BOILER #13
INTERIM REMEDIAL MEASURE
PCB REMEDIAL ACTION PLAN

February 2021

English Station Facility
510 Grand Avenue, New Haven, CT

Prepared For:
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ACRONYM LIST

ACGIH	American Conference of Governmental Industrial Hygienists
ACM	Asbestos Containing Material
AOC	Area of Concern
CFR	Code of Federal Regulations
CET	Complete Environmental Testing
COC	Contaminant of Concern
Con-Test	Con-Test Analytical Laboratory
ConnDOT	Connecticut Department of Transportation
Conn OSHA	Connecticut Occupational Safety and Health Administration
CRZ	Contamination Reduction Zone
CTDEEP	Connecticut Department of Energy and Environmental Protection
CTDPH	Connecticut Department of Public Health
ELUR	Environmental Land Use Restriction
ETPH	Extractable Total Petroleum Hydrocarbons
EZ	Exclusion Zone
ftbg	Feet Below Grade
GPS	Global Positioning System
HDPE	High Density Polyethylene
I/C DEC	Industrial/Commercial Direct Exposure Criteria
IRM	Interim Remedial Measure
LEP	Licensed Environmental Professional
µg/100 cm^2	Micrograms per 100 square centimeters
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
NAD83	North American Datum 1983
NAVD88	North American Vertical Datum 1988
ND	Not Detected above laboratory reporting limit
NESHAP	National Emission Standards for Hazardous Air Pollutants
OSHA	Occupational Safety and Health Administration
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PCO	Partial Consent Order
PEL	Permissible Exposure Limit
PMC	Pollutant Mobility Criteria
PPE	Personal Protective Equipment
PPM	Parts Per Million
PVC	Polyvinyl Chloride
RAP	Remedial Action Plan
RAR	Remedial Action Report
RCRA	Resource Conservation and Recovery Act
RSCA	Regulations of Connecticut State Agencies
RSRs	Remediation Standard Regulations
SVOC	Semi-Volatile Organic Compound
SPLP	Synthetic Preparation Leaching Procedure
TCLP	Toxicity Characteristic Procedure

TRC	TRC Environmental Corporation
TSCA	Toxic Substances Control Act
TWA	Time-Weighted Average
UI	The United Illuminating Company
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

1.0 EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC), on behalf of The United Illuminating Company (UI), has prepared this Boiler #13 Interim Remedial Measure PCB Remedial Action Plan (RAP) for a portion of Boiler #13 within the English Station Building (the Boiler #13 Area IRM) located on Parcel B at 510 Grand Avenue in New Haven, Connecticut. UI proposes to implement an Interim Remedial Measure (IRM) in the Boiler #13 Area to remediate environmental media containing polychlorinated biphenyls (PCBs). The IRM will be conducted in accordance with the Partial Consent Order COWSPCB15-001 (PCO) issued by the Connecticut Department of Energy and Environmental Protection (CT DEEP) to remediate environmental media. This RAP presents the plans and procedures to be implemented during the IRM within and beneath the first floor of a portion of the building known as the Boiler #13 area, the Boiler #13 Cooling Water Intake & Discharge Pipe Trenches, the Boiler #13 Sealed Cooling Water Intake Pump Chamber and the Condenser #7 Pit. This interim measure is only intended to remediate PCBs within Boiler #13, as identified on **Figures 3, 4, 5 & 6**. A future alternatives evaluation along with other RAPs will be developed following completion of the remediation described in this RAP to address UI's obligation under the PCO for the Former English Station Building. Prior to implementing the Boiler #13 Area IRM a Scope of Study for sampling the mat foundation and other concrete structures will be submitted and approved by the CTDEEP.

This RAP details the measures to be implemented to achieve the remedial goals as defined in the PCO. The PCO requires that inside the buildings, UI shall be obligated to evaluate alternatives for remedial actions associated with the high occupancy standards in 40 CFR Part 761, and under the buildings, UI shall be obligated to evaluate alternatives for remedial actions associated with the more stringent of the high occupancy standards in 40 CFR Part 761 and the inaccessible soil provisions of §22a-133k-2(b)(3) of the RSRs. The result of these criteria is that PCBs in soil (interstitial fill), solids in pipes, trenches and pits and porous media such as concrete are required to be remediated to remove PCBs greater than 1 mg/kg (parts per million (ppm). In addition,

oil containing PCBs greater than 1 mg/kg (ppm) and water containing PCBs greater than 0.5 µg/L are required to be remediated.

There are several goals to the remediation of PCBs being performed under this IRM as summarized below:

1) Remediate PCB impacts to a portion of the first-floor concrete slab in Boiler #13 south of the cooling pipe trench **(Figure 4)**;
2) Remediate PCB impacts to interstitial fill (soil) between the first-floor slab and the mat foundation in Boiler #13 south of the cooling water discharge pipe trench **(Figure 4)**;
3) Remediate PCB impacts to concrete filled steel grate covers, bottom solids, liquids and cooling water intake and discharge pipes in the concrete pipe trench from the intake pump chamber to the east foundation wall in Boiler #13 (**Figures 4 &5)**;
4) Remediate PCB impacts to debris, pumps, equipment, bottom solids, liquids and cooling water pipes in the concrete condenser pit # 7 associated with Boiler #13 **(Figures 4 & 5)**;
5) Remediate PCB impacts to pumps, bottom solids, liquids and cooling water intake pipes in the sealed concrete intake pump chamber associated with Boiler #13 **(Figures 5 & 6)**; and
6) Collect verification samples of the exposed concrete mat foundation, concrete footings, concrete piers, concrete cooling pipe trench bottom and walls, concrete condenser pit and concrete cooling water intake pump chamber;

The entire property occupies approximately 8.9-acres of land located south of Grand Avenue in New Haven and Parcel B occupies approximately 5.32 acres of the southerly portion of the property (**Figure 2**). The Mill River borders the property to the east, west, and south. UI operated electrical generating facilities on the property between 1929 and 1992. The property location, surrounding area, significant features and parcels are depicted on **Figures 1 and 2**.

Environmental investigations used to prepare this RAP were performed at the Boiler #13 Area IRM in 2018, 2019 and 2020 respectfully. TRC performed investigations to evaluate impacts to the first-floor concrete slab, interstitial fill soil and solids (sediment) and liquids in equipment, trenches, drains and pits.

2.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this RAP in accordance with PCB Performance Based Disposal standards under 40 CFR Part 761.61(b) for use in conducting remediation tasks within a portion of the Boiler #13 area (the Boiler #13 Area IRM) of the English Station Building in New Haven, Connecticut. The Boiler #13 Area IRM is located on Parcel B which has a property address of 510 Grand Avenue. Parcel B is owned by Paramount View Millennium, LLC, 115-10 Queens Boulevard, Suite LL1, Forest Hills, NY 11375. UI is performing this remediation pursuant to its obligations under Partial Consent Order COWSPCB 15-001 (PCO)

This RAP only addresses environmental issues related to PCBs with the Boiler #13 Area of the Former English Station Building and includes an outline of the approach and procedures that TRC and its subcontractors will follow to ensure achievement of the remedial objectives.

2.1 Property Description and Location

The property consists of two parcels of land totaling approximately 8.9-acres located on the southerly portion of a man-made island (Ball Island) situated within the Mill River which flows north to south into the Long Island Sound. The property is split into two parcels (Parcel A – 510A Grand Ave. and Parcel B – 510 Grand Ave.), which are owned by two separate entities (Parcel A – Haven River Properties, LLC and Parcel B- Paramount View Millennium, LLC). Parcel A occupies approximately 3.58 acres of the northernly portion of the property, where Parcel B occupies approximately 5.32 acres of the southerly portion of the property. The property is retained via steel bulkhead which surrounds the east, west, and south sides. The property is location is shown in **Figure 1**

– Site Location Map and the approximate boundaries for Parcels A and B are shown on **Figure 2**. Geographic coordinates for the property are:

Latitude/Longitude:	41° 18’ 23" North/72° 54’ 24" West
UTM Coordinates:	Zone 18
	675,239.9 meters Northing
	4,574,883.6 meters Easting

The investigation and remediation figures for this RAP only depict the conditions within the Boiler #13 Area IRM which consists of a portion of the Boiler #13 first floor and interstitial fill area located in the southeasterly section of the English Station Building.

2.2 Property History and Background

The property 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 property and began the construction of what was known as Station B. Station B was located immediately south of Grand Avenue on the northern portion of the property. As part of the construction of Station B, Ball Island’s footprint was expanded via the filling of the portion of the Mill River south Station B. 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 on the southern end of Ball Island. The initial construction of English Station consisted of a coal-fired, low-pressure boiler system and associated turbines, which were 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 and East 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 facility 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 property to QE. At that time, an escrow was established by UI to support environmental investigation and cleanup of the property. 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 (Parcel A and Parcel B). Subsequently, QE sold Parcel A to Evergreen Power, LLC (Evergreen) and Parcel B to ASNAT Realty, LLC (ASNAT). In 2018 Parcel A was sold to its current landowner, Paramount View Millennium, LLC and Parcel B to its current owner Haven River Properties, LLC.

From 2008 to 2011, the property was unused and no longer maintained as suitable for power generation. In 2011, the property owners at that time (ASNAT and Evergreen) contracted Grant Mackay Company (Grant Mackay) and Classic Environmental Inc. (Classic Environmental) to demolish the existing structures with the intention of generating enough money through the sale of scrap-metal steel to fund the future environmental investigation and eventual cleanup of the property. The initial focus of this project was at the English Station power plant building. In 2012, CT DEEP conducted an inspection which concluded that there was potential for tracking and spreading of PCB contamination from source areas to other uncontaminated areas of the property. In February of 2012, CTDEEP issued a Cease and Desist Order (CDOWSUST 12-001) to ASNAT which terminated all site activities. The United States Coast Guard (USCG), issued an Administrative Order, 002-14, on September 19, 2012 to the then property Owners and to UI as the former property owner. Actions performed by the USCG included placing booms around the southern end of Ball Island and removal of liquid wastes and drummed materials from the Oil Room because of the potential to discharge to a nearby catch basin.

In the summer of 2017 UI began a project to construct a clean corridor from the east entrance to facilitate decontamination and removal of the Grant Mackay and Classic Environmental equipment, remove and dispose of the Turbine Hall debris and perform

the boiler house “make safe” interim measure abatement work. The “make safe” interim measure was subsequently expanded to include the abatement of asbestos-containing materials in the Boiler 1-12 Area and the Boiler #13 and #14 Area. The interim abatement work was completed in September 2018.

Starting in early 2019 and going through April 2020, UI’s contractor performed asbestos abatement and demolition of Station B. The Station B basement slab and foundations currently remain as these will be addressed under a separate remedial measure.

2.2.1 English Station Construction and Past Operations

The English Station Building was constructed in four separate phases spanning from 1927 through 1952. The record drawings for all four phases were reviewed and show details of a pile-supported construction for each phase. The first phase of construction in 1927 consisted of the Boiler #1 through #6 Low-Pressure Boiler House, Turbine Hall with three steam turbine generators, Reactors, Switch Cells and other support portions of the facility on the west side. The low-pressure boiler system was configured such that two boilers served one turbine and one condenser. Thus, at this time, the low-pressure boiler system consisted of six boilers, three turbines, and three condensers. The island was expanded to the south with a new wooden bulkhead and fill to accommodate phase one and two of the building’s construction.

The third phase of construction began in 1947. This addition to the facility immediately south required further expansion of the bulkhead to accommodate the 9-story High Pressure Boiler #13 and a single turbine/generator. The building foundation construction was similar to the first two phases with driven piles supporting a reinforced concrete mat. The third phase incorporated a new cooling water intake tunnel. The major difference from the Low-Pressure Boiler facility, is that the non-contact cooling water from the pump intakes on the west side of the building to the discharge on the east side bulkhead, are fully contained within two 42-inch diameter steel pipes that sit in a

reinforced concrete pipe trench just beneath the first-floor slab.

The fourth and final phase of construction began in 1952 and added another high-pressure boiler system to the southern end of the facility (High Pressure Boiler #14). High Pressure Boiler #14 is nearly a mirror image of Boiler #13. Boiler #14 has its own separate cooling water intake at the southwest corner of the island, and like Boiler #13, the cooling water system consists of an intake on the west side of the facility and a discharge on the east side. Again, the cooling water system is a once-through, non-contact system where the cooling water was contained in large diameter piping that sat in a reinforced concrete pipe trench just beneath the floor slab. A cross-sectional view of the English Station building through the high-pressure boiler area, including the cooling water tunnel system, is presented in **Figure 5**.

2.3 Environmental Setting

2.3.1 Geology

According to the Surficial Materials Map of Connecticut (Stone et al, 1992), the property is located in an area underlain by fill. According to the 1998 Phase II/III report by GEI Consultants, Inc. (GEI), fill material encountered during their investigation of the property ranged in thickness from 9 to 16.5 feet and consisted of a variety of granular materials, including loose, poorly sorted sands with fine to medium gravel, moderately dense, slightly plastic silty sands, and anthropomorphic materials including brick, ash, cinders, wood, glass, metal and plastic fragments.

A slightly plastic silt and fine sand layer was reportedly encountered beneath the fill layer and generally ranged in thickness from 5 to 11 feet. Numerous mollusk shells, fine roots and other organic material were observed in this layer. Occasional 1- to 3-inch thick layers of well-sorted and sub-rounded fine to medium sands were observed interbedded with the siltier portions of this strata.

Interbedded fine to medium sand and slightly plastic silts were observed beneath

the potential confining layer of slightly plastic silts. This stratum is interpreted to represent a transition from low to medium depositional environment energy, as suggested by the alternating strata types. Both materials are similar to those described in the overlying strata, except that individual layer thicknesses and spacing were greater than those observed in the strata above.

A reddish-brown, well-sorted, medium to coarse sand with less than 10 percent non-plastic fines and up to 15 percent sub-rounded fine gravel is present at approximately 35 feet below ground surface (ft bgs) (GEI, 1998b).

Others who have performed intrusive environmental work at the property subsequent to the 1998 investigation have confirmed GEI's findings with respect to the presence of fill. In January 2003, AEI prepared a document titled Request for Widespread Polluted Fill Variance for the English Station property and on behalf of Quinnipiac Energy (QE). In this document, AEI indicated that the materials that comprise the bulk-headed island on which English Station is located are primarily Mill River dredge spoils generated between 1900 and 1936 (prior to environmental laws and controls) to maintain navigable shipping channels. The dredged sand and silt materials that comprise the island were referred to in the 2003 report as "native" only in that they were derived from the adjacent river, however, these dredged materials were subject to pre-dredging impact by various contaminants as a result of discharges to the river from the industries that lined its banks. These spoils were placed upon the native sand and silts of the marsh and tidal flat areas once present in the area (and exposed at low tide) to create the present-day Ball Island.

Site investigations were performed in 2017 by Weston & Sampson on behalf of UI. Soil boring logs documenting the materials encountered during the 2017 investigations are documented in the two reports entitled "*Former English Station Facility – North Side Investigation Summary Report, dated January 2018 by Weston and Sampson*" and "*Former English Station Facility – South Side Investigation Summary Report, dated January 2018 by Weston and Sampson*". The boring logs contained in these two reports, confirm the geology described above by others.

According to the Bedrock Geologic Map of Connecticut (USGS, 1985), the bedrock beneath the property consists of New Haven Arkose. This bedrock is described as consisting of reddish, poorly sorted, coarse-grained, sandstone-like sedimentary rock.

2.3.2 Hydrogeology

In general, groundwater behavior beneath the property is influenced by the action of the tides in the Mill River, which is inferred to be a regional groundwater discharge zone. Groundwater elevations are typically higher than surface water elevations. However, at high tide, the surface water elevation is higher than the groundwater elevation. This would indicate that at most times, groundwater flows to the Mill River and, at high tide, flow reverses toward the property. The continuous monitoring of groundwater and surface water elevations by Weston & Sampson indicate that there is a tidal influence on the groundwater elevation. This response in groundwater elevations is much less than the variation in surface water elevations. This is probably due to the presence of the interlocking steel bulkhead that limits surface water-groundwater interaction. In addition, for those monitoring wells nearest the bulkhead, surface water elevations were higher than groundwater elevations at high tide.

2.4 Applicable Regulations

Applicable PCB regulations for the Boiler #13 Area IRM include the federal regulations found in Chapter 40 of the Code of Federal Regulations, Part 761 (40 CFR Part 761)

2.4.1 Federal PCB Regulations

Applicable sections of 40 CFR Part 761 that apply to the procedures and goals as described in this RAP include:

- §761.61 – PCB Remediation Waste, section of the regulation applicable to the remediation of PCB Remediation Waste.
    - §761.61(b) – **Performance Based Disposal** of PCB Remediation Waste.

- §761.61(b)(1) - Any person disposing of **liquid PCB remediation waste** shall do so according to § 761.60(a) or (e) or decontaminate it in accordance with § 761.79.
- §761.60(a) **PCB liquids**. PCB liquids at concentrations ≥50 ppm must be disposed of in an incinerator which complies with § 761.70, except that PCB liquids at concentrations ≥50 ppm and <500 ppm may be disposed of as follows:

  (1) For mineral oil dielectric fluid, in a high efficiency boiler according to § 761.71(a).

  (2) For liquids other than mineral oil dielectric fluid, in a high efficiency boiler according to § 761.71(b).

  (3) For liquids from incidental sources, such as precipitation, condensation, leachate or load separation and are associated with PCB Articles or non-liquid PCB wastes, in a chemical waste landfill which complies with § 761.75 if:

  (i) [Reserved]

  (ii) Information is provided to or obtained by the owner or operator of the chemical waste landfill that shows that the liquids do not exceed 500 ppm PCB and are not an ignitable waste as described in § 761.75(b)(8)(iii).
- §761.61(b)(2) Any person disposing of **non-liquid PCB remediation waste** shall do so by one of the following methods:

  (i) Dispose of it in a high temperature incinerator approved under § 761.70(b), an alternate disposal method approved under § 761.60(e), a chemical waste landfill approved under § 761.75, or in a facility with a coordinated approval issued under § 761.77.

  (ii) Decontaminate it in accordance with § 761.79.
- §761.61(a)(4) – Cleanup Levels, section establishing remedial goals for remediation.

  (i) **Bulk PCB remediation waste**. Bulk PCB remediation waste includes, but is not limited to, the following non-liquid PCB remediation waste: soil, sediments, dredged materials, muds, PCB sewage sludge, and industrial sludge.

  (A) **High occupancy areas**. The cleanup level for bulk PCB remediation waste in high occupancy areas is ≤1 ppm without further conditions. High occupancy areas where bulk PCB remediation waste remains at concentrations >1 ppm and ≤10 ppm shall be

covered with a cap meeting the requirements of paragraphs (a)(7) and (a)(8) of this section.

(ii) **Non-porous surfaces**. In high occupancy areas, the surface PCB cleanup standard is ≤10 µg/100 cm^2 of surface area. In low occupancy areas, the surface cleanup standard is <100 µg/100 cm2 of surface area. Select sampling locations in accordance with subpart P of this part or a sampling plan approved under paragraph (c) of this section.

(iii) **Porous surfaces**. In both high and low occupancy areas, any person disposing of porous surfaces must do so based on the levels in paragraph (a)(4)(i) of this section. Porous surfaces may be cleaned up for use in accordance with § 761.79(b)(4) or § 761.30(p).

(iv) **Liquids.** In both high and low occupancy areas, cleanup levels are the concentrations specified in § 761.79(b)(1) and (b)(2).

- This RAP describes the clean-up of PCBs to the High Occupancy Standard as in accordance with the PCO requirement.
- High occupancy area is defined in § 761.3.
- §761.65 – Storage for Disposal, section providing requirements for the storage of PCB Wastes.
- §761.79 – Decontamination Standards and Procedures, section providing procedures to be implemented in the decontamination of materials, equipment, and some environmental media.
- 40 CFR Subpart N - Cleanup Site Characterization Sampling for PCB Remediation Waste in Accordance with § 761.61(a)(2)
- Subpart O – Sampling to Verify Completion of Self-Implementing Cleanup and On-Site Disposal of PCB Bulk Remediation Waste and Porous Surfaces in Accordance with §761.61(a)(6).

2.4.2 Partial Consent Order (PCO - COWSPCB15-001)

The PCO requires that inside the buildings, UI shall be obligated to evaluate alternatives for remedial actions associated with the high occupancy standards in 40 CFR Part 761; and under the buildings, UI shall be obligated to evaluate alternatives for remedial actions associated with the more stringent of the high occupancy standards in 40 CFR Part 761 and the inaccessible soil provisions of §22a-133k-2(b)(3) of the RSRs.

