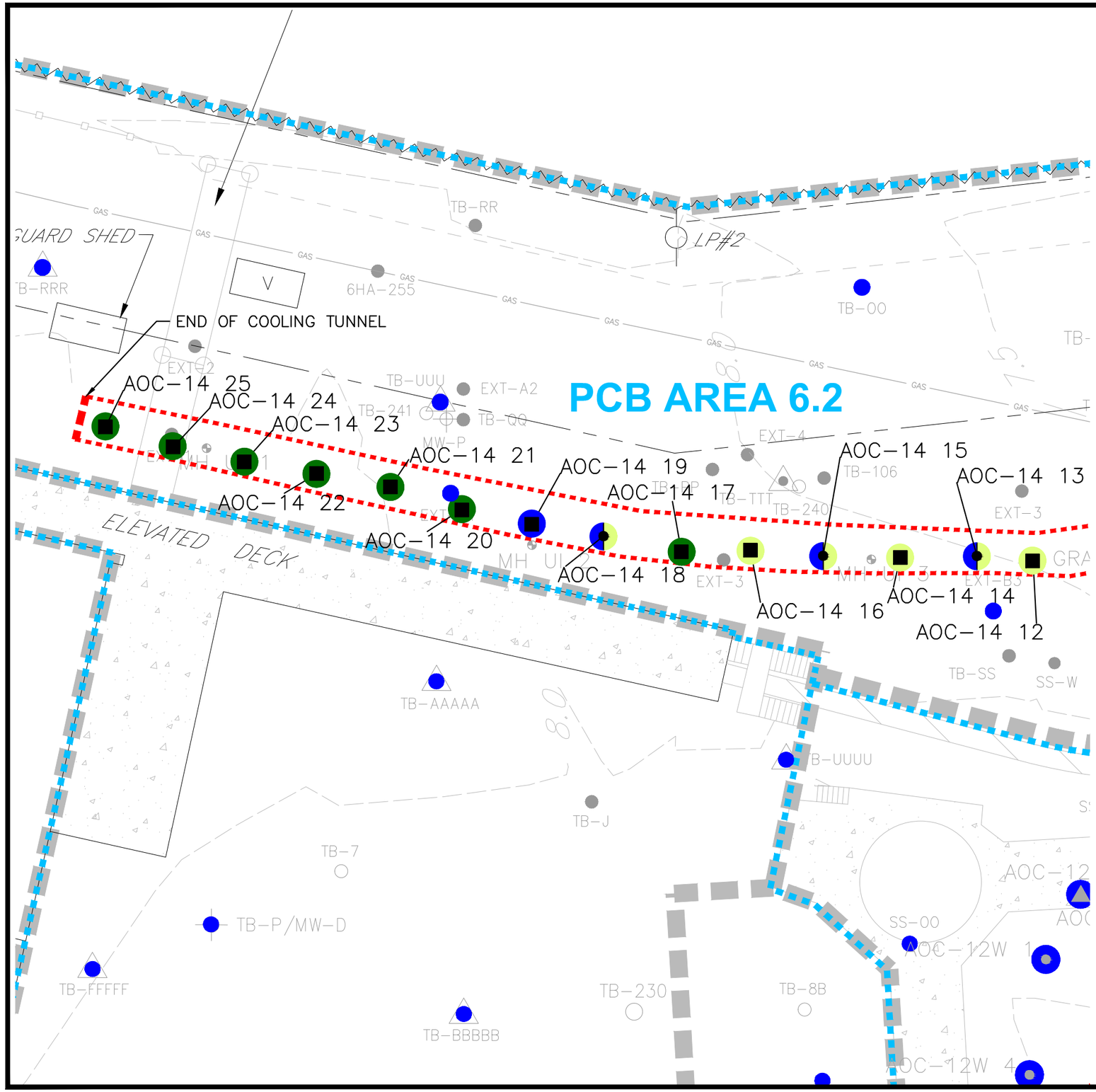

LEGEND:

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF COOLING TUNNEL

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. SEDIMENT AND CONCRETE SAMPLES WERE COLLECTED THROUGHOUT AOC-14 DEPENDING ON ACCESSIBILITY OF THE MEDIA.
4. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 10D

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-14 (COOLING TUNNEL)
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: NWA	CHECKED BY: MB	DATE: OCTOBER 2017

Weston & Sampson

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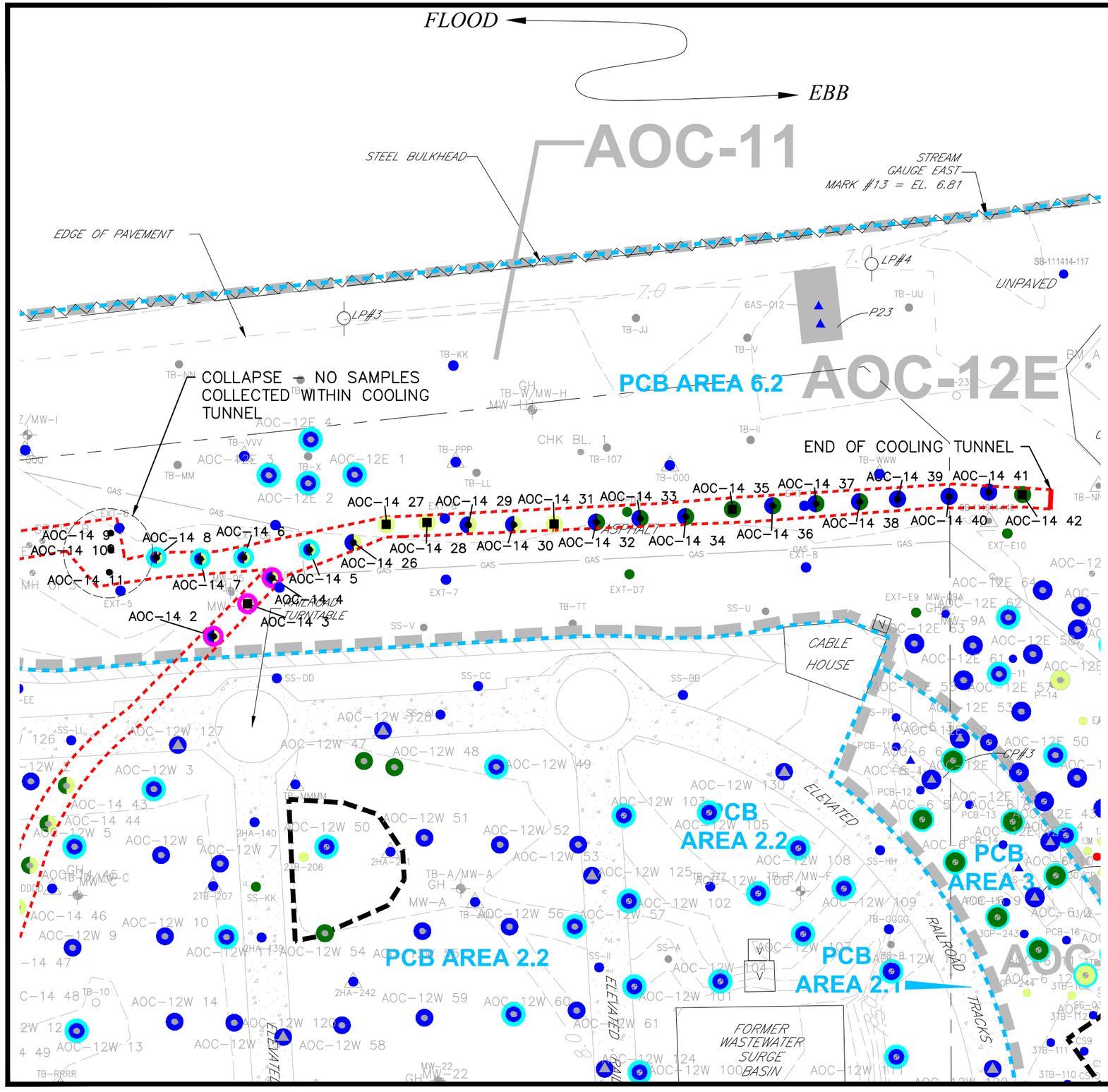