The result of these criteria is that PCBs in soil (interstitial fill), solids in pipes, trenches and pits and porous media such as concrete are required to be remediated to remove PCBs greater than 1 mg/kg. In addition, oil containing PCBs greater than 1 mg/kg and water containing PCBs greater than 0.5 µg/L are required to be remediated.

2.4.3 Connecticut RSRs

Remediation of impacts to soil and groundwater which are regulated under the Connecticut RSRs, Section 22a-133k-1 through -3, and are not applicable to the work being performed at the Boiler #13 Area IRM under this RAP.

2.5 Project Focus Area (AOC-16E, AOC-16I, AOC-16EE, AOC-16FF, AOC-16HH, AOC-17C, AOC-17F & AOC-19B)

This RAP focuses on areas of concern (AOC) in the Boiler #13 of the English Station Building referred to as AOC-16E, AOC-16I, AOC-16EE, AOC-16FF, AOC-16HH, AOC-17C & AOC-19B (**Figure 3**). Description of these AOCs containing PCB sources are as follows:

AOC-16E, AOC-16I, AOC-17C, and AOC-19B: Screen House #3, Unit 7 Condenser Area and Associated Cooling Water Pipe Trench and Drainage Structures

- Two sources of PCB contamination were identified within AOC-16I (a cathodic rectifier and the lube oil tank/piping and appurtenances).
- A portion of the cooling water pipe trench (AOC-19B) that extends from the sealed cooling intake pump chamber in Screen House #3 to Condenser #7 is contaminated with PCBs and ETPH. Concentrations of PCBs detected in samples of multiple media at this location were above criteria.
- The portion of the sealed cooling water intake pump chamber (AOC-19B) located under the east side of Screen House #3 is impacted with PCBs above criteria. However, oil was not present west of the intake pump chamber.
- PCB contamination is present in the Condenser #7 area (AOC-16I). In particular, the condenser pit contains oil, water, bottom solids, debris and concrete contaminated with PCBs above criteria.

- PCB impacts are present in solids in the drainage system (AOC-17C) within the Condenser #7 above criteria.

- PCBs were not detected in the samples collected of the interstitial fill material between the floor slab and the building mat within AOC-16I.

Level 1 Boiler #13 Area, Boiler #13 Former Transformers, Boiler #13 Area Manholes, Boiler #13 Drainage System and Boiler #13 Cooling Water Pipe Trench System (AOC-16EE, AOC-16FF, AOC-16HH, AOC-17F, and AOC-19B)

- Based on visual observations, an oil release has occurred in the Boiler #13 Area. Based on the contaminants detected, the source of the release appears to have been the two former 1,500 kVA transformers (AOC-16FF). Concentrations of PCBs >500 mg/kg, were detected in several different media near the transformers.
- The apparent release from the former 1,500 kVA transformers containment appears to have impacted the adjacent conduit vaults (AOC-16HH), a portion of the drainage system (AOC-17F), and the cooling water discharge pipe trench for Boiler #13 (AOC-19B). Based on the occurrence and distribution of concrete samples exhibiting PCB concentrations above 1.0 mg/kg in the Boiler #13 Area (AOC-16EE) it appears the release may have extended to this area.
- The concrete containment area (AOC-16-FF) in which the two transformers formerly sat is contaminated with PCBs at concentrations >500 mg/kg. In addition, the majority of the concrete floor (AOC-16EE) in the Boiler #13 exhibits PCB concentrations above 1.0 mg/kg in the area around the transformers.
- Oil with concentrations of PCBs >1 mg/kg and standing water contaminated with PCBs above 0.5 ug/L were noted in the conduit vault (AOC-16HH) located adjacent to the former 1,500 kVA transformers containment.
- PCBs were detected in solids samples collected from the Boiler #13 Area drainage system (AOC-17F).
- Oil containing PCBs above 1.0 mg/kg is present on top of the water within the Boiler #13 concrete cooling water discharge pipe trench (AOC-19B). In addition, water within the same pipe trench exhibits levels of PCB contamination above 0.5 ug/L.
- Interstitial fill soil samples collected beneath and adjacent to the former 1,500 kVA transformers containment (AOC-16FF) indicate that soils 6-8 feet below the floor slab are contaminated with PCBs >50 mg/kg. Twelve soil samples exceed the regulatory criteria of 1.0 mg/kg and ranged from 2.1 mg/kg to 17,000 mg/kg This soil interval lies directly above the reinforced concrete mat foundation. Based on the Aroclors detected and the presence of chlorinated solvents in the soil samples, the source of this

contamination appears to be the two former 1,500 kVA transformers. Samples of the interstitial fill material collected from locations on the north side of the Boiler #13 Area (north of the cooling water discharge pipe trench) (AOC-16EE) did not exhibit concentrations of PCBs above 1 mg/kg.

3.0 ENGLISH STATION BUILDING TRC CHARACTERIZATION SUMMARY

TRC performed detailed interior investigation activities for the English Station building beginning in 2018 and ending in 2019 based on the following Scopes of Study (SOS):

- Scope of Study, Western Portion of English Station (Partial), TRC, May 2018, Revised August 2018, Last Revised July 2020.
- Scope of Study, Eastern Portion of English Station Interior (Partial): Boiler 1-12 Area, TRC, August 2018, Revised September 2018, Last Revised September 2020.
- Scope of Study (Partial), English Station Interior, High-Pressure Boiler Area (Boilers #13 and #14), TRC, October 2018, No Revision.

The Western Portion SOS and the High-Pressure Boiler Area (Boiler #13 and #14) SOS pertain to the Boiler #13 Area IRM covered under this RAP. The data gathered from each of these investigations has been assessed and compiled into separate draft investigation report documents that have not received final approval from the CTDEEP. In May 2019, the CTDEEP requested that the investigation data from the first floor and the interstitial fill for all three areas of the building be compiled into a memorandum document. Following this request, TRC prepared a memorandum entitled the "*English Station - Interior Environmental Media Investigation Interim Results – First Floor and Interstitial Fill Areas*", dated June 3, 2019, revised February 18, 2020. In addition, following the receipt of the memo, the CTDEEP requested a separate scope of study to cover the interstitial fill. A document entitled "*Scope of Study: First Floor of English Station – Interstitial Fill Material (Partial)*" was submitted to the CTDEEP on October 7, 2019, revised September 3, 2020 and approved by the CTDEEP on October 14, 2020. The sample results representing the October 14, 2020 approved Interstitial Fill (Partial) SOS have been compiled into a draft investigation report which will be submitted to the

CTDEEP following submission of this RAP. This RAP presents the PCB sample results obtained through the investigations referenced in this Section along with Section 1.0, Section 2.2 and the December 2020 investigations.

The following is a summary for the Boiler #13 Area IRM from the investigations performed by TRC starting in 2018 thru 2020.

AOC-16E – Screen House #3

This portion of the building houses cooling water intake pumps, bar screens, sluice gates and associated mechanisms that allowed the intake of water from the Mill River. Screen House #3 took in water from the Mill River to feed the Condenser #7/Boiler #13 high-pressure boiler system. TRC identified the following potential sources(1) of contamination during reconnaissance of AOC-16E:

- Cathodic Rectifier Unit (El-Cab 1);
- Westinghouse Water Circulating Pump 7-1;
- Westinghouse Water Circulating Pump 7-2;
- Screen Wash Pump; and
- Orange Induction Motor.

(1) *Photographs of equipment referenced in this section are contained in Investigation Report Western Portion of English Station (Partial) by TRC with last revision July 2020.*

During investigation activities within AOC-16E, TRC personnel noted that the Cathodic Rectifier Unit was affixed with a black label indicating (test date 7/28/83) that it had been tested and found to contain oils at PCB concentrations that range from 50 to 500 ppm. The label indicated the unit was tested on July 28, 1983. TRC was unable to collect an oil sample from the Cathodic Rectifier Unit as no accessible sample point could be located. However, the top of the unit appeared to be full of water from infiltrating rainwater and a sample of this water (TRC-AOC-16E-SW-01) was collected for laboratory analysis of PCBs. PCBs were detected in sample TRC-AOC-16E-SW-01 at a concentration of 148 µg/L, which exceeds the regulatory criteria of 0.5 µg/L.

Residual oil samples were collected and submitted to the laboratory for PCB analysis from the Orange Induction Motor (TRC-AOC-16E-OIL-01), Screen Wash Pump (TRC-AOC-16E-OIL-02), and the Westinghouse Circulating Pump 7-1 (TRC-AOC-16E-OIL-03). TRC was unable to collect an oil sample from the Westinghouse Circulating Pump 7-2. PCBs were not detected above the laboratory reporting limits in the three oil samples.

Wipe samples were collected and submitted to the laboratory for PCB analysis from the Screen Wash Pump (TRC-AOC-16E-WP-01), Westinghouse Circulating Pump 7-1 (TRC-AOC-16E-WP-02), the valve stands associated with the cooling water pipes (TRC-AOC-16E-WP-03 and TRC-AOC-16E-WP-04), and Westinghouse Circulating Pump 7-2 (TRC-AOC-16E-WP-05). PCBs were detected in all five wipe samples collected from AOC-16E, at concentrations ranging from 0.34 µg/100 cm^2 to 15.4 µg/100 cm^2. TRC-AOC-16E-WP-05 was the only wipe sample of the five to exhibit PCB concentrations above the regulatory criteria of 10 µg/100 cm^2. Refer to **Table 2** for wipe sample results.

A total of ten concrete samples were collected from AOC-16E and submitted to the laboratory analysis for PCB analysis, samples were identified as TRC-AOC-16E-CO-01 through TRC-AOC-16E-CO-09 and duplicate sample TRC-AOC-16E-CO-09B. PCBs were detected in all ten samples, ranging in concentration from 0.25 mg/kg to 2.0 mg/kg. TRC-AOC-16E-CO-05 was the only concrete sample of the ten collected that exhibited a PCB concentration above the regulatory criteria of 1.0 mg/kg.

AOC-16I – Condenser Unit #7 Area

Condenser Unit #7, associated with Boiler #13 is located in the southern area of the English Station building, just to the south of the Turbine Hall. Several lube oil reservoirs, recirculating pumps and filtering systems area present in this area. Demolition activities and years of neglect have caused equipment to deteriorate allowing oils to spread throughout this area. Standing water, oil and debris were observed in the pits that

surround Condenser Unit #7. TRC identified the following as potential sources[1] of contamination:

- Automatic Potential Control Unit, Cathodic Rectifier (ED-1);
- Automatic Potential Control Unit, Cathodic Rectifier (El-Cab 2);
- Automatic Potential Control Unit, Cathodic Rectifier (El-Cab 3);
- Oil Filtering Unit;
- Oil Conditioner Unit;
- Lube Oil Tank, Piping and Appurtenances;
- Support Oil Tank; and
- Hydro Cooling Equipment.

(1) *Photographs of equipment referenced in this section are contained in Investigation Report Western Portion of English Station (Partial) by TRC with last revision July 2020.*

During investigation activities within AOC-16I, TRC personnel observed three Cathodic Rectifier Units located in a hallway area directly west of Condenser #7. TRC personnel noted that the Cathodic Rectifier Unit (ED-1) (test date 7-28-83) was affixed with a green label indicating that a sample of the oil (TRC-AOC-16I-OIL-01) it contained was found Non-Detect (ND) (<1 mg/kg). Two other Cathodic Rectifier Units (El-Cab 2 and El-Cab 3) were also observed by TRC in the same area. Both units were affixed with blue labels (no test date) indicating that both units contain dielectric fluid with PCB concentrations less than 50 ppm. Oil sample TRC-AOC-16I-OIL-02 from El-Cab 2 had PCBs detected at 10 mg/kg. The third Cathodic Rectifier Unit (El-Cab 3) did not appear to contain residual oils and TRC was unable to collect an oil sample from this unit.

TRC also collected two porous media samples from the floor (TRC-AOC-16I-CO-25 and TRC-AOC-16I-CO-26) and one wall sample(TRC-AOC-16I-CO-27) in the vicinity of the three Cathodic Rectifier Units located in the hallway directly west of Condenser #7. TRC used the porous media samples described above to evaluate potential spills and releases to the surrounding area from the storage of the Cathodic Rectifier units in this location. As indicated in **Table 3**, PCBs were detected in both of the floor samples at concentrations of 2.18 mg/kg and 3.04 mg/kg, respectively, which are above the regulatory criteria of 1 mg/kg. PCBs were not detected above the laboratory reporting limits in the wall sample located between the two units.

A large portion of the hallway in which the Cathodic Rectifiers are present is made up of steel diamond plate pull panels that cover the Boiler #13 cooling water intake pipe trench that previously fed Condenser #7. To evaluate spills and releases to the floor in the area of the Cathodic Rectifiers and to evaluate tracking through the area, TRC collected wipe samples, identified as TRC-AOC-16I-WP-01 through TRC-AOC-16I-WP-09, from the surface of the diamond plate pull panels and submitted them for laboratory analysis of PCBs. As shown in **Table 2**, PCBs were detected in all nine samples at concentrations ranging from 3.6 µg/100 cm^2 to 92 µg/100 cm^2. The detected PCB concentrations in six of the wipe samples were above the regulatory criteria of 10 µg/100 cm^2.

During subsequent investigation activities within AOC-16I in November of 2018, TRC personnel observed an area of oil staining and residue that appeared to originate from one or more of the three Cathodic Rectifiers located in the hallway west of Condenser #7. The oil staining was also observed on the diamond plate pull-panels located above the cooling water tunnel extending through this area. The oily residue also appeared to have entered the cooling water tunnel associated with Condenser #7 (AOC-19B). Upon discovery of the oil residue on the floor in AOC-16I, TRC personnel immediately posted danger tape preventing foot traffic through the area and applied dry absorbent spill control material over the stained area.

Immediately after the discovery of this condition, TRC collected an oil sample TRC-AOC-16I-OIL-01 on the bottom of the ED-1 Cathodic Rectifier unit and submitted it to Complete Environmental Testing (CET) of Stratford, Connecticut for laboratory analysis of PCBs. As shown in **Table 1**, laboratory analysis of sample TRC-AOC-16I-OIL-01 indicated that PCBs were not detected above the laboratory reporting limit. TRC also collected oil sample TRC-AOC-16I-OIL-02 from Cathodic Rectifier Unit El-Cab 2 and submitted it to CET for PCB analysis. Laboratory results for sample TRC-AOC-16I-OIL-02 indicated that PCBs were detected at a concentration of 10 mg/kg. The third Cathodic Rectifier Unit (El-Cab 3) did not contain residual oils, therefore TRC was unable to collect

an oil sample from this unit. Samples of media collected from the cooling water tunnel associated with Condenser #7 are discussed in AOC-19B of this report.

A bank of pumps, valves, gauges, tanks and filters, identified as the Oil Filtering Unit was observed at the southeast corner of Condenser #7. Due to the lack of residual oils in this piece of equipment, TRC could not obtain an oil sample. As an alternative, TRC collected one wipe sample TRC-AOC-16I-WP-12 from a heavily stained vertical surface adjacent to an open pipe on the unit. PCBs were detected in wipe sample TRC-AOC-16I-WP-12 at a concentration of 0.68 µg/100 cm^2, which is below the regulatory criteria of 10 µg/100 cm^2. TRC also collected a concrete sample, identified as TRC-AOC-16I-CO-18, from a heavily stained portion of the floor immediately adjacent to the Oil Filtering Unit. PCBs were detected in concrete sample TRC-AOC-16I-CO-18, at a concentration of 2.99 mg/kg, which is above the applicable regulatory criteria.

TRC collected an oil sample (TRC-AOC-16I-OIL-05), a wipe sample (TRC-AOC-16I-WP-11), and a concrete sample (TRC-AOC-16I-CO-19) from within and adjacent to the Oil Conditioner Unit associated with Condenser #7. PCBs were not detected above the laboratory reporting limit in oil sample TRC-AOC-16I-OIL-05. PCBs were detected in the wipe sample collected from the inside surface of the Oil Conditioner tank at a concentration of 45 µg/100 cm^2, which is above the applicable regulatory criteria of 10 µg/100 cm^2. PCBs were also detected in the concrete sample collected from a heavily stained portion of the floor adjacent to the Oil Conditioner Unit at a concentration of 3.46 mg/kg which also exceeds the applicable regulatory criteria.

Several samples of various media were collected by TRC personnel from the Lube Oil Tank and equipment associated with Condenser #7. Oil sample TRC-AOC-16I-OIL-01 was collected on October 4th, 2018 from the recessed pit surrounding the Lube Oil Tank on the south side of Condenser #7. PCBs were detected in oil sample TRC-AOC-16I-OIL-01, at a concentration of 11.1 mg/kg. The exact source of the oil in this pit could not be determined during investigation activities. Oil sample TRC-AOC-16I-OIL-06 (ND <0.94 mg/kg) and wipe sample TRC-AOC-16I-WP-13 (16.7 µg/100 cm^2) were collected

from a smaller Support Tank to the southwest of the Lube Oil Tank. TRC-AOC-16I-WP-13 is above applicable regulatory criteria. Oil samples TRC-AOC-16I-OIL-07 (ND <0.98 mg/kg) and TRC-AOC-16I-OIL-08 (ND < 0.97 mg/kg) were collected from a pipe situated above the Lube Oil Tank and from the Lube Oil Tank, respectively.

In addition to the samples collected to evaluate the southern portion of Condenser #7, several samples were collected from the northern portion of Condenser #7 area, including concrete samples TRC-AOC-16I-CO-08 and TRC-AOC-16I-CO-23, and solids sample TRC-AOC-16I-SED-01. PCBs were detected in all three samples at concentrations of 15.1 mg/kg, 22 mg/kg and 27 mg/kg, respectively. The reported concentrations of PCBs exceed the regulatory criteria of 1.0 mg/kg.

A bank of pumps, valves, gauges, tanks and piping, identified as Hydro Cooling Equipment was observed at the northeast corner of Condenser #7. TRC personnel collected two oil samples, TRC-AOC-16I-OIL-03 and TRC-AOC-16I-OIL-04, and a wipe sample, TRC-AOC-16I-WP-10 from this equipment during the investigation of AOC-16I. PCBs were not detected above the laboratory reporting limits in either of the oil samples. PCBs were detected in wipe sample TRC-AOC-16I-WP-10, at a concentration of 12.1 µg/100 cm2, which is above the applicable regulatory criteria.

A total of 28 concrete samples, identified as TRC-AOC-16I-CO-01 through TRC-AOC-16I-CO-27 and field duplicate sample TRC-AOC-16I-CO-18B, were collected from AOC-16I and analyzed for PCBs during TRC's investigation. Many of these samples were collected as part of the source evaluation and were discussed above. As indicated in **Table 3**, PCBs were detected in 27 of the 28 concrete samples at concentrations ranging from 0.92 mg/kg to 22 mg/kg. Of the 27 samples in which PCBs were detected, 25 concrete samples exceeded the regulatory criteria of 1.0 mg/kg and ranged in concentration from 1.15 mg/kg to 22 mg/kg.

A total of 13 wipe samples, identified as TRC-AOC-16I-WP-01 through TRC-AOC-16I-WP-13, were collected from AOC-16I and analyzed for PCBs during TRC's

investigation. Many of these samples were collected as part of the source evaluation and were discussed above. PCBs were detected in all 13 of the wipe samples collected from AOC-16I. The detected PCB concentrations in eight of the thirteen wipe samples exceeded the regulatory criteria of 10 µg/100 cm^2 and ranged in concentration from 11.5 µg/100 cm^2 to 92 µg/100 cm^2.

Four borings, identified as TRC-AOC-16I-SO-01 through TRC-AOC-16I-SO-04, were advanced beneath the concrete floor of the Condenser #7 area during TRC's investigation. Coring of the floor slab at these locations revealed that the concrete floor ranged in thickness from 7 to 9.5 inches. The depth to the top of the mat foundation from the bottom of the floor slab at these locations ranged from approximately 5 feet (TRC-AOC-16I-SO-04) to approximately 8 feet (TRC-AOC-16I-SO-01). Materials encountered in the interstitial fill generally consisted of a dark brown fine to medium sand that exhibited a petroleum-type odor at location TRC-AOC-16I-SO-01.

Two samples of the fill material between the floor slab and the building mat foundation were collected and analyzed from borings TRC-AOC-16I-SO-01, TRC-AOC-16I-SO-02 and TRC-AOC-16I-SO-04. Due to poor recoveries and difficulty during drilling, only one sample was collected and analyzed from TRC-AOC-16I-SO-03. In total, seven soil samples, identified as TRC-AOC-16I-SO-1(0-1), TRC-AOC-16I-SO-1(5.5-6.5), TRC-AOC-16I-SO-02(4-5), TRC-AOC-16I-SO-02(7-8), TRC-AOC-16I-SO-04(0-1), and TRC-AOC-16I-SO-04(4-5), were submitted for analysis of PCBs. As shown in **Table 4**, PCBs were not detected above the laboratory reporting limits in any of the seven soil samples collected from beneath the floor slab.

AOC-16EE – Level 1 Boiler #13 Area

This AOC includes the first floor of the Boiler #13 area, except for AOCs within the footprint of the Boiler #13 first floor that have separate specific AOC designations. Equipment still present in this area of the building includes two coal pulverizer foundations and associated primary air fans, air compressors, a condenser exhaust tank, and the ash hopper at the bottom of Boiler #13. Operations in this area consisted of coal crushing (for

use of coal at the burner level) and ash clean-out. Extensive staining of the floor was observed throughout the southern/southwestern portion of this area. Smaller areas of staining were also observed in other portions of the Boiler #13 area during reconnaissance. TRC identified the following potential sources of contamination during reconnaissance of AOC-16EE:

- Instrument Air Compressor Units (3);
- Primary Air Fans and Coal Pulverizers (2); and
- Furnace.

Residual oil samples, identified as TRC-AOC-16EE-OIL-01 through TRC-AOC-16EE-OIL-03, were collected from one of the air compressor units and each of the primary air fan and coal pulverizers observed in AOC-16EE and submitted for laboratory analysis of PCBs. As shown in **Table 1**, PCBs were detected in one of the three oil samples (TRC-ACO-16EE-OIL-03) at a concentration of 7.1 mg/kg. This sample was collected from the instrument air compressor located northern portion of AOC-16EE.

A total of eight wipe samples, identified as TRC-AOC-16EE-WP-01 through TRC-AOC-16EE-WP-08, were collected from the metal surfaces of each air compressor unit, primary fan and coal pulverizer, and the furnace and submitted for laboratory analysis of PCBs. As shown in **Table 2**, PCBs were detected in six of the eight samples at concentrations ranging from 0.40 µg/100 cm^2 to 36 µg/100 cm^2. The PCB detection in one wipe sample, TRC-AOC-16EE-WP-06, collected from the drain plug of the air compressor unit #2 was at a concentration above the regulatory criteria of 10 µg/100 cm^2. In addition, one wipe sample, TRC-AOC-16EE-WP-09, was collected from a condenser exhaust tank located in the northwestern portion of AOC-16EE and submitted for PCB analysis. PCBs were not detected above the laboratory reporting limits in this sample.

To evaluate potential tracking of PCB contamination through AOC-16EE, three wipe samples, identified as TRC-AOC-16EE-WP-10 through TRC-AOC-16EE-WP-12, were collected from the stairwell landings and stairs leading into AOC-16EE from Level 2 of the Boiler #13 area and submitted for PCB analysis. PCBs were detected in all three

wipe samples at concentrations ranging from 0.80 µg/100 cm^2 to 2.4 µg/100 cm^2, which is below the regulatory criteria of 10 µg/100 cm^2.

A total of 64 concrete samples, identified as TRC-AOC-16EE-CO-01 through TRC-AOC-16EE-CO-60 and field duplicate samples TRC-AOC-16EE-CO-01B, TRC-AOC-16EE-CO-15B, TRC-AOC-16EE-CO-35B, and TRC-AOC-16EE-CO-49B were collected from the first-floor area of AOC-16EE and analyzed for PCBs during TRC's investigation. As shown in **Table 3**, PCBs were detected in all 64 of the concrete samples collected from AOC-16EE at concentrations ranging from 0.77 mg/kg to 22,000 mg/kg. Of the 64 samples where PCBs were detected, 49 concrete samples exceeded the regulatory criteria of 1.0 mg/kg.

Fifteen soil borings, identified as TRC-AOC-16EE-SO-01 through TRC-AOC-16E-SO-15 plus duplicates, were advanced beneath the concrete floor of the Boiler #13 area during TRC's investigation. Coring of the floor slab at these locations revealed that the concrete floor ranged in thickness from 6 to 14 inches. The depth to the top of the mat foundation from the bottom of the floor slab at these locations ranged from approximately 6 feet (TRC-AOC-16EE-SO-01, TRC-AOC-16EE-SO-02, TRC-AOC-16EE-SO-05, TRC-AOC-16EE-SO-06 and TRC-AOC-16EE-SO-15) to approximately 8 feet (TRC-AOC-16EE-SO-11). Materials encountered in the interstitial fill generally consisted of a brown fine to medium wet sand with varied amounts of silt, coarse sand, and gravel that exhibited a solvent-type odor (TRC-AOC-16EE-SO-07 through TRC-AOC-16EE-SO-14). Copies of the boring logs for these borings are included as **Appendix B**.

Two samples of the fill material between the floor slab and the building mat foundation were collected and analyzed from each of the fifteen borings (30 samples plus four duplicate samples), identified as TRC-AOC-16EE-SO-01(0-1), TRC-AOC-16EE-SO-01(5-6), TRC-AOC-16EE-SO-02(0-1), TRC-AOC-16EE-SO-02(6-7), duplicate sample TRC-AOC-16EE-SO-02B(6-7), TRC-AOC-16EE-SO-03(0-1), duplicate sample TRC-AOC-16EE-SO-03B(0-1), TRC-AOC-16EE-SO-03(6-7), TRC-AOC-16EE-SO-04(0-1), TRC-AOC-16EE-SO-04(6-7), TRC-AOC-16EE-SO-05(0-1), TRC-AOC-16EE-SO-05(5-

6), TRC-AOC-16EE-SO-06(0-1), TRC-AOC-16EE-SO-06(5-6), TRC-AOC-16EE-SO-07(0-1), TRC-AOC-16EE-SO-07(6-7), TRC-AOC-16EE-SO-08(0-1), TRC-AOC-16EE-SO-08(6-7), duplicate sample TRC-AOC-16EE-SO-08(6-7), TRC-AOC-16EE-SO-09(0-1), TRC-AOC-16EE-SO-09(6-7), TRC-AOC-16EE-SO-10(0-1), TRC-AOC-16EE-SO-10(6-7), TRC-AOC-16EE-SO-11(0-1), TRC-AOC-16EE-SO-11(7-8), TRC-AOC-16EE-SO-12(0-1), TRC-AOC-16EE-SO-12(6-7), TRC-AOC-16EE-SO-13(0-1), TRC-AOC-16EE-SO-13(6-7), TRC-AOC-16EE-SO-14 (0-1), TRC-AOC-16EE-SO-14(6-7), TRC-AOC-16EE-15(0-1), TRC-AOC-16EE-15(5-6) and duplicate sample TRC-AOC-16EE-15(5-6) and submitted for laboratory analyses of PCBs.

As shown in **Table 4**, PCBs were detected in 21 of the 34 soil samples collected from beneath the floor slab in AOC-16EE at concentrations ranging from 0.12 mg/kg to 17,000 mg/kg. Of the 21 samples in which PCBs were detected, 13 soil samples exceed the regulatory criteria 1.0 mg/kg and ranged from 2.1 mg/kg to 17,000 mg/kg.

AOC-16FF – Boiler #13 Transformers

There were two transformers (both 1,500 kVa; one identified as "30B" (east) and the other identified as "7B" (west) removed in October 2019) located on the south end of Boiler #13, along the wall that separates Boilers #13 and #14. Both transformers were affixed with the ML mark and contain PCBs > 500ppm, indicating they are considered PCB Transformers as defined in 40 CFR 761.3. Both transformers were situated adjacent to one another in an east/west orientation within a concrete secondary containment. Extensive staining of the floor was identified within and surrounding the secondary containment in which the transformers were located. Due to the deteriorated condition of the building, including numerous roof leaks, the secondary containment structure in which these transformers sit contained water. To facilitate characterization sampling of the secondary containment structure, the standing water was drained and containerized for characterization and sent offsite for proper disposal at Clean Harbors Deer Park, LLC in La Porte, Texas. TRC identified the following potential sources of contamination during reconnaissance of AOC-16FF:

- 1,500 kVa Transformers (2).

During the investigation of AOC-16FF, one oil sample, identified as TRC-AOC-16FF-OIL-01, was collected from the bottom of the eastern transformer (30B) and submitted for PCB analysis. Oil was not available in the western transformer (7B) to sample. The oil was described as a clear viscous liquid. As indicated in **Table 1**, PCBs were detected at a concentration of 540,000 mg/kg in sample TRC-AOC-16FF-OIL-01. In addition, two wipe samples were collected from each transformer (4 wipe samples total), identified as TRC-AOC-16FF-WP-01 through TRC-AOC-16FF-WP-04, and submitted for PCB analysis. As indicated on **Table 2**, PCBs were detected in all four wipe samples at concentrations ranging from 180 µg/100 cm^2 to 490,000 µg/100 cm^2, all of which are well above the regulatory criteria of 10 µg/100 cm^2.

As shown on **Figure 3**, a total of seven concrete samples, identified as TRC-AOC-16FF-CO-01 through TRC-AOC-16FF-CO-07, were collected from within the secondary containment areas of AOC-16FF and analyzed for PCBs. As shown in **Table 4**, PCBs were detected in all seven concrete samples at concentrations ranging from 32,000 mg/kg to 65,000 mg/kg, which are well above the regulatory criteria of 1.0 mg/kg.

Two borings, identified as TRC-AOC-16FF-SO-01 through TRC-AOC-16FF-SO-02, were advanced beneath the concrete floor in the Boiler #13 area northwest of the former transformer area. Coring of the floor slab at these locations revealed that the concrete floor ranged in thickness from 8 to 9 inches. The depth to the top of the mat foundation from the bottom of the floor slab at these locations was approximately 6 feet. Materials encountered in the interstitial fill generally consisted of a dark brown fine to medium sand that exhibited a mild solvent odor at location TRC-AOC-16FF-SO-01 and no odor staining in TRC-AOC-16FF-SO-02.

Two samples of the fill material between the floor slab and the building mat foundation were collected and analyzed from borings TRC-AOC-16FF-SO-01 and TRC-AOC-16FF-SO-02. In total, four soil samples, identified as TRC-AOC-16FF-SO-1(0-1), TRC-AOC-16FF-SO-1(5-6), TRC-AOC-16FF-SO-02(0-1) and TRC-AOC-16FF-SO-02(5-

6) were submitted for analysis of PCBs. As shown in **Table 4**, PCBs were not detected (<1 mg/kg) above the laboratory reporting limits in the four soil samples collected from beneath the floor slab.

AOC-16HH – Manhole Structures in Boiler #13 Area

There are two manholes located to the west of the former 1,500 kVa transformers and immediately adjacent to the staircase located in the south/central portion of the Boiler #13 area that provide access to subsurface vaults and that constitute AOC-16HH. The exact purpose of the vaults is not known. Conduit banks were observed on the sidewalls of each manhole. During the pre-investigation site inspection, staining was observed around these manholes.

To evaluate potential tracking over the manholes, one wipe sample (2 wipe samples total), identified as TRC-AOC-16HH-WP-01 and TRC-AOC-16HH-WP-02, were collected from each steel manhole cover and submitted for laboratory analysis of PCBs. As indicated on **Table 2**, PCBs were detected in both wipe samples at concentrations of 450 µg/100 cm^2 and 1,800 µg/100 cm^2, respectively. Both PCB detections are above the regulatory criteria of 10 µg/100 cm^2.

At the time of sampling, the interior of each manhole was inspected. Both manholes consisted of a vault with empty conduit banks. The cables from within the conduits have been removed. No solids were present at the bottom of the vaults. TRC observed oil inside of the southeastern manhole. One oil sample (TRC-AOC-16HH-OIL-01), was collected from the manhole and submitted for PCB analysis. PCBs were detected at a concentration of 1,150 mg/kg. Green, murky water was also observed inside of the northwestern manhole located in AOC-16HH. One water sample, identified as TRC-AOC-16HH-SW-01, was collected from the water inside of the manhole and submitted to the laboratory for PCBs. PCBs were detected at a concentration of 8.2 µg/L.

One boring identified as TRC-AOC-16HH-SO-01 was advanced beneath the concrete floor in the Boiler #13 area west of former electrical vaults during TRC's

investigation. Coring of the floor slab at this location revealed that the concrete floor 8 inches thick. The depth to the top of the mat foundation from the bottom of the floor slab at this location was approximately 6 feet. Materials encountered in the interstitial fill generally consisted of a brown fine to medium sand with no odor at TRC-AOC-16HH-SO-01.

Two samples of the fill material between the floor slab and the building mat foundation were collected and analyzed from boring TRC-AOC-16HH-SO-01. Two soil samples identified as TRC-AOC-16HH-SO-1(0-1) and TRC-AOC-16HH-SO-1(5-6) were submitted for analysis of PCBs. As shown in **Table 4**, PCBs were not detected (<1 mg/kg) above the laboratory reporting limits in the two soil samples collected from beneath the floor slab.

As indicated in **Table 5**, PCBs were detected in the water sample (TRC-AOC-16HH-SW-01) at concentrations of 8.2 µg/L, which exceeds the regulatory criteria of 0.5 µg/L.

AOC-17C – Drainage System Beneath Condenser Unit #7 Area

As shown on **Figure 3**, a floor/trench drain system and associated piping is present in the vicinity of Condenser Unit #7. Floor drains, trench drains, and sumps present throughout the Condenser Unit #7 area (and Boiler #13 area in general) are piped directly to sumps within Boiler #13 that formerly discharged to the sanitary sewer. Both drainage systems were pumped from sumps inside Boiler #13 are to the sanitary sewer pump station sump pit on the east side of the building, which discharged to the City sewer on Grand Avenue. Three concrete samples, 3 solids samples, 1 oil sample and duplicate were collected from AOC-17C as part of TRC's investigation. The concrete samples were collected from the trench drains located in the vicinity of Condenser #7; specifically, sample TRC-AOC-17C-CO-01 was collected from the trench drain to the southeast of the condenser unit and samples TRC-AOC-17C-CO-02 and TRC-AOC-17C-CO-03 were collected from the trench drain to the southwest of the condenser unit. Samples TRC-AOC-17C-SED-01 and TRC-AOC-17C-SED-02 (and duplicate sample TRC-AOC-17C-SED-02B) were collected from

trench drains located to the west/southwest of Condenser #7 and to the south/southeast of Condenser #7, respectively. It was noted that both trench drains contained water, however there was not enough to allow for the collection of samples. There was, however, an oil layer atop the water where sample TRC-AOC-17C-SED-01 was collected that was able to be sampled. The third solids sample was collected from a floor drain located off of the northwestern corner of Condenser #7.

As shown in **Table 1**, the one oil sample (TRC-AOC-17C-OIL-01) from atop the water surface collected from AOC-17C exhibited PCBs at a concentration of 69 mg/kg. As shown in **Table 6**, there were no VOCs detected in any of the 3 solids samples (or the duplicate sample) collected from AOC-17C as part of this investigation. PCBs were detected in all 3 solids samples at concentrations ranging from 6.0 mg/kg in sample TRC-AOC-17C-SED-03 to 19 mg/kg in sample TRC-AOC-17C-SED-02, and all three samples exceed the regulatory criteria of 1.0 mg/kg.

As indicated in **Table 3**, PCBs were detected in all three concrete samples (plus the duplicate sample) collected from AOC-17C at concentrations ranging from 0.78 mg/kg to 4.6 mg/kg. Of the three samples in which PCBs were detected, two samples, plus the duplicate exceed the regulatory criteria of 1.0 mg/kg.

AOC-17F – Drainage System Beneath Boiler #13 Area

As shown on **Figure 3**, a trench and floor drain system along with associated piping is present beneath the majority of the Boiler #13 area. The trench and floor drains provide a potential migration pathway for spills and releases associated with oil and chemical storage and mechanical systems present on Level 1. The floor and trench drain network in this area is connected to two sumps; one located along the northeastern wall of the Boiler #13 area and one located in the southeast corner of the Boiler #13 area. The drainage system in this area is separated into two parts that run parallel to the cooling water pipe tunnel that fed the Condenser #7 / Boiler #13 system. One floor and trench drain system is located in the northern portion of this area and drains to the sump located

in the northeastern corner of the area. The second floor and trench drain system is located in the southern portion of the Boiler #13 area and drains to a sump located in the southeast corner of the area. Both drainage systems were pumped from sumps inside Boiler #13 to the sanitary sewer pump station sump pit on the east side of the building, which discharged to the City sewer on Grand Avenue. The floor and trench drain system is separate from the Cooling Water Discharge piping (AOC-19B) and runs parallel to the cooling water discharge pipe trench. This infrastructure makes up AOC-17F.

During the investigation of AOC-17F, TRC observed an oil layer floating atop the water in a trench drain located in the southwestern portion of this AOC. One oil sample, identified as TRC-AOC-17F-OIL-01, was collected and analyzed for PCBs. As indicated on **Table 1**, PCBs were detected in this sample at a concentration of 124 mg/kg. The surface water observed in the trench drain was sampled as well as solids and concrete collected from the bottom of the drain. The results of these sample matrices are discussed in detail below. Oil was not identified in any of the remaining floor drains/cleanouts, trench drains, or sumps located in AOC-17F.

As shown on **Figure 3**, three wipe samples, identified as TRC-AOC-17F-WP-01 through TRC-AOC-17-WP-03, were collected from the steel covers of each of the sumps located in AOC-17F and submitted for PCB analysis. As indicated in **Table 2**, PCBs were detected in all three wipe samples at concentrations ranging from 0.56 µg/100 cm^2 to 5.4 µg/100 cm^2. The reported PCB concentrations are all below the regulatory criteria of 10 µg/100 cm^2.

Water, solids, and concrete samples were collected from AOC-17F floor drains/clean-outs, trench drains and sumps as part of TRC's interior investigation. Specifically, there were a total of 14 water samples collected, identified as TRC-AOC-17F-SW-01 through TRC-AOC-17F-SW-13 and one duplicate sample, TRC-AOC-17F-SW-01B. A total of 16 solids samples were collected, identified as TRC-AOC-17F-SED-01 through TRC-AOC-17F-SED-14 and two duplicate samples, TRC-AOC-17F-SED-01B and TRC-AOC-17F-SED-10B. Lastly, a total of four concrete samples were collected,

identified as TRC-AOC-17F-CO-01 through TRC-AOC-17F-CO-04.

All 14 water samples and 16 solids samples were submitted to the laboratory for PCB analyses. Concrete samples were submitted for laboratory analysis of PCBs only. As shown on **Figure 3**, many water, solids and/or concrete samples were co-located. Three borings, identified as TRC-AOC-17F-SO-01 through TRC-AOC-17F-SO-03, were advanced beneath the concrete floor in the Boiler #13 area adjacent to a floor drain and two floor drain sumps. Coring of the floor slab at these locations revealed that the concrete floor ranged in thickness from 8 to 9 inches. The depth to the top of the mat foundation from the bottom of the floor slab at these locations was approximately 6 feet. Materials encountered in the interstitial fill generally consisted of brown and dark brown fine to medium sand that exhibited a mild petroleum odor at TRC-AOC-17F-SO-01 and strong to mild solvent odor at location TRC-AOC-17F-SO-02.

Two samples of the fill material between the floor slab and the building mat foundation were collected and analyzed from borings TRC-AOC-17F-SO-01 through TRC-AOC-17F-SO-03. In total, six soil samples, identified as TRC-AOC-17F-SO-1(0-1), TRC-AOC-17F-SO-1(5-6), TRC-AOC-17F-SO-02(0-1), TRC-AOC-17F-SO-02(5-6), TRC-AOC-17F-SO-03(0-1) and TRC-AOC-17F-SO-03(5-6) were submitted for analysis of PCBs. As shown in **Table 4**, PCBs were not detected (<1 mg/kg) above the laboratory reporting limits in four soil samples collected from beneath the floor slab. PCBs were detected above laboratory reporting limits TRC-AOC-17F-SO-02(0-1) and TRC-AOC-17F-SO-02(5-6) at 0.26 mg/kg and 0.12 mg/kg respectively.