LEGEND:

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- SAMPLE LOCATION WITH NON–DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH TPH/ETPH > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH < I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- CONCRETE/ASPHALT SAMPLE LOCATION
- SEDIMENT SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- APPROXIMATE LIMIT OF COOLING TUNNEL

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.
2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.
3. SEDIMENT AND CONCRETE SAMPLES WERE COLLECTED THROUGHOUT AOC–14 DEPENDING ON ACCESSIBILITY OF THE MEDIA.
4. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

N

25 12.5 0 25 50

SCALE: 1"=25'

FIGURE 10E

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC–14 (COOLING TUNNEL)
2017 SAMPLE LOCATIONS: 0–2 FOOT DEPTH

DESIGNED BY: NWA	CHECKED BY: MB	DATE: OCTOBER 2017

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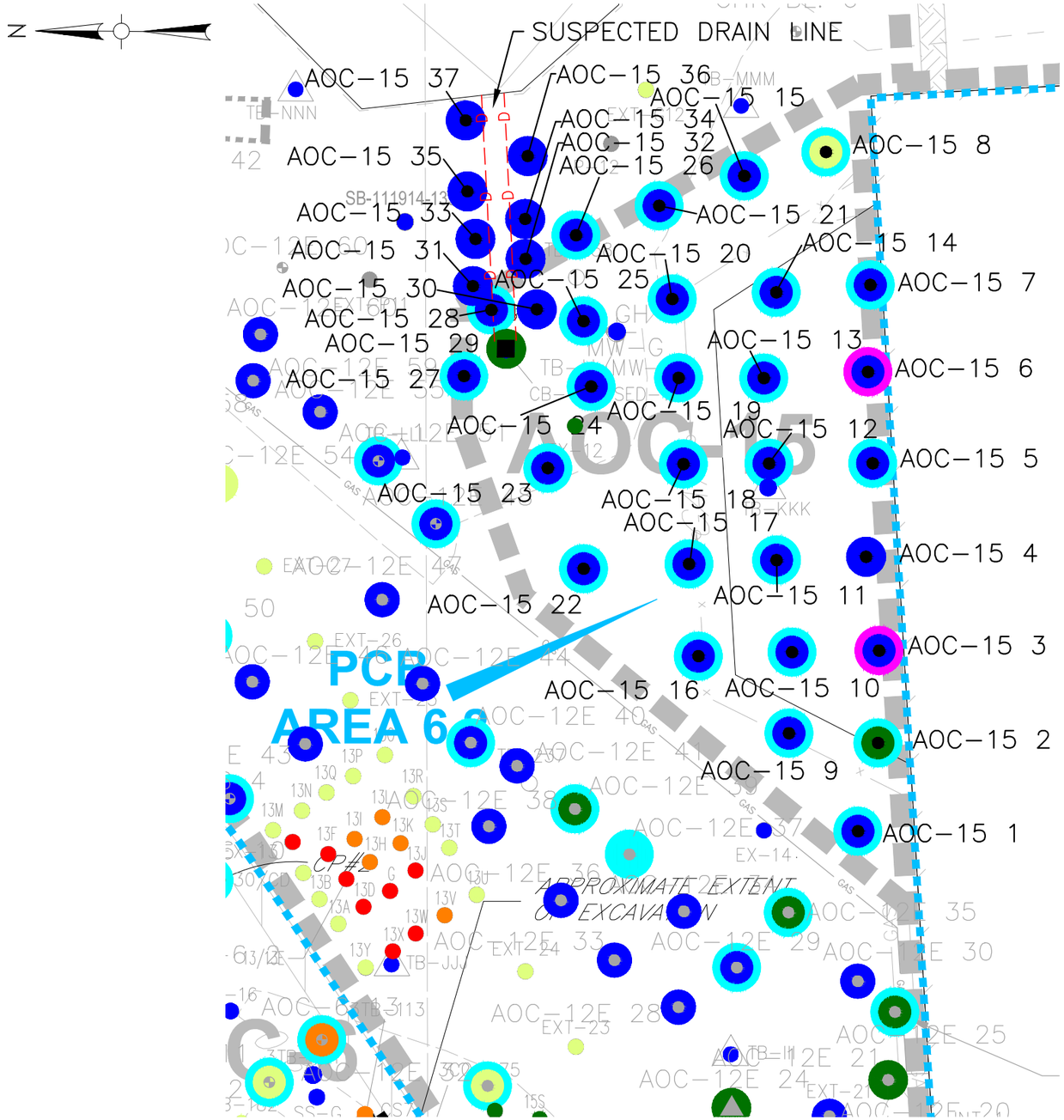