As shown in **Table 5**, PCBs were detected in 11 of the 14 water samples, at concentrations ranging from 0.91 µg/L to 450 µg/L. All 11 surface water samples exceed the regulatory criteria of 0.5 µg/L.

PCBs were detected in all 16 solids samples at concentrations ranging from 0.25 mg/kg to 47,000 mg/kg. Of the 16 solids samples in which PCBs were detected, 14 solids samples exhibited PCBs at concentrations exceeding the regulatory criteria of 1 mg/kg.

As indicated in **Table 3**, PCBs were detected in all four concrete samples collected from the bottoms of the trench drains in AOC-17F at concentrations ranging from 1.8 mg/kg to 18 mg/kg. All of the reported PCB concentrations were above the regulatory criteria of 1.0 mg/kg.

AOC-19B - Cooling Water Intake and Discharge Associated with Boiler #13

As shown on **Figure 5**, cooling water for high-pressure boiler system (Boiler #13) entered from the Mill River on the west side of the facility, through Screen House #3 (AOC-16E), in an open channel that terminates inside of Screen House #3. From the terminus of the intake tunnel at the sealed pump intake chamber (**Figure 6)**, the cooling water was pumped through twin 42-inch diameter piping to Condenser #7. The twin pipes sat inside a rectangular reinforced concrete pipe trench directly beneath the first-floor slab. The top of the pipe trench is covered either with steel plates or concrete filled steel grating panels. This cooling water pipe system was a closed, once-through cooling system and is not connected to the other floor drains, trench drains and/or sumps located within the Boiler #13 area. This infrastructure makes up this segment of AOC-19B.

Any specific potential sources of PCB contamination/equipment associated with the functioning of the cooling water system is not discussed as part of this sub-surface AOC, rather in the portion of AOC-16, discussed above. The investigation of AOC-19B focused on the collection of oil and surface water from the cooling water pipe trench (note that there were no solids observed in the bottom of the cooling water pipe trench at the sampling locations, therefore the proposed sampling for that media could not be carried out).

Intake – West of Condenser #7 (AOC19B)

On October 4, 2018, one water sample (TRC-AOC-19B-SW-01) and a duplicate sample were collected from the sealed intake pump chamber (**Figure 6**) in Screen House #3 for PCB analysis. It was observed on that date that there was an oil layer floating on top of the surface water inside the sealed intake pump chamber and a decision was made subsequently to sample (TRC-AOC-19B-OIL-01) the oil layer for PCBs. PCBs were

detected in the water sample and its duplicate at concentrations of 21.1 µg/L and 0.66 µg/L, which exceed the regulatory criteria of 0.5 µg/L.

The results of the analysis of the oil sample (TRC-AOC-19B-OIL-01) from the sealed intake pump chamber at the same location as the surface water sample in the sealed intake pump chamber indicated the presence of PCBs at a concentration of 35.9 mg/kg.

A second oil sample identified as TRC-AOC-19B-OIL-02 was collected from the portion of the cooling water discharge pipe trench to the east of Condenser #7. As indicated in **Table 1**, PCBs were not detected above reporting limits in this oil sample.

On February 6, 2019, one oil sample (TRC-AOC-19B-OIL-08), one water sample (TRC-AOC-19B-SW-08), and one solids sample (TRC-AOC-19B-SED-08) were collected from an area of the intake cooling water pipe trench between Condenser #7 and the sealed intake pump chamber in Screen House #3, where an oily stain was observed leading to the cooling water pipe trench. Oil sample TRC-AOC-19B-OIL-08 was collected from a floating layer of oil present on the water surface within the cooling water intake pipe trench and submitted for laboratory analysis of PCBs. As indicated in **Table 1**, PCBs were detected at a concentration of 260 mg/kg in this oil sample. Water sample TRC-AOC-19B-SW-08 was collected from beneath the oil layer at the same location and submitted for laboratory analysis of PCBs. PCBs were detected in this surface water sample at a concentration of 190 µg/L, which exceeds the regulatory criteria of 0.5 µg/L. One boring identified as TRC-AOC-19B-SO-01 was advanced beneath the concrete floor in adjacent to the north side of the cooling water intake pipe trench during TRC's investigation. Coring of the floor slab at this location revealed that the concrete floor 9 inches thick. The depth to the top of the mat foundation from the bottom of the floor slab at this location was approximately 6 feet. Materials encountered in the interstitial fill generally consisted of a brown fine to medium sand with no odor in the upper part and grey medium to coarse gravel fill with concrete and brick fragments with no odor at TRC-AOC-19B-SO-01.

Two samples of the fill material between the floor slab and the building mat foundation were collected and analyzed from boring TRC-AOC-19B-SO-01. Two soil samples identified as TRC-AOC-19B-SO-1(0-1) and TRC-AOC-19B-SO-1(5-6) were submitted for analysis of PCBs. As shown in **Table 4**, PCBs were not detected (<1 mg/kg) above the laboratory reporting limits in the two soil samples collected from beneath the floor slab.

Solids sample TRC-AOC-19B-SED-08 was collected at the same location as oil sample TRC-AOC-19B-OIL-08 and water sample TRC-AOC-19B-SW-08 and submitted for laboratory analysis of PCBs. As indicated in **Table 6**, PCBs were reported at a concentration of 88 mg/kg in this solids sample, which exceeds the regulatory criteria 1.0 mg/kg.

Water sample TRC-AOC-19B-SW-10 was collected from revolving screen pit 7-2 on the west side of Screen House #3. This sample was analyzed for PCBs. As indicated on **Table 5**, sample TRC-AOC-19B-SW-10 had PCBs reported at a concentration of 0.69 µg/L, which exceeds the regulatory criteria of 0.5 µg/L.

Discharge - East of Condenser #7 (AOC-19B)

TRC's investigation of this portion of AOC-19B included the collection of 4 oil samples, 5 co-located, water, solids samples and duplicates. Oil samples TRC-AOC-19B-OIL-05 and TRC-AOC-19B-OIL-09 were collected from the cooling water pipe trench on the western side of Boiler #13 and submitted for PCB analysis. As indicated in **Table 1**, PCBs were detected at a concentration of 430 mg/kg in sample TRC-AOC-19B-OIL-05, and at a concentration of 560 mg/kg in sample TRC-AOC-19B-OIL-09. Oil samples TRC-AOC-19B-OIL-04 and TRC-AOC-19B-OIL-06 were collected from the discharge portion of the cooling water trench on the eastern side of Boiler #13 and submitted for PCB analysis. PCBs were detected at concentrations of 276 mg/kg and 167 mg/kg in samples TRC-AOC-19B-OIL-04 and TRC-AOC-19B-OIL-06, respectively. The cooling water discharge pipe trench has a solid bulkhead that the cooling pipes penetrate at the

east wall of Boiler #13. Oil was not found in the cooling water discharge pipe trench east of the bulkhead.

Two borings, identified as TRC-AOC-19B-SO-02 through TRC-AOC-19B-SO-03, were advanced beneath the concrete floor in the Boiler #13 area adjacent to and north of the cooling water discharge pipe trench. Coring of the floor slab at these locations revealed that the concrete floor thickness to be 8 inches. The depth to the top of the mat foundation from the bottom of the floor slab at these locations was approximately 7 feet. Materials encountered in the interstitial fill generally consisted of a brown fine to medium sand with no odor or staining.

Two samples of the fill material between the floor slab and the building mat foundation were collected and analyzed from borings TRC-AOC-19B-SO-02 and TRC-AOC-19B-SO-03. In total, four soil samples, identified as TRC-AOC-19B-SO-2(0-1), TRC-AOC-19B-SO-2(5-6), TRC-AOC-19B-SO-03(0-1) and TRC-AOC-19B-SO-03(5-6) were submitted for analysis of PCBs. As shown in **Table 4**, PCBs were not detected (<1 mg/kg) above the laboratory reporting limits in the four soil samples collected from beneath the floor slab.

Five water samples (TRC-AOC-19B-SW-04 through TRC-AOC-19B-SW-07, and TRC-AOC-19B-SW-09) were collected from the cooling water discharge pipe trench associated with Boiler #13. Samples TRC-AOC-19B-SW-04 and TRC-AOC-19B-SW-06 were collected to the east of Boiler #13, while samples -05 and -09 were collected to the west of Boiler #13. Sample TRC-AOC-19B-SW-07 was collected from the cooling water trench below the ash load-out area, on the east side of the main building exterior wall. All five water samples were analyzed for PCBs. As indicated in **Table 5**, PCBs were reported at concentrations of 190 µg/L, 930 µg/L, 0.80 µg/L, and 210 µg/L in samples TRC-AOC-19B-SW-04, TRC-AOC-19B-SW-05, TRC-AOC-19B-SW-06, and TRC-AOC-19B-SW-09 respectively, which exceed the regulatory criteria of 0.5 µg/L. PCBs were non-detect (<0.2 µg/L) in the water sample TRC-AOC-19B-SW-07 and duplicate taken from the cooling water discharge pipe trench beneath the Ash Loadout Structure east of the Boiler

#13 area.

Five solids samples (TRC-AOC-19B-SED-04 through TRC-AOC-19B-SED-07, and TRC-AOC-19B-SED-09) were collected from the cooling water discharge pipe trench associated with Boiler #13. Samples TRC-AOC-19B-SED-04 and TRC-AOC-19B-SED-06 were collected to the east of Boiler #13, while samples TRC-AOC-19B-SED-05 and TRC-AOC-19B-SED-09 were collected to the west of Boiler #13. Sample TRC-AOC-19B-SED-07 was collected from the cooling water discharge pipe trench below the ash load out area, on the east side of the main building exterior wall. All five solids samples were analyzed for PCBs. PCBs were detected in four of the five solids samples collected from AOC-19B at concentrations ranging from 2.4 mg/kg to 33 mg/kg, which all exceed the regulatory criteria of 1.0 mg/kg.

4.0 REMEDIAL ACTION PLAN

This section outlines the plans and procedures to be implemented for the remediation of PCB impacted concrete, soils, solids, liquids and debris within the Boiler #13 Area IRM and the assessment of concrete mat foundation, cooling water pipe trench, condenser pit and sealed cooling water intake pump chamber. Planned PCB remediation activities will be completed in accordance with the requirements of 761.61(b) – Performance Based Disposal. Details regarding the remedial objectives, scope, and sequence of remediation are provided below. A more detailed description for the verification sampling activities is being provided in a separate Scope of Study to the CTDEEP.

4.1 Remedial Goals

This RAP only addresses environmental issues related to PCBs within the segment of Boiler #13 identified on **Figure 3**. There are other COCs that are described in the previous section and they are presented to provide information for proper waste management and disposal. The goal of the Boiler #13 Area IRM detailed in this RAP is to perform remediation in compliance with the regulations as stated in 40 CFR §761.61(b),

and the PCO. Since this RAP is an interim measure it is intended to remove only specific PCB impacted areas within the Boiler #13 Area IRM limits and to perform verification as required under 40 CFR 761.61(b) within these areas. The presence of floor slabs, soil, liquids, debris, pipes and bottom solids covering these concrete materials prevents the delineation of PCBs within these materials without adversely affecting PCB migration. The removal of soil, liquids and bottom solids covering these concrete materials will allow safe access to these materials to perform complete horizontal and vertical delineation in accordance with Subpart O of 40 CFR 761. **Appendix A** contains photographs of the various areas described below. **Figure 3** shows the limits of the AOCs described below and **Figures 4, 5 and 6** provide detailed drawings of the areas described below. More specifically, the remedial goals for this project are:

AOC-16E – Screen House #3 & AOC-19B – Sealed Cooling Water Intake Pump Chamber (Figures 5 & 6)

- Remove and dispose of the cathodic rectifier unit (El-Cab1), two cooling water intake pumps, pump motors and twin 42-inch diameter cooling water pipes as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2) and **liquid PCB remediation waste** in accordance with §761.61(b)(1).

- Remove and dispose of water and free phase oil from within the sealed cooling water intake pump chamber as **liquid PCB remediation waste** in accordance with §761.61(b)(1).

- Remove and dispose of solids from within the sealed cooling water intake pump chamber as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Surface clean and decontaminate the inside of the sealed cooling water intake pump chamber. Collect the liquid residue from this process and dispose of as **liquid PCB remediation waste** in accordance with §761.61(b)(1).

- Perform porous media sampling of the interior surfaces of the concrete sealed cooling water intake pump chamber according to the requirements of 40 CFR Part 761 Subpart O to verify the horizontal and vertical impacts of residual PCB contamination within the concrete to be addressed as part of a future remedial action.

AOC-16I – Condenser Unit #7 Area (Figure 4)

The cooling water condenser units sit above the condenser pit above the first floor. The twin 42-inch cooling water pipes have been disconnected from the condensers and the inlet and outlet sections of the pipes are lying in the bottom of the condenser pit. The condensers have been dismantled and only the outer steel housings remain. The condenser pit has standing water and oil present. Debris is lying in the condenser pit. There are also several pieces of oil storage, oil filtering, pumps and ancillary small diameter piping that were part of the turbine-generator bearing/seal lubricating system that sit inside the condenser pit.

- Remove and dispose of water and free phase oil from within the condenser pit as **liquid PCB remediation waste** in accordance with §761.61(b)(1).
- Remove and dispose of the twin 42-inch diameter cooling water pipes as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).
- Remove and dispose of the debris, pumps, piping and turbine-generator lubricating oil system components from within the condenser pit as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).
- Drain, remove and dispose of the two rectifier units (El-Cab2 and El-Cab3) as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2). Liquids will be disposed as **liquid PCB remediation waste** in accordance with §761.61(b)(1).
- Remove and dispose of solids from within the condenser pit as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).
- Surface clean and decontaminate the inside of the condenser pit. Collect the liquid residue from this process and dispose of as **liquid PCB remediation waste** in accordance with §761.61(b)(1).
- Perform porous media sampling of the interior surfaces of the concrete condenser pit according to the requirements of 40 CFR Part 761 Subpart O to verify the horizontal and vertical impacts of residual PCB contamination within the concrete to be addressed as part of a future remedial action.

AOC-16EE – Level 1 Boiler #13 Area & AOC-16FF – Boiler #13 Transformers (Figure 4)

- Remove the reinforced concrete slab within the limits shown on **Figure 4** and dispose of the material as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Remove free water (dewater) from the soil material (interstitial fill) from beneath the first-floor slab and above the reinforced concrete mat foundation (the Mat) and dispose of the material as **liquid PCB remediation waste** in accordance with §761.61(b)(1).

- Remove the interstitial fill within the limits shown on **Figure 4** and dispose of the material as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Vacuum the surface of the Mat and other concrete foundation elements that have been exposed from the removal of the interstitial fill. Dispose of the material as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Perform porous media sampling of the Mat and concrete foundations according to the requirements of 40 CFR Part 761 Subpart O to verify the horizontal and vertical impacts of residual PCB contamination within the concrete to be addressed as part of a future remedial action.

AOC-16HH – Manhole Structures in Boiler #13 Area (Figure 4)

There are two manholes located to the west of the former 1,500 kVa transformers and immediately adjacent to the staircase located in the south/central portion of the Boiler #13 area that provide access to subsurface vaults and that constitute AOC-16HH.

- Remove and dispose of water and free phase oil from within the manholes as **liquid PCB remediation waste** in accordance with §761.61(b)(1).

- Remove and dispose of solids from within the manholes as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Remove and dispose of concrete manhole structures, manhole frames and covers, conduit, duct bank, drainpipes and other equipment inside the manholes as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Perform porous media sampling of the bottom surfaces of the manholes or the Mat according to the requirements of 40 CFR Part 761 Subpart O to verify the horizontal and vertical impacts of residual PCB contamination within the concrete to be addressed as part of a future remedial action.

AOC-17C – Drainage System Beneath Condenser Unit #7 Area and AOC-17F – Drainage System Beneath Boiler #13 Area (Figure 3)

The portions of these drainage systems that will be directly impacted by removal of a portion of the first-floor slab and interstitial fill are included in the IRM RAP. Floor drains, trench drains, piping systems and sump pits are included in the remediation described below.

- Remove and dispose of water and free phase oil from within the floor drains, trench drains, pipes and sump pits as **liquid PCB remediation waste** in accordance with §761.61(b)(1).
- Remove and dispose of solids from within the floor drains, trench drains, pipes and sump pits as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).
- Remove and dispose of pipe, floor drains, grating, sump pumps, ancillary sump pit equipment and the concrete sump pit structures as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).
- Perform porous media sampling of the bottom surfaces of the sump pits or the Mat according to the requirements of 40 CFR Part 761 Subpart O to verify the horizontal and vertical impacts of residual PCB contamination within the concrete to be addressed as part of a future remedial action.

AOC-19B - Cooling Water Intake and Discharge Associated with Boiler #13 (Figures 4 & 5)

There are two separate sections of AOC-19B that are covered in this portion of the IRM RAP. The first is the cooling water intake section between the sealed intake pump chamber and the Condenser #7 pit. The second is the cooling water discharge section from the Condenser #7 pit and the east wall of Boiler #13, not including the ash loadout structure.

- Remove and dispose of the cooling water pipe trench steel covers, the concrete filled steel grate covers and steel supports as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Remove and dispose of water and free phase oil from within the condenser pit as **liquid PCB remediation waste** in accordance with §761.61(b)(1).

- Remove and dispose of the twin 42-inch diameter cooling water pipes as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Remove and dispose of solids from within the cooling water pipe trench as **non-liquid PCB remediation waste** in accordance with §761.61(b)(2).

- Surface clean and decontaminate the inside of the concrete cooling water pipe trench. Collect the liquid residue from this process and dispose of as **liquid PCB remediation waste** in accordance with §761.61(b)(1).

- Perform porous media sampling of the sides and bottom surfaces of the concrete cooling water pipe trench and solid bulkheads according to the requirements of 40 CFR Part 761 Subpart O to verify the horizontal and vertical impacts of residual PCB contamination within the concrete to be addressed as part of a future remedial action.

4.2 Remediation Sequence and Procedures

4.2.1 Site Preparations

Prior to the start of remediation, the areas requiring excavation will be surveyed and marked in the field. Survey control will be established for use during the performance of excavation and verification activities for horizontal and vertical control of the work. One or more exclusion zones (EZs) will be delineated in the field with the placement of orange poly construction fencing and signage. The entry/exit to each EZ will have a decontamination area for personnel entering and leaving the EZ to don and doff personal protective equipment (PPE). Waste storage area(s) for drummed PPE and other spent decontamination supplies will be established by the contractor with agreement from UI.

The recommended entrance for equipment and waste hauling vehicles will be the east side overhead door opening into Boiler #13 adjacent to the Ash Loadout Structure. The contractor will establish a clean surface for equipment to operate from the paved clean corridor at the north end of the building running parallel to the building along the

east side to the Boiler #13 overhead door entrance. Equipment and waste hauling vehicles entering and leaving the site that don't enter the EZs will not require decontamination.

4.2.2 Dust Control and Air Monitoring

The dust control measures and air monitoring program to be implemented during the planned remediation activities that are the subject of this RAP were based on the requirements and guidance provided the following documents and regulations:

- PCB Regulations 22a-463 through 469
- Connecticut's Occupational Safety and Health Administration (CONN-OSHA).
- Code of Federal Regulations (CFR) Title 29: Labor: U.S. Occupational Safety and Health Administration (OSHA), including, but not limited to the following:
  - 29 CFR 1910.1000-Air Contaminants
  - 29 CFR 1910.1001-General Industry Standard for Asbestos
  - 29 CFR 1926.1101-Asbestos in Construction Regulations
- CFR Title 40: Protection of Environment, including but not limited to the following:
  - 40 CFR 50 - National Ambient Air Quality Standards
  - 40 CFR Part 61 Subpart M-Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)
  - 40 CFR Part 761-PCB Regulations
  - 40 CFR 260-273-Resouce Conservation and Recovery Act
- American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values 2021
- Connecticut Department of Public Health (CTDPH) 19a-332a-1 through 16, 20-440-1 through 9 & 20-441-Standards for Asbestos Abatement, Licensure and Training

Dust monitoring for total particulate emissions and fugitive dust within work areas and at the site perimeter will be implemented during equipment management and remediation activities to provide real-time feedback on the effectiveness of work practices

implemented to reduce potential exposures to on- and off-site receptors during remediation. Monitoring will be conducted continuously using real-time measurement equipment. One dust monitor shall be located inside the building adjacent to the active work area and outside the building directly downwind of the work area. The third station will be located on the upwind side of the work area.

Work under this RAP shall be conducted in a way that will not result in excessive particulate matter emissions, nuisance dust conditions, PM_{10} emissions, or PM_{10} concentrations exceeding the Connecticut and National Ambient Air Quality Standard of 150 micrograms per meter cubed ($\mu g/m^3$) on 24-hour average basis within the work area for the protection of the workers, and to prevent the spread of potential PCB-containing dust onto and off the site. The OSHA permissible exposure limit (PEL) for PCBs is a time-weighted average (TWA) airborne concentration of 1,000 $\mu g/m^3$ for PCBs containing 42% chlorine (average molecular formula of $C_{12}H_7Cl_3$). The PEL for PCBs with 54% chlorine and an average molecular formula of $C_{12}H_5Cl_5$ is 500 $\mu g/m^3$ (OSHA 1998a). The action level of 150 $\mu g/m^3$ is set so as to be protective against exceeding the PEL. The contractor will be required to minimize dust emissions beyond the limits of work to the extent practical to ensure target values of PCBs over a time weighted workday period are not exceeded as measured on a daily basis at the downwind property boundary. In addition, in the event that some of the work involves disturbance of asbestos containing materials, dust emissions will be controlled to maintain compliance with the air monitoring requirements under CTDPH regulations and NESHAP.

The air monitoring plan will include action levels at which the contractor will be required to implement or to increase dust control measures. PCB concentrations in air will be calculated using the dust measurements and an assumed concentration of PCBs in the dust. The results for the dust monitoring will be reviewed regularly by TRC and the contractor to evaluate the effectiveness of the dust control measures employed. Dust controls will include the use of polyethylene sheeting over waste storage containers and as necessary, active dust controls, such as wet spraying will also be employed.

The contractor will conduct daily monitoring of the breathing zone of personnel in the EZs and contaminant reduction zones (CRZs) using a personal air monitor per work task. The Site Safety Officer or designee shall conduct periodic breathing zone monitoring of personnel engaged in work within the EZs or CRZs. The personal samples shall be less than 150 µg/m^3. If personal air samples for dust are found to be over the 150 µg/m^3 limit, appropriate work practice controls, engineering controls, and PPE will be utilized for the work task. Frequency of monitoring will be dependent on conditions observed at the site but sufficient to assure that potential action level exceedances are identified and appropriate steps are taken to control worker exposure. The size of the crew in the area will determine how many personnel will be wearing the personnel air monitoring devices. Personal air monitoring for asbestos and PCB excavation activities will be conducted in accordance with applicable OSHA regulations.

4.2.3 Dewatering

The first step will involve removing standing water, oil and other liquids present in the sealed intake pump chamber, the cooling water pipe trench and the Condenser #7 pit. Further dewatering of the interstitial fill removal area will be performed as needed and once the first-floor concrete slab is removed. The contractor will be required to submit a work plan to safely remove, manage, test, store, transport and dispose of the liquids generated from these activities. Dewatering of the areas described above will continue throughout the duration of the remediation and sample verification program. The closing of valves, sealing of pipes and sealing of other possible seepage will be implemented once sufficient dewatering is accomplished and the areas are safely accessible. Water will be managed accordingly based on sample analysis

4.2.4 Removal of PCB Remediation Waste

The sequence of the PCB removal actions for each of the AOC areas will proceed for each AOC described in Section 4.1 – Remedial Goals. The selected contractor may perform work in multiple AOCs at the same time. The selected contractor will be required to provide a Health and Safety Plan, a detailed schedule showing the sequence of activities and will be required to update the schedule on a bi-weekly basis. The contractor

will be required to submit a work plan to safely remove, manage, test, store, transport and dispose of the PCB Remediation Wastes generated from these activities. In general, the remedial actions will be performed in a “top down” manner.

Porous media (concrete, brick, etc.) verification samples from the mat foundation, columns and other structures located below the first floor of the Boiler #13 Area IRM will be collected from in-situ material using decontaminated drilling and coring devices. Where coring is required, the contractor will be responsible for performing the coring and providing the cores to TRC collect samples by depth from the cores for laboratory analysis. Samples will be pulverized and collected in accordance with the USEPA Region 1 “Standard Operating Procedure for Sampling Porous Surfaces for Polychlorinated Biphenyls (PCBs)”. Samples will be placed into new, laboratory-supplied, glass jars and labeled with a unique sample number, sample time, and analyses requested. Sealed sample jars will be wiped down with a clean cloth and clear packing tape will be used to cover completed labels. Samples will be placed on ice in a cooler for delivery to the laboratory under chain-of-custody protocols. All verification porous media samples will be submitted for laboratory analysis of PCBs by EPA Method 8082/3540C (Soxhlet Extraction). All porous media verification samples will be reported on a dry-weight basis in mg/kg. A more detailed description for the verification sampling activities is being provided in a separate Scope of Study to the CTDEEP.

4.2.5 Waste Storage, Handling and Disposal

Liquid PCB remediation waste will be disposed in accordance with §761.61(b)(1). Non-liquid PCB remediation waste will be disposed in accordance with §761.61(b)(2). Non-liquid PCB remediation waste PCB Remediation Waste from the Boiler #13 Area IRM will be removed and either loaded into lined roll-off boxes or live-loaded into lined dump body trucks for transport to the selected disposal facility. Data currently available for non-PCB constituents will be used in conjunction with other sampling required by the disposal facilities to perform waste characterization prior to or during the remediation from the Boiler #13 Area IRM. Only permitted waste haulers and treatment/disposal facilities permitted to accept PCB Remediation Wastes subject to 40 CFR 761.61(b) will be used.

Prior to shipping the wastes, containers and hauling vehicles will be inspected and certified for Hazardous Materials Handling under 49 CFR Transportation Regulations (49 CFR 172.704). Wastes will be shipped with proper manifests and bills of lading and copies of these documents will be retained by UI.

4.2.6 Restoration & Decontamination

Upon completion of remedial activities, the excavations, cooling pipe trench, Condenser #7 pit and sealed cooling water intake chamber will remain open. Temporary security barricades and/or fencing will be installed to protect these areas from possible fall and trip hazards until future final remediation work and restoration is completed.

Moveable equipment, tools, and sampling equipment which has contacted PCB Remediation Wastes will be decontaminated prior to leaving the site. Decontamination procedures will comply with either §761.79(b)(3)(i)(A), §761.79(b)(3)(ii)(A) or §761.79(c)(2).

Decontamination wastes, PPE, and polyethylene that comes in contact with PCB Remediation Wastes will be containerized and disposed of as PCB Remediation Wastes. These wastes will be segregated as to matrix, aqueous, non-aqueous liquids, or solid materials (e.g., PPE), and stored in drums or lined containers prior to transport from the site for disposal.

5.0 DOCUMENTATION

Documentation of the field activities will be performed on a daily basis by the contractor and TRC during the performance of the remediation and will be summarized at the conclusion of the remediation in a Remedial Action Report (RAR) completed by TRC.

5.1 Field Notes and Other Records

The field inspector will maintain a daily log and other records of on-site activities.

That will include, but not be limited to the following:

- Daily health and safety meetings.
- Site & personal air monitoring records.
- Personnel training records, medical monitoring and licenses.
- Personnel and equipment on site.
- Field procedures and observations.
- Excavation and other remedial action progress and extents.
- Sample locations selection criteria, samples collected, analyses performed, sample handling.
- Telephone or other instructions.
- Equipment decontamination.
- Buried utility information.
- Concrete structure decontamination and testing.
- On-site waste storage tracking.
- Waste transporter information and disposal manifests.

5.2 Photographs

Daily photographs will be taken of representative activities, such as excavation, remedial activities, sample locations, and subsurface structures. The final extents of the excavations will also be photographed. Copies of selected photographs will be included in the RAR.

5.3 Survey

The horizontal extents of the excavations and other remedial activities will be documented by reference to state plane coordinate (NAD83) geometry. Vertical extents will be referenced to the site vertical datum, which is NAVD 1988. The RAR will include

documentation of the extents and depths of the excavations and remedial activities.

5.4 Waste Transport and Treatment/Disposal Documentation

Manifests and/or Bills of Lading for the transportation, treatment and disposal of waste materials and certifications of the treatment or disposal of the wastes will be obtained from the transporter and from the treatment/disposal facility. Copies of these forms will be included in the RAR.

5.5 Remedial Action Report

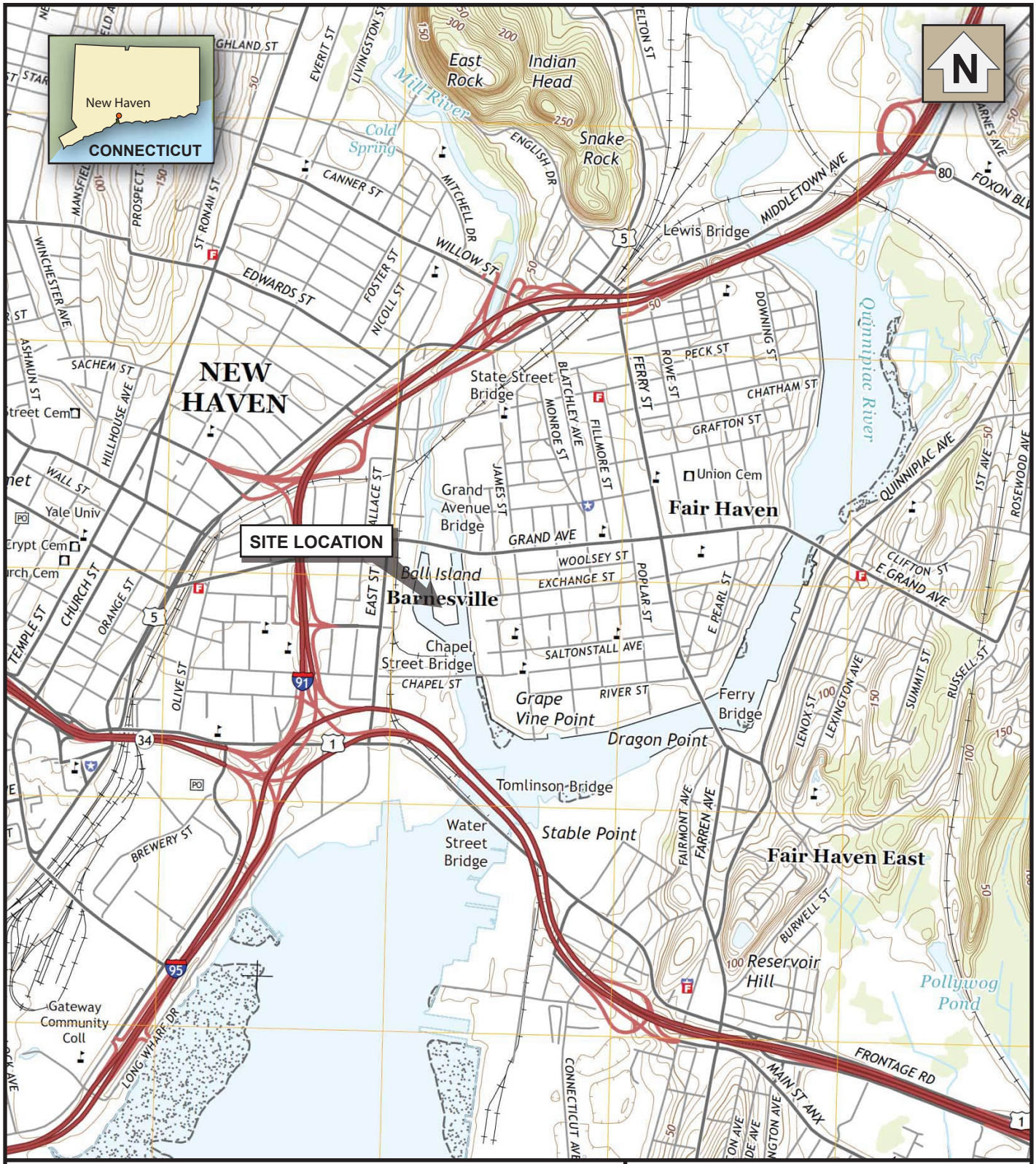
The RAR will be prepared by TRC upon receipt of analytical data confirming that the removal action was complete and receipt of certifications of treatment/disposal from the treatment/disposal facility. The RAR will include the following.

- Site description
- A description of field procedures
- Verification sample locations and analytical results – These will be documented in an investigation report separate from the RAR
- A photographic record of the remedial actions
- Figures showing the extent of excavations, other remedial activities, foundations and utilities
- Waste characterization sample data
- Waste transport and treatment disposal information
- Copies of waste manifests and bills of lading
- Post-excavation depths and mapping

5.6 Recordkeeping

TRC will prepare and maintain records and documents required by 40 CFR Part 761, including those records required under Subpart K. The records shall be maintained in a centralized location for a minimum of three years and will be available for inspection by representatives of EPA if required.

FIGURES



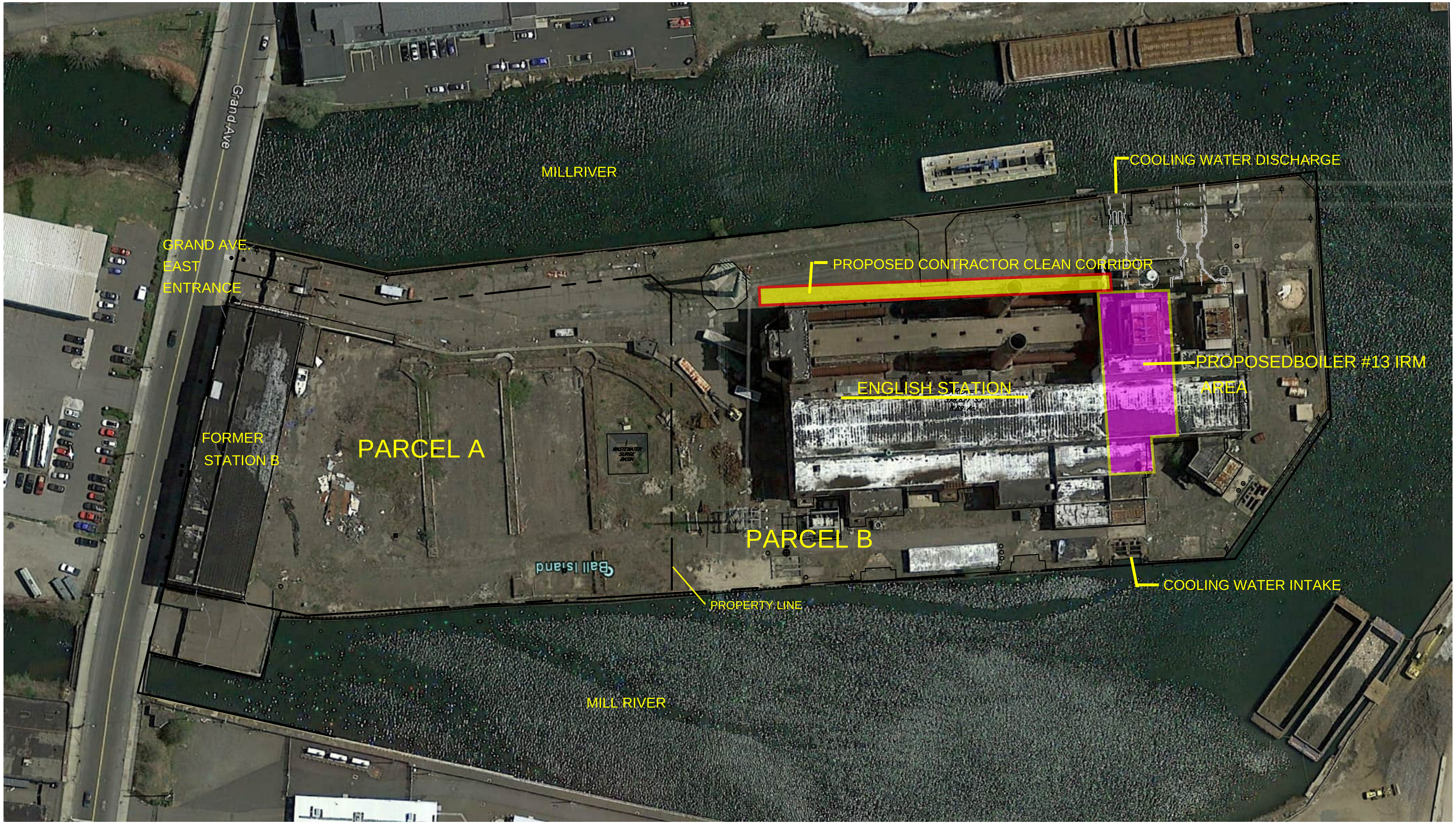
1:24000
BASE CREATED WITH 7.5' USGS TOPOGRAPHIC MAP
NEW HAVEN, CT 2015

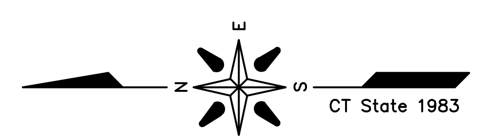
TRC
21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692

ENGLISH STATION
510 GRAND AVENUE, NEW HAVEN, CT

FIGURE 1
SITE LOCATION MAP

DATE: 10/2016 | PROJECT NO. 263951.0000.000000





0 100' 200'

GRAPHIC SCALE

PROJECT: UNITED ILLUMINATING
ENGLISH STATION POWER PLANT
510 Grand Avenue
New Haven, Connecticut

TITLE: SITE PLAN AND APPROXIMATE PARCEL BOUNDARIES

DRAWN BY:	K. Hollenbeck	PROJ NO.:	263951-000007-000000
CHECKED BY:	R. Gille	FIGURE 2	
APPROVED BY:	M. Kearney		
DATE:	04/19/2018		

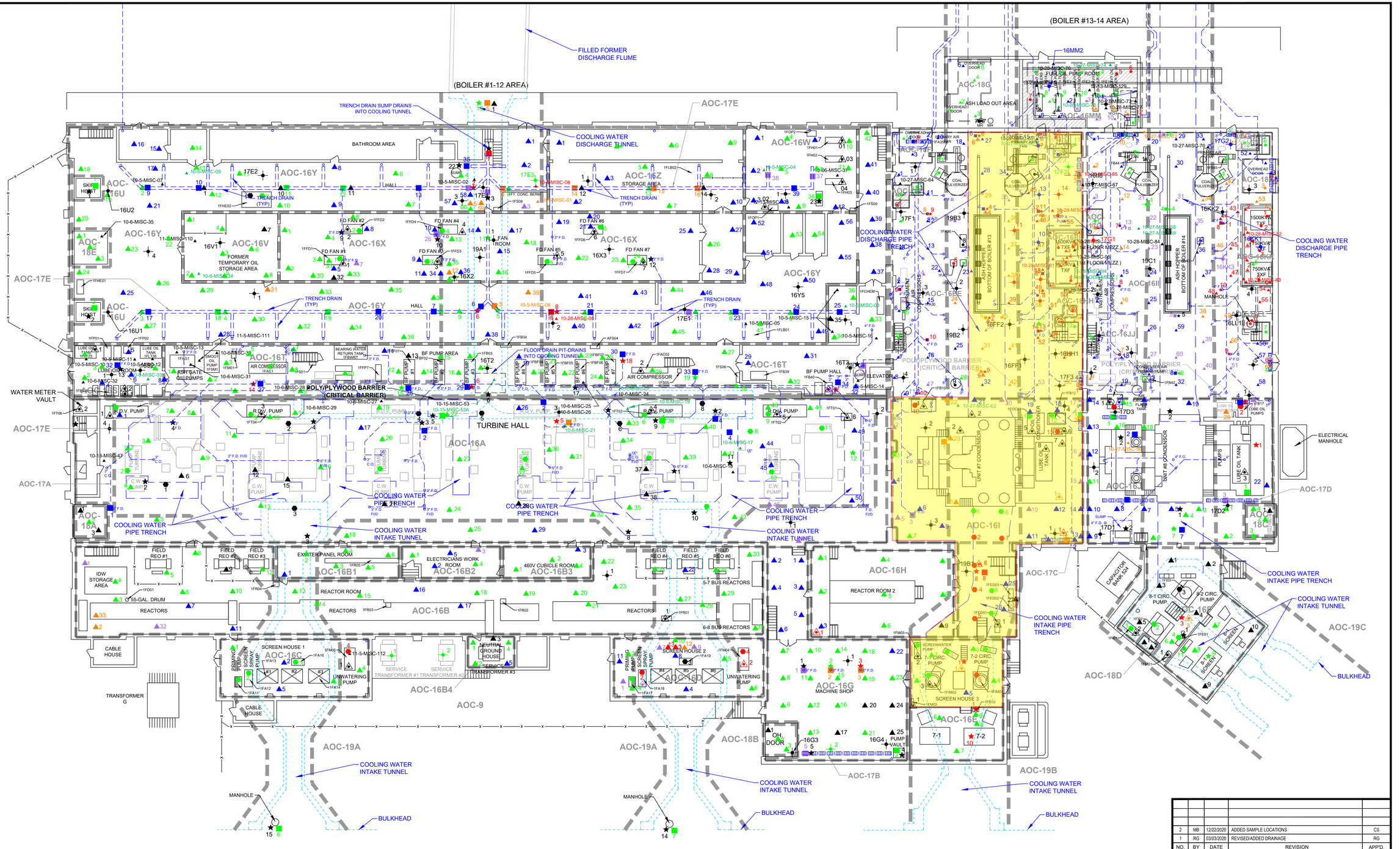
TRC

21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692
www.trcsolutions.com

02/15/21

FILE NO.: Figure 1-2 & Figure 2-1.dwg

11x17 --- ATTACHED XREF'S: --- ATTACHED IMAGES: Google 4-20-2016; Google 4-20-2016 Enlarged; Project_English_Figures_20150828_Page_1; Project_English_Figures_20150828_Page_2;
DRAWING NAME: J:\CAD\United Illuminating\English Station-263951\Building Scope Of Study-000007\000000\ Figure 1-2 & Figure 2-1.dwg --- PLOT DATE: April 19, 2018 - 11:28AM --- LAYOUT: Figure 1-2