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.

2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 11-1

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-15 (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: 0-2 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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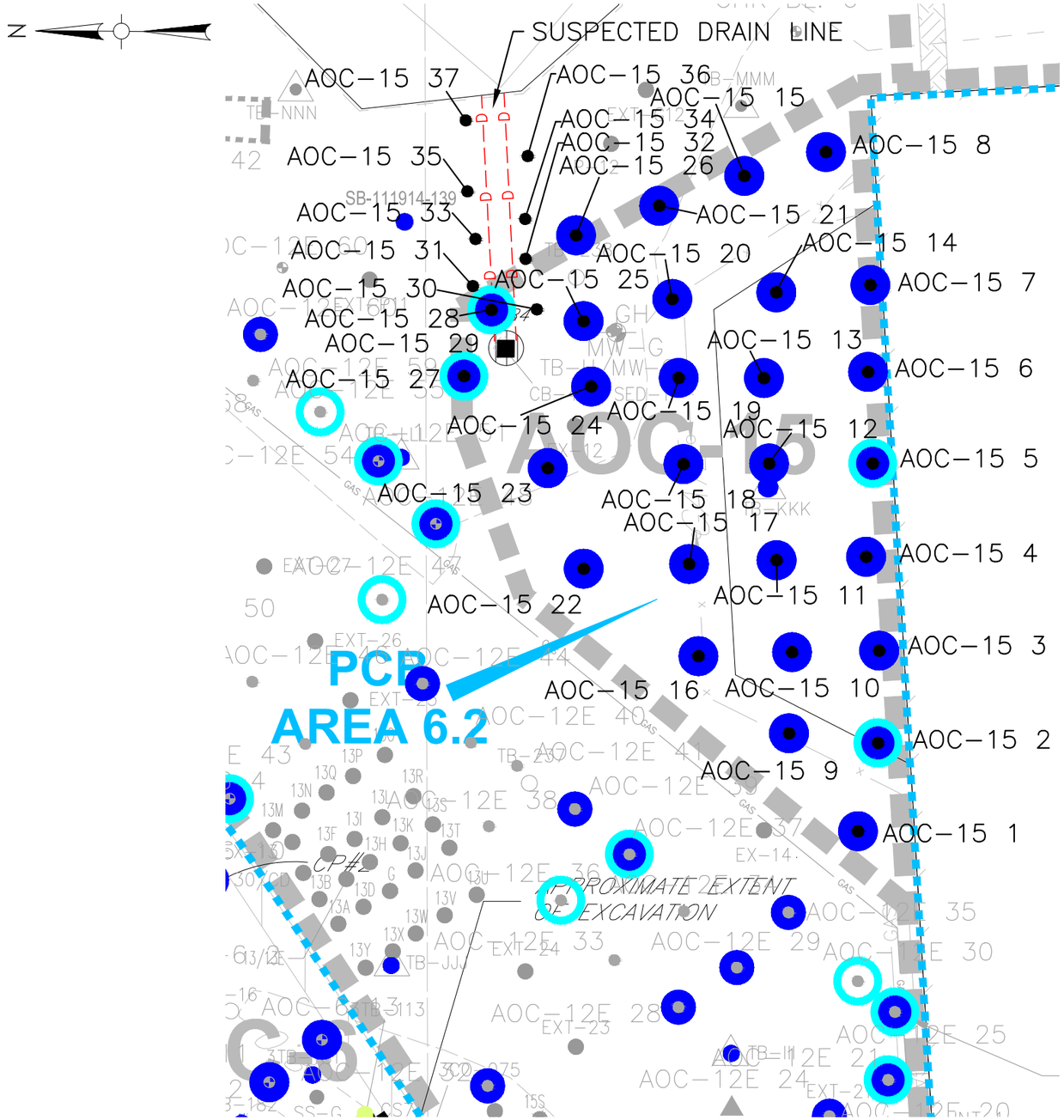

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.