LEGEND

- 10-6-MISC-31 ▲ GEI MISC. SAMPLE LOCATION WITH PCBs ≤1 mg/kg
- 10-6-MISC-21 ▲ GEI MISC. SAMPLE LOCATION WITH PCBs >1 BUT ≤10 mg/kg
- 10-5-MISC-06 ▲ GEI MISC. SAMPLE LOCATION WITH PCBs >10 BUT <50 mg/kg
- 10-28-MISC-06 ▲ GEI MISC. SAMPLE LOCATION WITH PCBs >50 mg/kg

- POROUS MEDIA SAMPLE LOCATION PCBs - NON-DETECT (ND)
- POROUS MEDIA SAMPLE LOCATION PCBs ≤ 1 mg/kg
- POROUS MEDIA SAMPLE LOCATION PCBs >1 BUT ≤ 5 mg/kg
- POROUS MEDIA SAMPLE LOCATION PCBs >5 BUT ≤ 10 mg/kg
- POROUS MEDIA SAMPLE LOCATION PCBs >10 BUT < 50 mg/kg
- POROUS MEDIA SAMPLE LOCATION PCBs ≥ 50 mg/kg

- SEDIMENT SAMPLE LOCATION PCBs - NON-DETECT (ND)
- SEDIMENT SAMPLE LOCATION PCBs ≤1 mg/kg
- SEDIMENT SAMPLE LOCATION PCBs >1 BUT ≤ 5 mg/kg
- SEDIMENT SAMPLE LOCATION PCBs >5 BUT ≤ 10 mg/kg
- SEDIMENT SAMPLE LOCATION PCBs >10 BUT < 50 mg/kg
- SEDIMENT SAMPLE LOCATION PCBs ≥ 50 mg/kg

- SURFACE WATER SAMPLE LOCATION PCBs - NON-DETECT (ND)
- SURFACE WATER SAMPLE LOCATION PCBs < 0.5 µg/L
- SURFACE WATER SAMPLE LOCATION PCBs ≥ 0.5 µg/L

- HEXANE WIPE SAMPLE LOCATION PCBs - NON-DETECT (ND)
- HEXANE WIPE SAMPLE LOCATION PCBs ≤ 10 µg/100cm²
- HEXANE WIPE SAMPLE LOCATION PCBs >10 µg/100cm²

- SOIL SAMPLE LOCATION PCBs - NON-DETECT (ND)
- SOIL SAMPLE LOCATION PCBs ≤1 mg/kg
- SOIL SAMPLE LOCATION PCBs >1 BUT ≤ 5 mg/kg
- SOIL SAMPLE LOCATION PCBS >5 BUT ≤ 10 MG/KG
- SOIL SAMPLE LOCATION PCBs >10 BUT < 50 mg/kg
- SOIL SAMPLE LOCATION PCBs ≥ 50 mg/kg
- SOLID SAMPLE LOCATION

- OIL SAMPLE LOCATION PCBs-NON DETECT (ND)
- OIL SAMPLE LOCATION PCBs ≤ 1 mg/L
- OIL SAMPLE LOCATION PCBs >1 BUT ≤ 5 mg/L
- OIL SAMPLE LOCATION PCBs >5 BUT ≤ 10 mg/L
- OIL SAMPLE LOCATION PCBs >10 BUT < 50 mg/L
- OIL SAMPLE LOCATION PCBs ≥ 50 mg/L

AREA OF CONCERN (AOC)

AOC-17 STRUCTURES

- TRENCH DRAIN
- FLOOR DRAIN PIPING
- FD FLOOR DRAIN
- C.O. FLOOR DRAIN CLEANOUT
- F/D FILLED IN/ DESTROYED
- PROPOSED BOILER #13 IRM PROJECT LIMITS

NO.	BY	DATE	REVISION	APP'D.
2	MB	12/22/2020	ADDED SAMPLE LOCATIONS	CS
1	RG	03/03/2020	REVISED/ADDED DRAINAGE	RG

PROJECT:
UNITED ILLUMINATING
ENGLISH STATION POWER PLANT
510 Grand Avenue
New Haven, Connecticut

TITLE:
INTERIOR INVESTIGATION 1ST FLOOR SAMPLE LOCATIONS

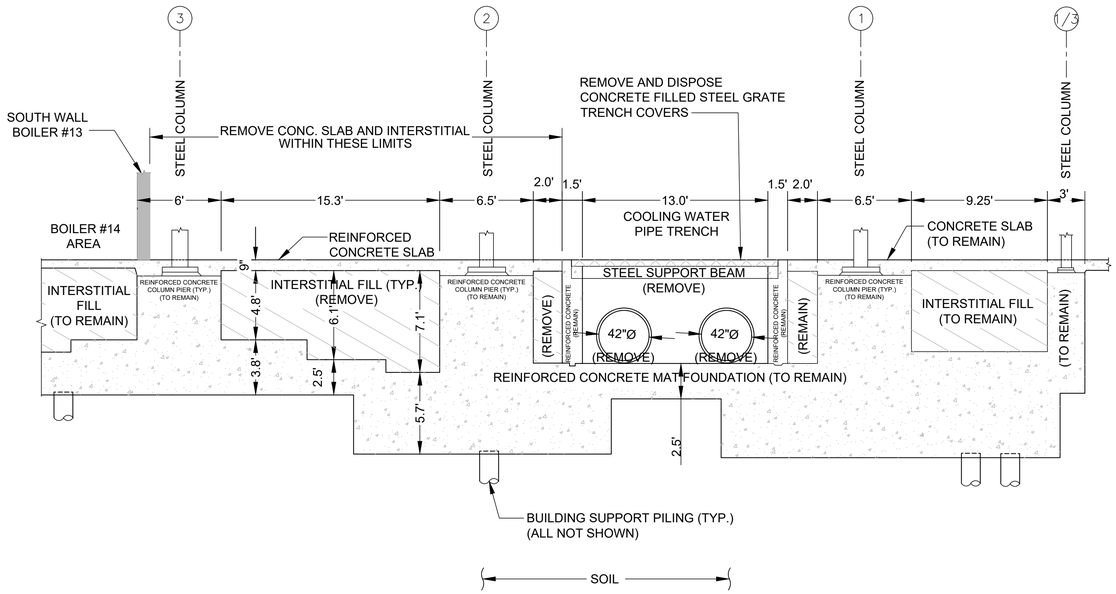
DRAWN BY:	R. Hamilton
CHECKED BY:	R. Gille
APPROVED BY:	M. Mahoney
DATE:	08/30/2019
PROJ. NO.:	263951-000028-000000

Figure 3

TRC
21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692
www.trccompanies.com

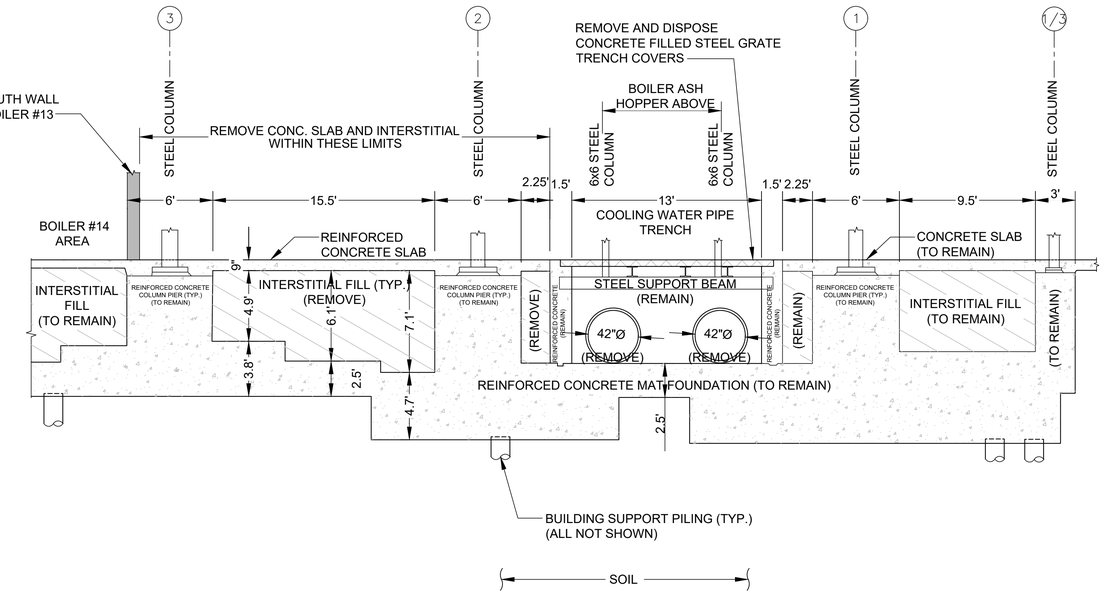
FILE NO.: Figure 3-1.dwg

DRAWING NAME: J:\CAD\United Illuminating\English Station-263951\Interior Investigation First Floor Report - 0000370000071 Figure 3-1.dwg --- PLOT DATE: December 30, 2020 - 11:16AM --- LAYOUT: Figure 3-1



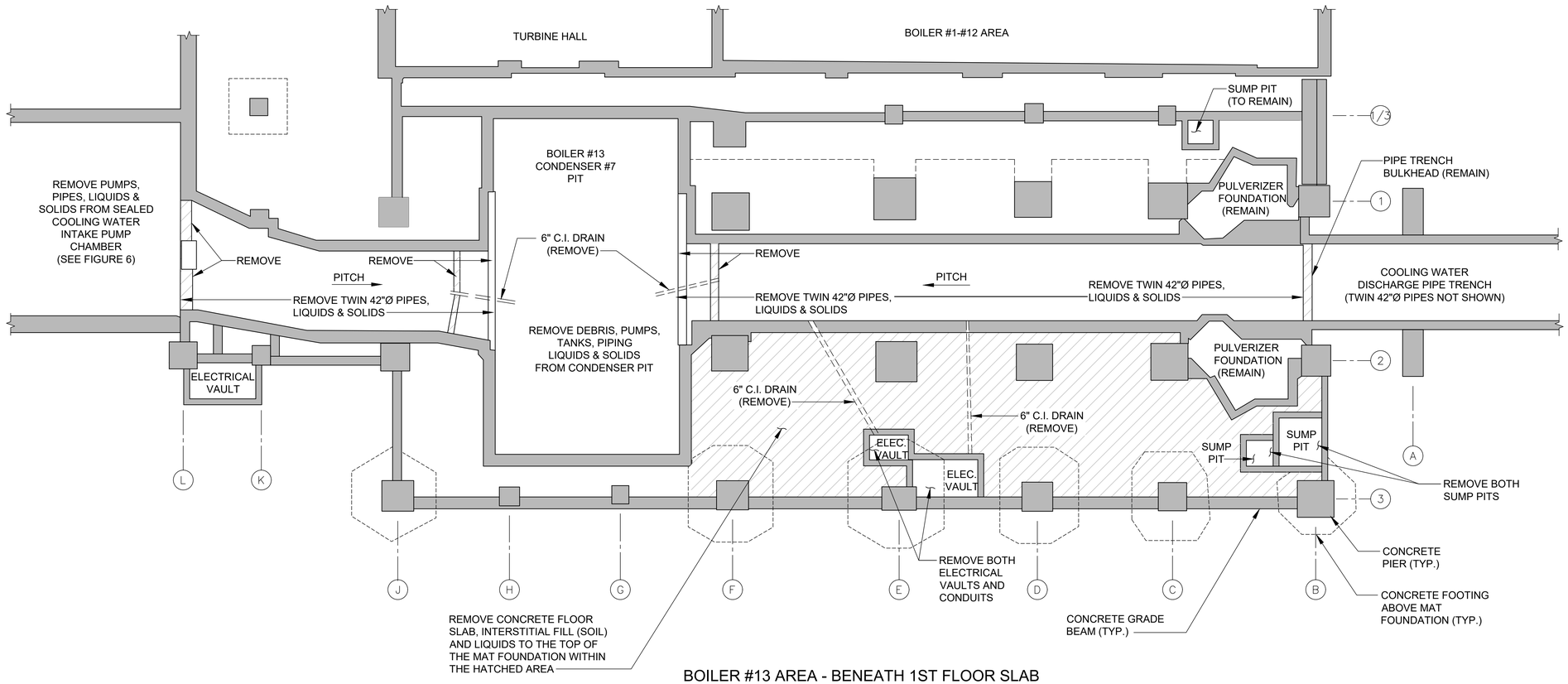
SECTION - COLUMN LINE E

0 5' 10'
GRAPHIC SCALE



SECTION - COLUMN LINE C

0 5' 10'
GRAPHIC SCALE



BOILER #13 AREA - BENEATH 1ST FLOOR SLAB

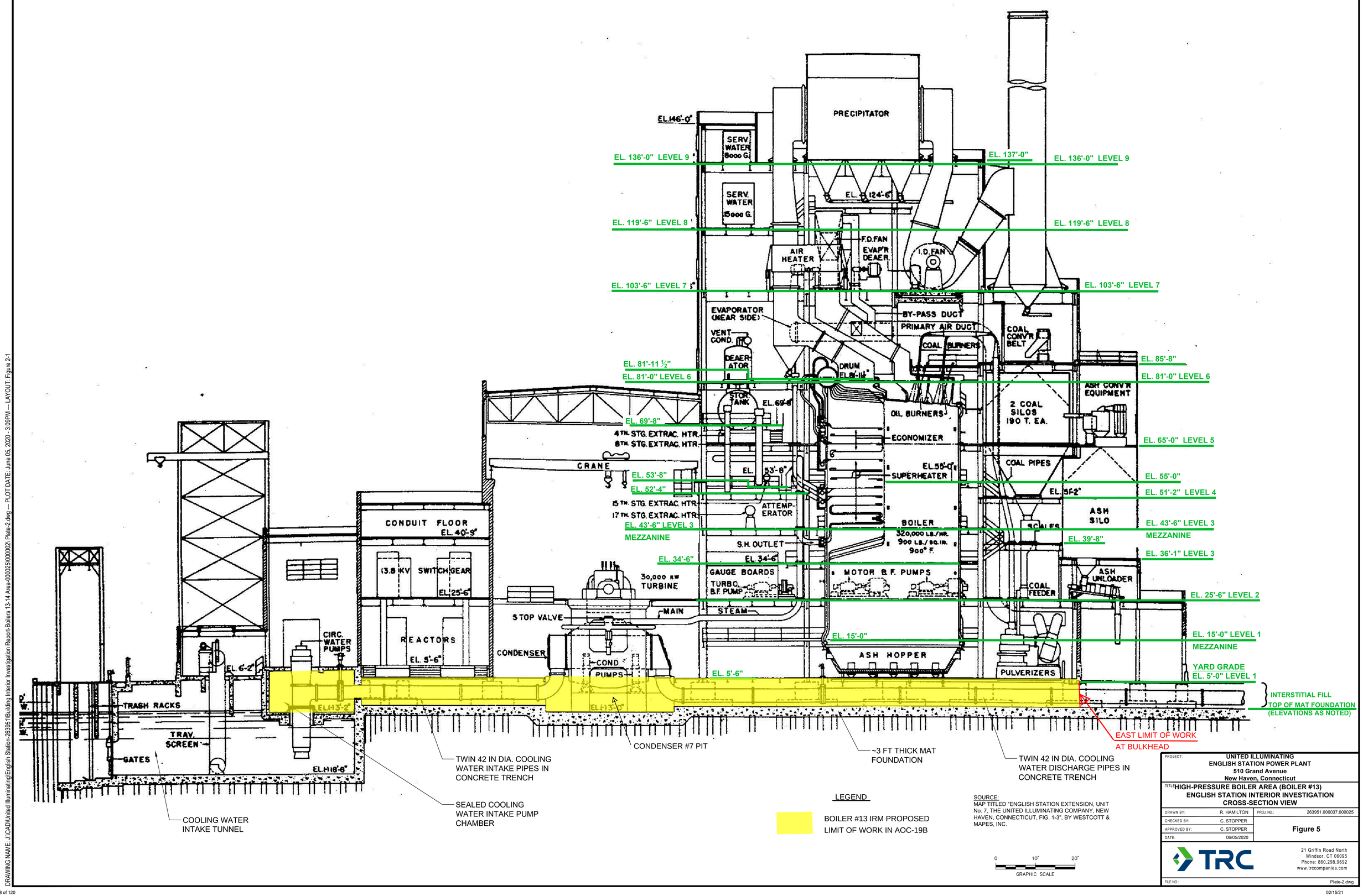
0 10' 20'
GRAPHIC SCALE

PROJECT:	UNITED ILLUMINATING ENGLISH STATION POWER PLANT 510 & 510A GRAND AVENUE New Haven, Connecticut
TITLE:	BOILER # 13 PLAN AND SECTIONS
DRAWN BY:	R. Hamilton
CHECKED BY:	C. Stopper
APPROVED BY:	C. Stopper
DATE:	12/16/2020
PROJ. NO.:	263951.000037.000018
	Figure 4

TRC
21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692
www.trccompanies.com

FILE NO.: Boiler 13 plan.dwg

02/15/21



PROJECT: UNITED ILLUMINATING
ENGLISH STATION POWER PLANT
510 Grand Avenue
New Haven, Connecticut

TITLE: HIGH-PRESSURE BOILER AREA (BOILER #13)
ENGLISH STATION INTERIOR INVESTIGATION
CROSS-SECTION VIEW

DRAWN BY:	R. HAMILTON	PROJ. NO.:	263951.000037.000025
CHECKED BY:	C. STOPPER		
APPROVED BY:	C. STOPPER		Figure 5
DATE:	06/05/2020		

TRC
21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692
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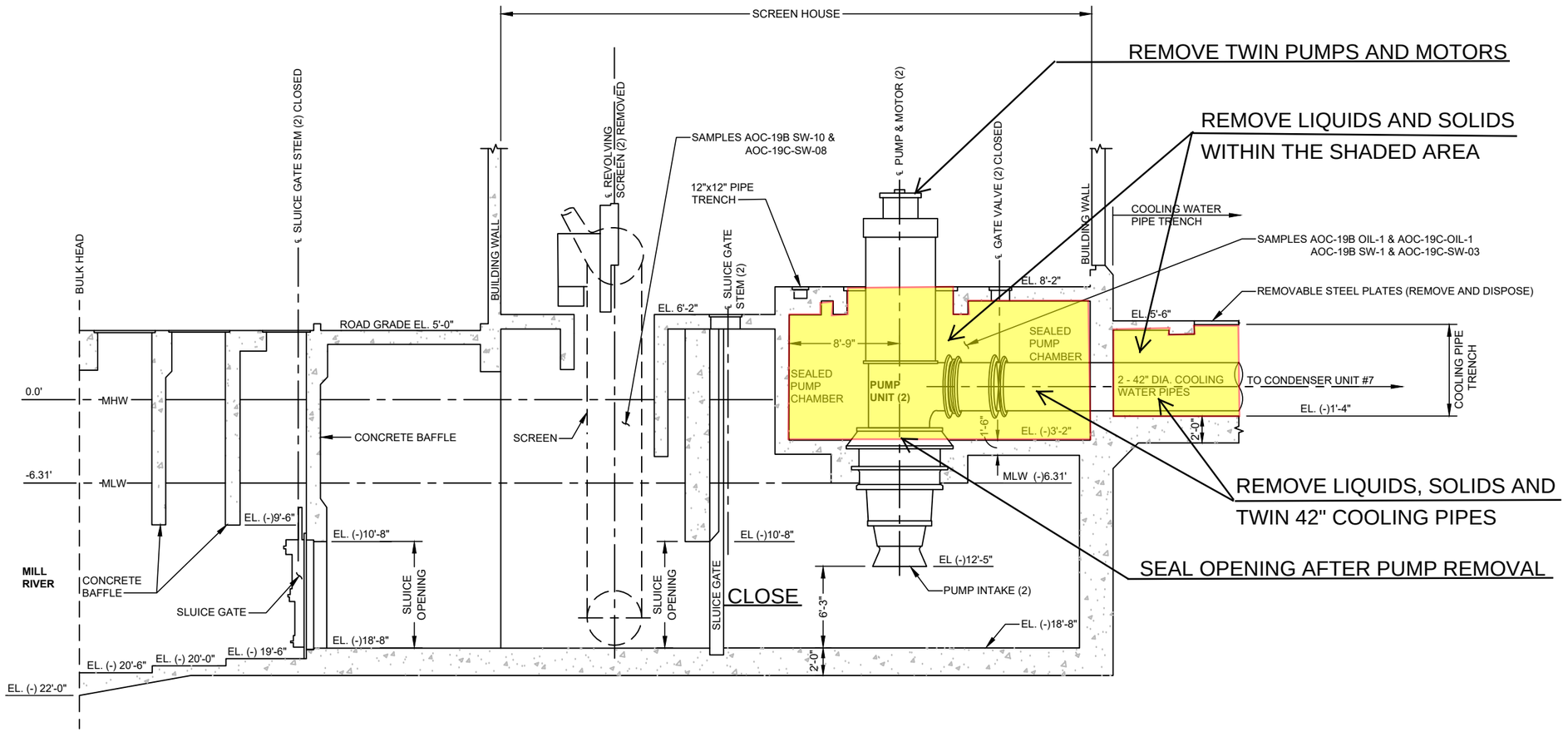
FILE NO.: Plate-2.dwg

DRAWING NAME: J:\CAD\United Illuminating\English Station-263951\Building Interior Investigation Report-Boilers 13-14 Area-000025\000002\ Plate-2.dwg --- PLOT DATE: June 05, 2020 - 3:09PM --- LAYOUT: Figure 2-1

02/15/21



BOILER #13 CONDENSER UNIT #7 COOLING WATER INTAKE SYSTEM SECTION (AOC-19B)

N.T.S.