2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 11-2

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-15 (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: 2-4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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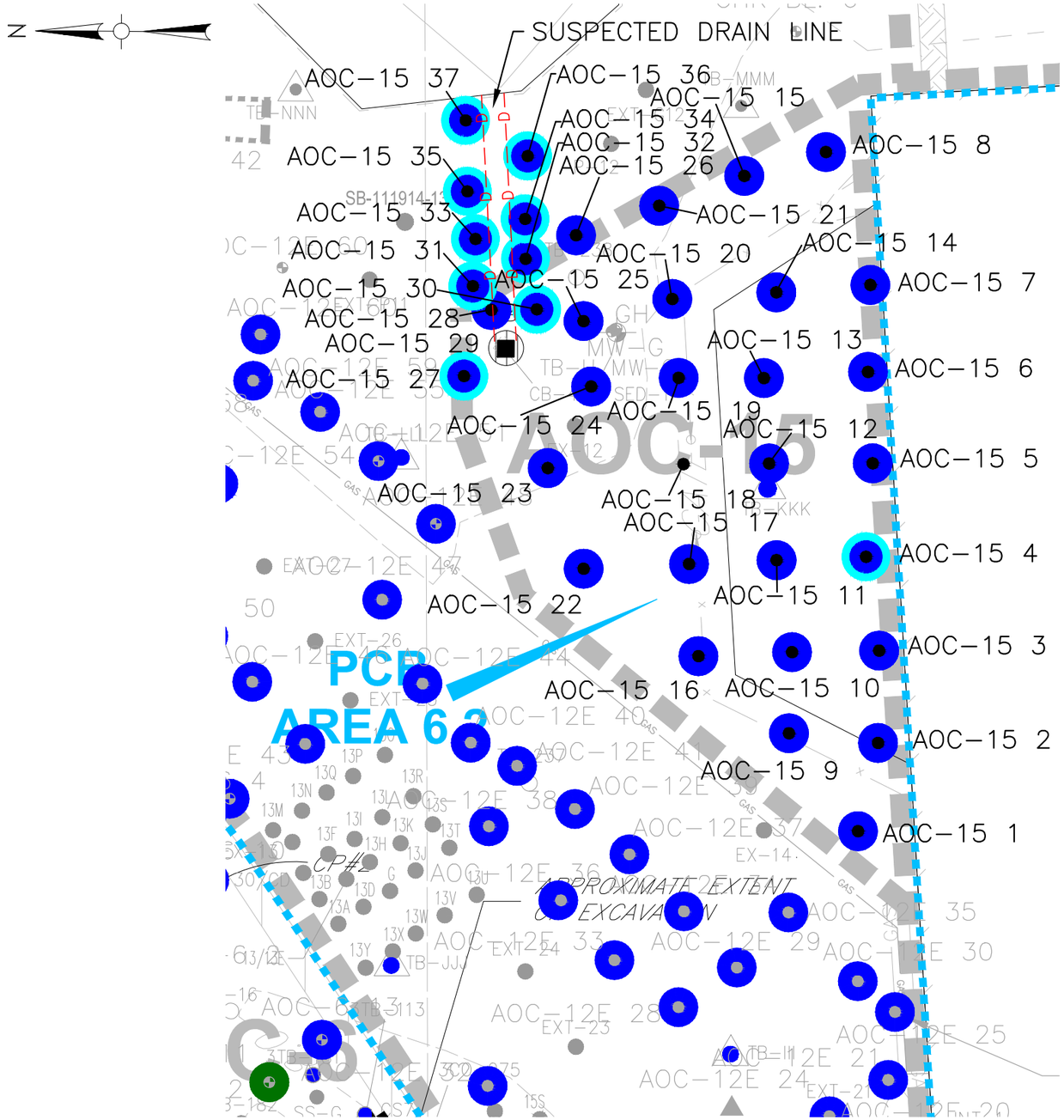

LEGEND:

- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION

NOTES:

1. SEE FIGURE 3 FOR NOTES, LEGEND AND LOCATION.

2. SHADED DATA POINTS REPRESENT HISTORICAL SAMPLE POINTS AND/OR SAMPLE LOCATIONS OUTSIDE OF FIGURE'S AOC.

3. HISTORICAL SAMPLE POINTS WHERE DETECTIONS/ EXCEEDANCES OCCURRED ARE HIGHLIGHTED. NO SAMPLE SYMBOL IS USED.

15 7.5 0 15 30

SCALE: 1"=15'

FIGURE 11-3

UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT

AOC-15 (PCB AREA 6.2)
2017 SAMPLE LOCATIONS: > 4 FOOT DEPTH

DESIGNED BY: PML	CHECKED BY: MB	DATE: OCTOBER 2017

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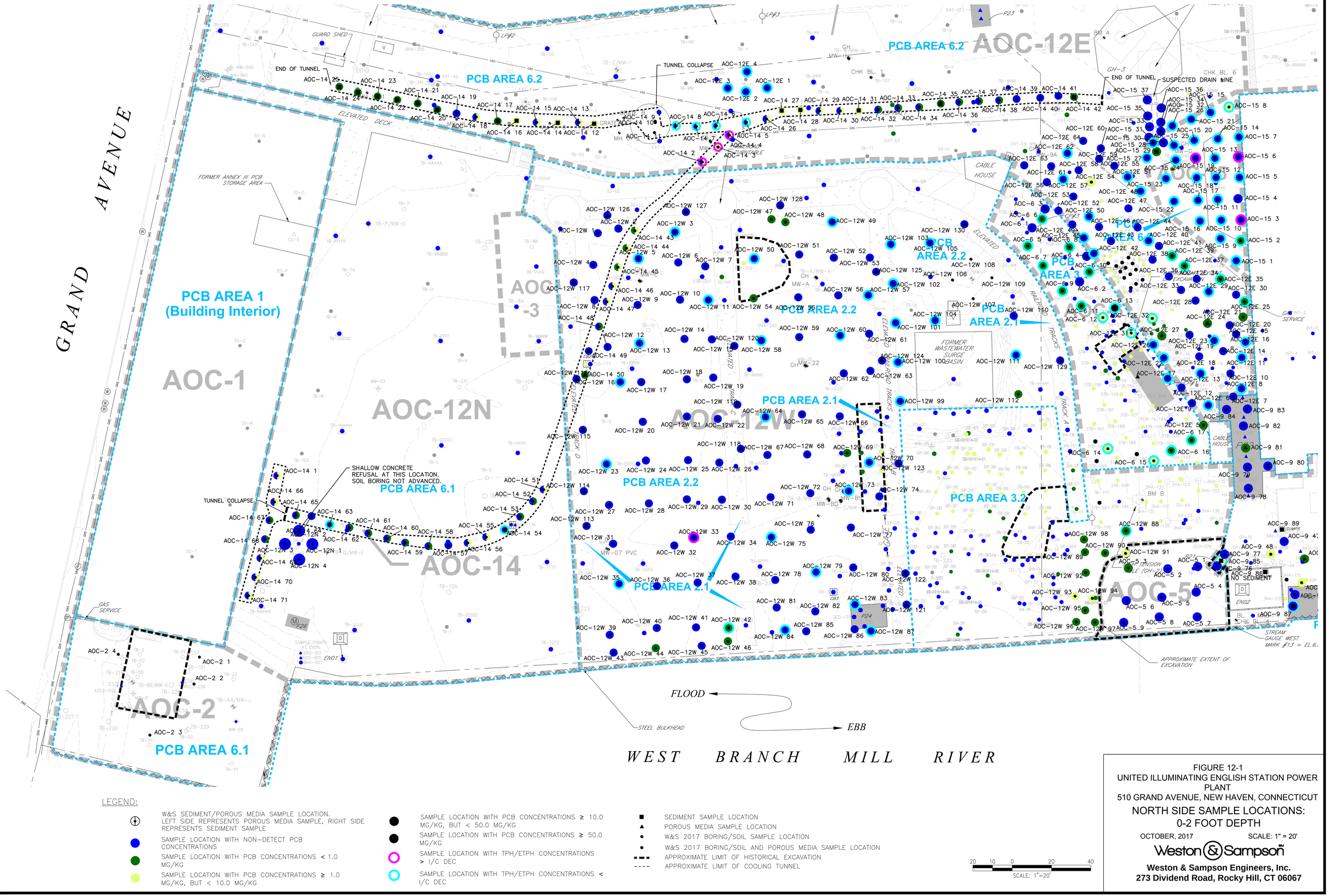