PROJECT:
ENGLISH STATION - 510 & 510A GRAND AVENUE
NEW HAVEN, CT

TITLE: **BOILER #13 CONDENSER UNIT #7 COOLING WATER INTAKE SYSTEM SECTION (AOC-19B)**

DRAWN BY:	R. HAMILTON	PROJ NO.:	263951.000028.000002
CHECKED BY:	C. STOPPER		**FIGURE 6**
APPROVED BY:			
DATE:	01/23/2020		

TRC
21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692
www.trccompanies.com

FILE NO.: 02/15/21 Cooling Intake system.dwg

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS - OIL SAMPLES
Interior Investigation - Boiler #13 IRM Area
English Station
510 Grand Avenue
New Haven, Connecticut

		AOC:	TRC-AOC-16E			TRC-AOC-16I									TRC-AOC-16EE			TRC-AOC-16FF	TRC-AOC-16HH
		Sample Name:	TRC-AOC-16E-OIL-01	TRC-AOC-16E-OIL-02	TRC-AOC-16E-OIL-03	TRC-AOC-16I-OIL-01	TRC-AOC-16I-OIL-03	TRC-AOC-16I-OIL-04	TRC-AOC-16I-OIL-05	TRC-AOC-16I-OIL-06	TRC-AOC-16I-OIL-07	TRC-AOC-16I-OIL-08	TRC-AOC-16I-OIL-01**	TRC-AOC-16I-OIL-02**	TRC-AOC-16EE-OIL-01	TRC-AOC-16EE-OIL-02	TRC-AOC-16EE-OIL-03	TRC-AOC-16FF-OIL-01	TRC-AOC-16HH-OIL-01
		Lab Sample ID:	18L0338-04	18L0338-05	18L0338-06	18J0277-05	18L0338-14	18L0338-15	18L0338-16	18L0338-17	18L0338-18	18L0338-19	8110566-01	8110566-02	19A0756-19	19A0756-20	19A0758-16	19A0758-15	19A1162-16
		Sample Date:	12/06/2018	12/06/2018	12/06/2018	10/04/2018	12/06/2018	12/06/2018	12/06/2018	12/06/2018	12/06/2018	12/06/2018	11/20/2018	11/20/2018	01/15/2019	01/15/2019	01/15/2019	01/15/2019	01/23/2019
Analysis	**Analyte**	**Unit**																	
PCB Aroclors																			
	Aroclor-1016	mg/kg	0.96 U	0.98 U	0.98 U	0.99 U	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	0.78 U	64,000 U	78 U
	Aroclor-1221	mg/kg	0.96 U	0.98 U	0.98 U	0.99 U	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	0.78 U	64,000 U	78 U
	Aroclor-1232	mg/kg	0.96 U	0.98 U	0.98 U	0.99 U	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	0.78 U	64,000 U	78 U
	Aroclor-1242	mg/kg	0.96 U	0.98 U	0.98 U	0.99 U	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	0.78 U	64,000 U	78 U
	Aroclor-1248	mg/kg	0.96 U	0.98 U	0.98 U	0.99 U	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	0.78 U	64,000 U	78 U
	Aroclor-1254	mg/kg	0.96 U	0.98 U	0.98 U	**3.1**	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	**10**	0.77 U	0.78 U	**4.9**	64,000 U	**340**
	Aroclor-1260	mg/kg	0.96 U	0.98 U	0.98 U	**8**	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	**2.2**	**540,000**	**810**
	Aroclor-1262	mg/kg	0.96 U	0.98 U	0.98 U	0.99 U	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	0.78 U	64,000 U	78 U
	Aroclor-1268	mg/kg	0.96 U	0.98 U	0.98 U	0.99 U	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	1.0 U	0.77 U	0.78 U	0.78 U	64,000 U	78 U
	PCBs, Total	mg/kg	0.96 U	0.98 U	0.98 U	**1.1**	0.94 U	0.97 U	0.99 U	0.94 U	0.98 U	0.97 U	1.0 U	**10**	0.77 U	0.78 U	**7.1**	**540,000**	**1,150**

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

* With the exception of PCBs, this table shows only compounds that were reported to be present in oil samples.

** Samples collected from the cathodic rectifiers on November 20, 2018

In instances where the laboratory detection limit is above 1 mg/kg and there are no Aroclor detections, the PCB concentrations in oil will be presumed to be between 1 mg/kg and 49 mg/kg for disposal purposes during the remediation bidding process, but will be re-sampled by the contractor prior to disposal.

TABLE 1
SUMMARY OF ANALYTICAL RESULTS - OIL SAMPLES
Interior Investigation - Boiler #13 IRM Area
English Station
510 Grand Avenue
New Haven, Connecticut

			AOC:	TRC-AOC-17C		TRC-AOC-17F		TRC-AOC-19B											
			Sample Name:	TRC-AOC-17C-OIL-01		TRC-AOC-17F-OIL-01		TRC-AOC-19B-OIL-01		TRC-AOC-19B-OIL-02		TRC-AOC-19B-OIL-08		TRC-AOC-19B-OIL-04		TRC-AOC-19B-OIL-05		TRC-AOC-19B-OIL-06		TRC-AOC-19B-OIL-09	
			Lab Sample ID:	18J0660-04		19A1224-20		18J1070-22		18J0277-06		19B0229-01		19A0987-06		19A0987-09		19A1224-08		19B0236-01	
			Sample Date:	10/12/2018		01/24/2019		10/22/2018		10/04/2018		02/06/2019		01/18/2019		01/18/2019		01/24/2019		02/06/2019	
Analysis	**Analyte**	**Unit**																			
PCB Aroclors																					
	Aroclor-1016	mg/kg		9	U	7.9	U	1.9	U	0.85	U	49	U	32	U	39	U	16	U	99	U
	Aroclor-1221	mg/kg		9	U	7.9	U	1.9	U	0.85	U	49	U	32	U	39	U	16	U	99	U
	Aroclor-1232	mg/kg		9	U	7.9	U	1.9	U	0.85	U	49	U	32	U	39	U	16	U	99	U
	Aroclor-1242	mg/kg		9	U	7.9	U	**15**		0.85	U	49	U	32	U	39	U	16	U	99	U
	Aroclor-1248	mg/kg		9	U	7.9	U	1.9	U	0.85	U	49	U	32	U	39	U	16	U	99	U
	Aroclor-1254	mg/kg		9	U	**29**		**13**		0.85	U	49	U	**76**		**120**		**47**		99	U
	Aroclor-1260	mg/kg		**69**		**95**		**5.3**		0.85	U	**260**		**200**		**310**		**120**		**560**	
	Aroclor-1262	mg/kg		9	U	7.9	U	1.9	U	0.85	U	49	U	32	U	39	U	16	U	99	U
	Aroclor-1268	mg/kg		9	U	7.9	U	**2.6**		0.85	U	49	U	32	U	39	U	16	U	99	U
	PCBs, Total	mg/kg		**69**		**124**		**35.9**		0.85	U	**260**		**276**		**430**		**167**		**560**	

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

* With the exception of PCBs, this table shows only compounds that were reported to be present in oil samples.

** Samples collected from the cathodic rectifiers on November 20, 2018

In instances where the laboratory detection limit is above 1 mg/kg and there are no Aroclor detections, the PCB concentrations in oil will be presumed to be between 1 mg/kg and 49 mg/kg for disposal purposes during the remediation bidding process, but will be re-sampled by the contractor prior to disposal.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS - WIPE SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

				AOC:	TRC-AOC-16E																					
				Sample Name:	TRC-AOC-16E-WP-01		TRC-AOC-16E-WP-02		TRC-AOC-16E-WP-03		TRC-AOC-16E-WP-04		TRC-AOC-16E-WP-05		TRC-AOC-16I-WP-01		TRC-AOC-16I-WP-02		TRC-AOC-16I-WP-03		TRC-AOC-16I-WP-04		TRC-AOC-16I-WP-05		TRC-AOC-16I-WP-06		TRC-AOC-16I-WP-07		TRC-AOC-16I-WP-08	
				Lab Sample ID:	18I1267-11		18I1267-12		18I1267-13		18I1267-14		18I1267-15		18I1267-16		18I1267-17		18I1267-18		18I1267-19		18I1267-20		18I1268-01		18I1268-02		18I1268-03	
				Sample Date:	09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018	
Analysis	**Analyte**	**Unit**	**EPA[1]**																											
PCB Aroclors																														
	Aroclor-1016	µg/100 cm^2	~		0.2	U	1	U	1	U	0.2	U	1	U	1	U	10	U	4	U	10	U	10	U	1	U	1	U	1	U
	Aroclor-1221	µg/100 cm^2	~		0.2	U	1	U	1	U	0.2	U	1	U	1	U	10	U	4	U	10	U	10	U	1	U	1	U	1	U
	Aroclor-1232	µg/100 cm^2	~		0.2	U	1	U	1	U	0.2	U	1	U	1	U	10	U	4	U	10	U	10	U	1	U	1	U	1	U
	Aroclor-1242	µg/100 cm^2	~		0.2	U	1	U	1	U	0.2	U	1	U	1	U	10	U	4	U	10	U	10	U	1	U	1	U	1	U
	Aroclor-1248	µg/100 cm^2	~		0.2	U	1	U	1	U	0.2	U	1	U	1	U	10	U	4	U	10	U	10	U	1	U	1	U	1	U
	Aroclor-1254	µg/100 cm^2	~		0.2	U	**2.1**		**2.4**		**0.26**		**3.1**		**3.5**		**16**		4	U	10	U	10	U	**2**		**1.9**		1	U
	Aroclor-1260	µg/100 cm^2	~		**0.34**		**3.6**		**5.8**		**0.79**		**8.1**		**5.4**		**26**		**6.4**		**10**		10	U	**2.6**		**3.8**		**1**	
	Aroclor-1262	µg/100 cm^2	~		0.2	U	1	U	1	U	0.2	U	1	U	1	U	10	U	4	U	10	U	10	U	1	U	1	U	1	U
	Aroclor-1268	µg/100 cm^2	~		0.2	U	**3.7**		**1.2**		**0.44**		**4.2**		**5.9**		**50**		**19**		**39**		**45**		**3.6**		**5.8**		**2.6**	
	PCBs, Total	µg/100 cm^2	10		**0.34**		**9.4**		**9.4**		**1.49**		**15.4**		**14.8**		**92**		**25.4**		**49**		**45**		**8.2**		**11.5**		**3.6**	

Notes:
ug/Wipe - micrograms per wipe (100 cm2).
~ - No listed criteria exists from this analyte.
U - Analyte was not detected at specified quantitation limit.
Values in bold indicate the analyte was detected.
Values shown in bold and shaded type exceed the listed criteria.
PCBs - Polychlorinated Biphenyls.

[1.] Analytical results for non-porous media samples collected from building structures were compared to the High Occupancy Standard set forth in §761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 10 µg/100 cm2 without further conditions.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS - WIPE SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

				AOC:	TRC-AOC-16I										TRC-AOC-16EE									
				Sample Name:	TRC-AOC-16I-WP-09		TRC-AOC-16I-WP-10		TRC-AOC-16I-WP-11		TRC-AOC-16I-WP-12		TRC-AOC-16I-WP-13		TRC-AOC-16EE-WP-01		TRC-AOC-16EE-WP-02		TRC-AOC-16EE-WP-03		TRC-AOC-16EE-WP-04		TRC-AOC-16EE-WP-05	
				Lab Sample ID:	18I1268-04		18I1268-11		18I1268-12		18I1268-13		18I1268-14		19A0842-13		19A0842-14		19A0842-15		19A0842-16		19A0842-17	
				Sample Date:	09/27/2018		09/27/2018		09/27/2018		09/27/2018		09/27/2018		01/16/2019		01/16/2019		01/16/2019		01/16/2019		01/16/2019	
Analysis	**Analyte**	**Unit**	**EPA[1]**																					
PCB Aroclors																								
	Aroclor-1016	µg/100 cm^2	~		1	U	1	U	0.2	U	0.2	U	1	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
	Aroclor-1221	µg/100 cm^2	~		1	U	1	U	0.2	U	0.2	U	1	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
	Aroclor-1232	µg/100 cm^2	~		1	U	1	U	0.2	U	0.2	U	1	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
	Aroclor-1242	µg/100 cm^2	~		1	U	1	U	0.2	U	0.2	U	1	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
	Aroclor-1248	µg/100 cm^2	~		1	U	1	U	0.2	U	0.2	U	1	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
	Aroclor-1254	µg/100 cm^2	~		1	U	**5.8**		0.2	U	**0.43**		**6**		0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
	Aroclor-1260	µg/100 cm^2	~		**1.3**		**4.3**		**0.37**		**0.25**		**6.6**		**0.45**		**0.41**		**0.40**		0.20	U	**0.66**	
	Aroclor-1262	µg/100 cm^2	~		1	U	1	U	0.2	U	0.2	U	1	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U
	Aroclor-1268	µg/100 cm^2	~		**6.5**		**2**		0.2	U	0.2	U	**4.1**		**1.1**		0.20	U	0.20	U	0.20	U	**0.33**	
	PCBs, Total	µg/100 cm^2	10		**7.8**		**12.1**		**0.37**		**0.68**		**16.7**		**1.55**		**0.41**		**0.40**		0.20	U	**0.99**	

				AOC:	TRC-AOC-16EE									
				Sample Name:	TRC-AOC-16EE-WP-06		TRC-AOC-16EE-WP-07		TRC-AOC-16EE-WP-08		TRC-AOC-16EE-WP-09			
				Lab Sample ID:	19A0842-18		19A0842-19		19A0842-20		19A0844-01			
				Sample Date:	01/16/2019		01/16/2019		01/16/2019		01/16/2019			
Analysis	**Analyte**	**Unit**	**EPA[1]**											
PCB Aroclors														
	Aroclor-1016	µg/100 cm^2	~		20	U	0.20	U	0.20	U	0.20	U		
	Aroclor-1221	µg/100 cm^2	~		20	U	0.20	U	0.20	U	0.20	U		
	Aroclor-1232	µg/100 cm^2	~		20	U	0.20	U	0.20	U	0.20	U		
	Aroclor-1242	µg/100 cm^2	~		20	U	**0.73**		0.20	U	0.20	U		
	Aroclor-1248	µg/100 cm^2	~		20	U	0.20	U	0.20	U	0.20	U		
	Aroclor-1254	µg/100 cm^2	~		20	U	**1.8**		0.20	U	0.20	U		
	Aroclor-1260	µg/100 cm^2	~		**36**		**1.3**		0.20	U	0.20	U		
	Aroclor-1262	µg/100 cm^2	~		20	U	0.20	U	0.20	U	0.20	U		
	Aroclor-1268	µg/100 cm^2	~		20	U	0.20	U	0.20	U	0.20	U		
	PCBs, Total	µg/100 cm^2	10		**36**		**3.83**		0.20	U	0.20	U		

Notes:
ug/Wipe - micrograms per wipe (100 cm2).
~ - No listed criteria exists from this analyte.
U - Analyte was not detected at specified quantitation limit.
Values in bold indicate the analyte was detected.
Values shown in bold and shaded type exceed the listed criteria.
PCBs - Polychlorinated Biphenyls.

[1.] Analytical results for non-porous media samples collected from building structures were compared to the High Occupancy Standard set forth in §761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 10 µg/100 cm2 without further conditions.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS - WIPE SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

			AOC:	TRC-AOC-16EE						TRC-AOC-16FF								TRC-AOC-16HH			
			Sample Name:	TRC-AOC-16EE-WP-10		TRC-AOC-16EE-WP-11		TRC-AOC-16EE-WP-12		TRC-AOC-16FF-WP-01		TRC-AOC-16FF-WP-02		TRC-AOC-16FF-WP-03		TRC-AOC-16FF-WP-04		TRC-AOC-16HH-WP-01		TRC-AOC-16HH-WP-02	
			Lab Sample ID:	19A1109-14		19A1109-15		19A1109-16		19A0756-15		19A0756-16		19A0756-17		19A0756-18		19A0844-07		19A0844-08	
			Sample Date:	01/22/2019		01/22/2019		01/22/2019		01/15/2019		01/15/2019		01/15/2019		01/15/2019		01/16/2019		01/16/2019	
Analysis	**Analyte**	**Unit**	**EPA[1]**																		
PCB Aroclors																					
	Aroclor-1016	µg/100 cm^2	~	0.20	U	0.20	U	0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	Aroclor-1221	µg/100 cm^2	~	0.20	U	0.20	U	0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	Aroclor-1232	µg/100 cm^2	~	0.20	U	0.20	U	0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	Aroclor-1242	µg/100 cm^2	~	0.20	U	0.20	U	0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	Aroclor-1248	µg/100 cm^2	~	0.20	U	0.20	U	0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	Aroclor-1254	µg/100 cm^2	~	0.20	U	0.20	U	0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	Aroclor-1260	µg/100 cm^2	~	**1.7**		**0.57**		**0.81**		**180**		**180,000**		**130,000**		**490,000**		**450**		**1,800**	
	Aroclor-1262	µg/100 cm^2	~	0.20	U	0.20	U	0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	Aroclor-1268	µg/100 cm^2	~	**0.70**		**0.23**		0.20	U	80	U	20,000	U	20,000	U	80,000	U	100	U	200	U
	PCBs, Total	µg/100 cm^2	10	**2.4**		**0.80**		**0.81**		**180**		**180,000**		**130,000**		**490,000**		**450**		**1,800**	

Notes:

ug/Wipe - micrograms per wipe (100 cm2).

~ - No listed criteria exists from this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in bold indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

PCBs - Polychlorinated Biphenyls.