LEGEND:

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION
- APPROXIMATE LIMIT OF COOLING TUNNEL

20 10 0 20 40
SCALE: 1"=20'

FIGURE 12-1
UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT
NORTH SIDE SAMPLE LOCATIONS:
0-2 FOOT DEPTH

OCTOBER, 2017 SCALE: 1" = 20'

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273 Dividend Road, Rocky Hill, CT 06067

GRAND AVENUE

PCB AREA 1
(Building Interior)

AOC-1

AOC-2

AOC-12N

AOC-12W

AOC-14

AOC-12E

AOC-5

PCB AREA 6.1

PCB AREA 6.2

PCB AREA 2.2

PCB AREA 2.1

PCB AREA 3.2

PCB AREA 3

END OF TUNNEL

TUNNEL COLLAPSE

SHALLOW CONCRETE REFUSAL AT THIS LOCATION. SOIL BORING NOT ADVANCED.

SUSPECTED DRAIN LINE

ELEVATED DECK

FORMER ANNEX III PCB STORAGE AREA

GUARD SHED

CABLE HOUSE

FORMER WASTEWATER SURGE BASIN

RAILROAD TRACKS

TRACK A

TRACK D

GAS SERVICE

STEEL BULKHEAD

APPROXIMATE EXTENT OF EXCAVATION

STREAM GAUGE WEST MARK #13 = EL.6.

FLOOD

EBB

WEST BRANCH MILL RIVER

LEGEND:

- W&S SEDIMENT/POROUS MEDIA SAMPLE LOCATION. LEFT SIDE REPRESENTS POROUS MEDIA SAMPLE, RIGHT SIDE REPRESENTS SEDIMENT SAMPLE
- SAMPLE LOCATION WITH NON-DETECT PCB CONCENTRATIONS
- SAMPLE LOCATION WITH PCB CONCENTRATIONS < 1.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 1.0 MG/KG, BUT < 10.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 10.0 MG/KG, BUT < 50.0 MG/KG
- SAMPLE LOCATION WITH PCB CONCENTRATIONS ≥ 50.0 MG/KG
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS > I/C DEC
- SAMPLE LOCATION WITH TPH/ETPH CONCENTRATIONS < I/C DEC
- SEDIMENT SAMPLE LOCATION
- POROUS MEDIA SAMPLE LOCATION
- W&S 2017 BORING/SOIL SAMPLE LOCATION
- W&S 2017 BORING/SOIL AND POROUS MEDIA SAMPLE LOCATION
- APPROXIMATE LIMIT OF HISTORICAL EXCAVATION
- APPROXIMATE LIMIT OF COOLING TUNNEL

20 10 0 20 40
SCALE: 1"=20'

FIGURE 12-2
UNITED ILLUMINATING ENGLISH STATION POWER PLANT
510 GRAND AVENUE, NEW HAVEN, CONNECTICUT
NORTH SIDE SAMPLE LOCATIONS:
2-4 FOOT DEPTH

OCTOBER, 2017 SCALE: 1" = 20'

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