[1.] Analytical results for non-porous media samples collected from building structures were compared to the High Occupancy Standard set forth in §761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 10 µg/100 cm2 without further conditions.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS - CONCRETE SAMPLES (PCBs)
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

					AOC:	TRC-AOC-16E															
					Sample Name:	TRC-AOC-16E-CO-1		TRC-AOC-16E-CO-2		TRC-AOC-16E-CO-3		TRC-AOC-16E-CO-4		TRC-AOC-16E-CO-5		TRC-AOC-16E-CO-6		TRC-AOC-16E-CO-7		TRC-AOC-16E-CO-8		TRC-AOC-16E-CO-9		TRC-AOC-16E-CO-9B	
					Lab Sample ID:	18I1186-05		18I1186-06		18I1186-07		18I1186-08		18I1186-09		18I1186-10		18I1186-11		18I1186-12		18J0392-04		18J0392-05	
					Sample Date:	09/26/2018		09/26/2018		09/26/2018		09/26/2018		09/26/2018		09/26/2018		09/26/2018		09/26/2018		10/08/2018		10/08/2018	
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**																				Field Dup	
PCB Aroclors																									
	Aroclor-1016	mg/kg	~	~		0.1	U	0.088	U	0.095	U	0.1	U	0.096	U	0.099	U	0.092	U	0.093	U	0.098	U	0.093	U
	Aroclor-1221	mg/kg	~	~		0.1	U	0.088	U	0.095	U	0.1	U	0.096	U	0.099	U	0.092	U	0.093	U	0.098	U	0.093	U
	Aroclor-1232	mg/kg	~	~		0.1	U	0.088	U	0.095	U	0.1	U	0.096	U	0.099	U	0.092	U	0.093	U	0.098	U	0.093	U
	Aroclor-1242	mg/kg	~	~		0.1	U	0.088	U	0.095	U	0.1	U	**0.74**		**0.13**		0.092	U	**0.14**		0.098	U	0.093	U
	Aroclor-1248	mg/kg	~	~		0.1	U	0.088	U	0.095	U	0.1	U	0.096	U	0.099	U	0.092	U	0.093	U	**0.22**		**0.31**	
	Aroclor-1254	mg/kg	~	~		0.1	U	0.088	U	0.095	U	0.1	U	**0.79**		**0.28**		**0.097**		**0.28**		**0.35**		**0.42**	
	Aroclor-1260	mg/kg	~	~		**0.31**		**0.34**		**0.35**		**0.27**		**0.31**		**0.12**		**0.15**		**0.13**		0.098	U	**0.11**	
	Aroclor-1262	mg/kg	~	~		0.1	U	0.088	U	0.095	U	0.1	U	0.096	U	0.099	U	0.092	U	0.093	U	0.098	U	0.093	U
	Aroclor-1268	mg/kg	~	~		**0.22**		**0.19**		**0.4**		0.1	U	**0.16**		0.099	U	0.092	U	0.093	U	0.098	U	0.093	U
	PCBs, Total	mg/kg	1	50		**0.53**		**0.53**		**0.75**		**0.27**		**2**		**0.53**		**0.247**		**0.55**		**0.57**		**0.84**	

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

~ - No listed criteria exists for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded green are above 1.0 mg/kg.

Values shown in bold and shaded orange are equal to or above 50 mg/kg.

PCBs - Polychlorinated Biphenyls.

All concrete samples were collected from the surface (0-0.5 inches) of the structure being sampled, unless otherwise noted.

[1.] Analytical results for porous media samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for porous media samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS - CONCRETE SAMPLES (PCBs)
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

				AOC:	TRC-AOC-16I																															
				Sample Name:	TRC-AOC-16I-CO-01		TRC-AOC-16I-CO-02		TRC-AOC-16I-CO-03		TRC-AOC-16I-CO-04		TRC-AOC-16I-CO-05		TRC-AOC-16I-CO-06		TRC-AOC-16I-CO-07		TRC-AOC-16I-CO-08		TRC-AOC-16I-CO-09		TRC-AOC-16I-CO-10		TRC-AOC-16I-CO-11		TRC-AOC-16I-CO-12		TRC-AOC-16I-CO-13		TRC-AOC-16I-CO-14		TRC-AOC-16I-CO-15		TRC-AOC-16I-CO-16		TRC-AOC-16I-CO-17		TRC-AOC-16I-CO-18		TRC-AOC-16I-CO-18B		TRC-AOC-16I-CO-19		TRC-AOC-16I-CO-20	
				Lab Sample ID:	18J0034-13		18J0034-14		18J0034-15		18J0034-16		18J0034-17		18J0034-18		18J0034-19		18J0034-20		18J0039-01		18J0039-02		18J0039-03		18J0039-04		18J0039-05		18J0039-06		18J0039-07		18J0039-08		18J0039-09		18J0039-10		18J0039-11		18J0039-12		18J0039-13	
				Sample Date:	09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		09/29/2018		Field Dup		09/29/2018		09/29/2018	
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**																																								
PCB Aroclors																																														
	Aroclor-1016	mg/kg	~	~	0.5	U	0.98	U	0.097	U	0.39	U	1	U	0.099	U	0.096	U	1.9	U	0.48	U	0.98	U	0.49	U	0.36	U	0.36	U	0.43	U	0.5	U	0.87	U	2	U	0.37	U	0.3	U	0.44	U	0.85	U
	Aroclor-1221	mg/kg	~	~	0.5	U	0.98	U	0.097	U	0.39	U	1	U	0.099	U	0.096	U	1.9	U	0.48	U	0.98	U	0.49	U	0.36	U	0.36	U	0.43	U	0.5	U	0.87	U	2	U	0.37	U	0.3	U	0.44	U	0.85	U
	Aroclor-1232	mg/kg	~	~	0.5	U	0.98	U	0.097	U	0.39	U	1	U	0.099	U	0.096	U	1.9	U	0.48	U	0.98	U	0.49	U	0.36	U	0.36	U	0.43	U	0.5	U	0.87	U	2	U	0.37	U	0.3	U	0.44	U	0.85	U
	Aroclor-1242	mg/kg	~	~	0.5	U	0.98	U	0.097	U	0.39	U	1	U	0.099	U	0.096	U	1.9	U	0.48	U	0.98	U	0.49	U	0.36	U	0.36	U	0.43	U	0.5	U	0.87	U	2	U	0.37	U	0.3	U	0.44	U	0.85	U
	Aroclor-1248	mg/kg	~	~	0.5	U	0.98	U	0.097	U	0.39	U	1	U	0.099	U	0.096	U	1.9	U	0.48	U	0.98	U	0.49	U	0.36	U	0.36	U	0.43	U	0.5	U	0.87	U	2	U	0.37	U	0.3	U	0.44	U	0.85	U
	Aroclor-1254	mg/kg	~	~	**0.95**		**1.1**		**0.46**		**0.59**		**1.4**		**0.46**		0.096	U	**5.1**		**0.89**		0.98	U	**0.53**		**0.76**		0.36	U	**0.5**		**1**		**1.1**		2	U	**0.82**		**0.43**		**0.77**		**1.3**	
	Aroclor-1260	mg/kg	~	~	**2.7**		**4.4**		**0.46**		**1.5**		**4.9**		**0.45**		**0.53**		**10**		**3.2**		**5.7**		**2.5**		**2.5**		**1.2**		**2.4**		**3.9**		**4.4**		**8.7**		**1.8**		**1.4**		**2.1**		**4.4**	
	Aroclor-1262	mg/kg	~	~	0.5	U	0.98	U	0.097	U	0.39	U	1	U	0.099	U	0.096	U	1.9	U	0.48	U	0.98	U	0.49	U	0.36	U	0.36	U	0.43	U	0.5	U	0.87	U	2	U	0.37	U	0.3	U	0.44	U	0.85	U
	Aroclor-1268	mg/kg	~	~	0.5	U	0.98	U	0.097	U	0.39	U	1	U	**0.24**		**0.44**		1.9	U	**1.9**		**1**		**0.85**		**0.94**		**0.52**		**0.57**		**0.95**		**1.6**		2	U	**0.37**		0.3	U	**0.59**		**1.1**	
	PCBs, Total	mg/kg	1	50	**3.65**		**5.5**		**0.92**		**2.09**		**6.3**		**1.15**		**0.97**		**15.1**		**5.99**		**6.7**		**3.88**		**4.2**		**1.72**		**3.47**		**5.85**		**7.1**		**8.7**		**2.99**		**1.83**		**3.46**		**6.8**	

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

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U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded green are above 1.0 mg/kg.

Values shown in bold and shaded orange are equal to or above 50 mg/kg.

PCBs - Polychlorinated Biphenyls.

All concrete samples were collected from the surface (0-0.5 inches) of the structure being sampled, unless otherwise noted.

[1.] Analytical results for porous media samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for porous media samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS - CONCRETE SAMPLES (PCBs)
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

					AOC:	TRC-AOC-16I								TRC-AOC-16EE																	
					Sample Name:	TRC-AOC-16I-CO-21	TRC-AOC-16I-CO-22	TRC-AOC-16I-CO-23	TRC-AOC-16I-CO-24	TRC-AOC-16I-CO-25	TRC-AOC-16I-CO-26	TRC-AOC-16I-CO-27	TRC-AOC-16EE-CO-01	TRC-AOC-16EE-CO-01B	TRC-AOC-16EE-CO-02	TRC-AOC-16EE-CO-03	TRC-AOC-16EE-CO-04	TRC-AOC-16EE-CO-05	TRC-AOC-16EE-CO-06	TRC-AOC-16EE-CO-07	TRC-AOC-16EE-CO-08	TRC-AOC-16EE-CO-09	TRC-AOC-16EE-CO-10	TRC-AOC-16EE-CO-11	TRC-AOC-16EE-CO-12	TRC-AOC-16EE-CO-13
					Lab Sample ID:	18J0039-14	18J0039-15	18J0039-16	18J0039-17	18J0392-01	18J0392-02	18J0392-03	19A0898-01	19A0898-02	19A0898-03	19A0898-04	19A0898-05	19A0898-06	19A0898-07	19A0898-08	19A0898-09	19A0898-10	19A0898-11	19A0898-12	19A0898-13	19A0898-14
					Sample Date:	09/29/2018	09/29/2018	09/29/2018	09/29/2018	10/08/2018	10/08/2018	10/08/2018	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**										Field Dup												
PCB Aroclors																										
	Aroclor-1016	mg/kg	~	~	0.43 U	1.9 U	4.2 U	1.4 U	0.094 U	0.19 U	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	0.50 U	0.48 U	0.50 U	0.50 U	0.48 U	0.49 U	0.49 U	0.49 U	0.50 U
	Aroclor-1221	mg/kg	~	~	0.43 U	1.9 U	4.2 U	1.4 U	0.094 U	0.19 U	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	0.50 U	0.48 U	0.50 U	0.50 U	0.48 U	0.49 U	0.49 U	0.49 U	0.50 U
	Aroclor-1232	mg/kg	~	~	0.43 U	1.9 U	4.2 U	1.4 U	0.094 U	0.19 U	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	0.50 U	0.48 U	0.50 U	0.50 U	0.48 U	0.49 U	0.49 U	0.49 U	0.50 U
	Aroclor-1242	mg/kg	~	~	0.43 U	1.9 U	4.2 U	1.4 U	0.094 U	0.19 U	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	0.50 U	0.48 U	0.50 U	0.50 U	0.48 U	0.49 U	0.49 U	0.49 U	0.50 U
	Aroclor-1248	mg/kg	~	~	0.43 U	1.9 U	4.2 U	1.4 U	0.094 U	0.19 U	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	0.50 U	0.48 U	0.50 U	0.50 U	0.48 U	0.49 U	0.49 U	0.49 U	0.50 U
	Aroclor-1254	mg/kg	~	~	**0.86**	**2.4**	4.2 U	**1.5**	**0.93**	**0.34**	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	0.50 U	0.48 U	0.50 U	0.50 U	0.48 U	0.49 U	0.49 U	0.49 U	0.50 U
	Aroclor-1260	mg/kg	~	~	**2.7**	**6.9**	**22**	**4.6**	**0.87**	**1.3**	0.097 U	**2.2**	**2.1**	**0.77**	**4.5**	**1.8**	**1.7**	**1.2**	**1.2**	**3.5**	**3.2**	**3.0**	**2.0**	**3.6**	**4.8**
	Aroclor-1262	mg/kg	~	~	0.43 U	1.9 U	4.2 U	1.4 U	0.094 U	0.19 U	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	0.50 U	0.48 U	0.50 U	0.50 U	0.48 U	0.49 U	0.49 U	0.49 U	0.50 U
	Aroclor-1268	mg/kg	~	~	**1.3**	**2.4**	4.2 U	1.4 U	**0.38**	**1.4**	0.097 U	0.48 U	0.50 U	0.50 U	0.49 U	0.48 U	**0.64**	0.48 U	0.50 U	**0.75**	**0.66**	0.49 U	0.49 U	**0.66**	0.50 U
	PCBs, Total	mg/kg	1	50	**4.86**	**11.7**	**22**	**6.1**	**2.18**	**3.04**	0.097 U	**2.2**	**2.1**	**0.77**	**4.5**	**1.8**	**2.34**	**1.2**	**1.2**	**4.25**	**3.86**	**3.0**	**2.0**	**4.26**	**4.8**

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

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Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded green are above 1.0 mg/kg.

Values shown in bold and shaded orange are equal to or above 50 mg/kg.

PCBs - Polychlorinated Biphenyls.

All concrete samples were collected from the surface (0-0.5 inches) of the structure being sampled, unless otherwise noted.

[1.] Analytical results for porous media samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for porous media samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS - CONCRETE SAMPLES (PCBs)
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

				AOC:	**TRC-AOC-16EE**																				
				Sample Name:	TRC-AOC-16EE-CO-14	TRC-AOC-16EE-CO-15	TRC-AOC-16EE-CO-15B	TRC-AOC-16EE-CO-16	TRC-AOC-16EE-CO-17	TRC-AOC-16EE-CO-18	TRC-AOC-16EE-CO-19	TRC-AOC-16EE-CO-20	TRC-AOC-16EE-CO-21	TRC-AOC-16EE-CO-22	TRC-AOC-16EE-CO-23	TRC-AOC-16EE-CO-24	TRC-AOC-16EE-CO-25	TRC-AOC-16EE-CO-26	TRC-AOC-16EE-CO-27	TRC-AOC-16EE-CO-28	TRC-AOC-16EE-CO-29	TRC-AOC-16EE-CO-30	TRC-AOC-16EE-CO-31	TRC-AOC-16EE-CO-32	TRC-AOC-16EE-CO-33
				Lab Sample ID:	19A0898-15	19A0898-16	19A0898-17	19A0898-18	19A0898-19	19A0898-20	19A0899-01	19A0899-02	19A0899-03	19A0899-04	19A0899-05	19A0899-06	19A0899-07	19A0899-08	19A0899-09	19A0899-10	19A0899-11	19A0899-12	19A0899-13	19A0899-14	19A0899-15
				Sample Date:	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**			Field Dup																		
PCB Aroclors																									
	Aroclor-1016	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	0.50 U	0.48 U	0.50 U	0.93 U	0.48 U	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	0.46 U	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	Aroclor-1221	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	0.50 U	0.48 U	0.50 U	0.93 U	0.48 U	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	0.46 U	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	Aroclor-1232	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	0.50 U	0.48 U	0.50 U	0.93 U	0.48 U	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	0.46 U	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	Aroclor-1242	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	0.50 U	0.48 U	0.50 U	0.93 U	0.48 U	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	0.46 U	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	Aroclor-1248	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	0.50 U	0.48 U	0.50 U	0.93 U	0.48 U	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	0.46 U	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	Aroclor-1254	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	0.50 U	0.48 U	0.50 U	0.93 U	**0.66**	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	**0.63**	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	Aroclor-1260	mg/kg	~	~	**6.0**	**3.2**	**3.2**	**3.4**	**3.1**	**2.5**	**5.3**	**6.2**	**3.0**	**3.8**	**4.8**	**12**	**4.7**	**0.97**	**2.4**	**4.8**	**12**	**6.9**	**18**	**5.0**	**23**
	Aroclor-1262	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	0.50 U	0.48 U	0.50 U	0.93 U	0.48 U	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	0.46 U	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	Aroclor-1268	mg/kg	~	~	0.48 U	0.50 U	0.48 U	0.49 U	**2.1**	0.48 U	0.50 U	0.93 U	0.48 U	0.47 U	0.47 U	2.0 U	0.49 U	0.48 U	0.46 U	0.41 U	2.0 U	0.87 U	3.6 U	0.45 U	3.5 U
	PCBs, Total	mg/kg	1	50	**6.0**	**3.2**	**3.2**	**3.4**	**5.2**	**2.5**	**5.3**	**6.2**	**3.66**	**3.8**	**4.8**	**12**	**4.7**	**0.97**	**3.03**	**4.8**	**12**	**6.9**	**18**	**5.0**	**23**

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

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U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded green are above 1.0 mg/kg.

Values shown in bold and shaded orange are equal to or above 50 mg/kg.

PCBs - Polychlorinated Biphenyls.

All concrete samples were collected from the surface (0-0.5 inches) of the structure being sampled, unless otherwise noted.

[1.] Analytical results for porous media samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

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TABLE 3
SUMMARY OF ANALYTICAL RESULTS - CONCRETE SAMPLES (PCBs)
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

				AOC:	**TRC-AOC-16EE**																				
				Sample Name:	TRC-AOC-16EE-CO-34	TRC-AOC-16EE-CO-35	TRC-AOC-16EE-CO-35B	TRC-AOC-16EE-CO-36	TRC-AOC-16EE-CO-37	TRC-AOC-16EE-CO-38	TRC-AOC-16EE-CO-39	TRC-AOC-16EE-CO-40	TRC-AOC-16EE-CO-41	TRC-AOC-16EE-CO-42	TRC-AOC-16EE-CO-43	TRC-AOC-16EE-CO-44	TRC-AOC-16EE-CO-45	TRC-AOC-16EE-CO-46	TRC-AOC-16EE-CO-47	TRC-AOC-16EE-CO-48	TRC-AOC-16EE-CO-49	TRC-AOC-16EE-CO-49B	TRC-AOC-16EE-CO-50	TRC-AOC-16EE-CO-51	TRC-AOC-16EE-CO-52
				Lab Sample ID:	19A0899-16	19A0899-17	19A0899-18	19A0899-19	19A0899-20	19A0916-01	19A0916-02	19A0916-03	19A0916-04	19A0916-05	19A0916-06	19A0916-07	19A0916-08	19A0916-09	19A0916-10	19A0916-11	19A0916-12	19A0916-13	19A0916-14	19A0916-15	19A0916-16
				Sample Date:	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019	01/17/2019
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**			Field Dup															Field Dup			
PCB Aroclors																									
	Aroclor-1016	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	Aroclor-1221	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	Aroclor-1232	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	Aroclor-1242	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	Aroclor-1248	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	Aroclor-1254	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	Aroclor-1260	mg/kg	~	~	**1.5**	**9.2**	**8.4**	**31**	**29**	**26**	**85**	**14**	**19**	**11**	**14**	**5.8**	**130**	**940**	**21,000**	**610**	**20,000**	**22,000**	**13**	**490**	**66**
	Aroclor-1262	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	Aroclor-1268	mg/kg	~	~	0.48 U	1.9 U	1.9 U	3.5 U	3.5 U	4.5 U	20 U	2.5 U	4.8 U	2.0 U	2.4 U	0.48 U	24 U	170 U	10,000 U	97 U	9,300 U	9,800 U	1.9 U	89 U	9.5 U
	PCBs, Total	mg/kg	1	50	**1.5**	**9.2**	**8.4**	**31**	**29**	**26**	**85**	**14**	**19**	**11**	**14**	**5.8**	**130**	**940**	**21,000**	**610**	**20,000**	**22,000**	**13**	**490**	**66**

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

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Values shown in bold and shaded green are above 1.0 mg/kg.

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PCBs - Polychlorinated Biphenyls.

All concrete samples were collected from the surface (0-0.5 inches) of the structure being sampled, unless otherwise noted.

1. Analytical results for porous media samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

2. Analytical results for porous media samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

TABLE 3
SUMMARY OF ANALYTICAL RESULTS - CONCRETE SAMPLES (PCBs)
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

					AOC:	TRC-AOC-16EE																									
					Sample Name:	TRC-AOC-16EE-CO-53		TRC-AOC-16EE-CO-54		TRC-AOC-16EE-CO-55		TRC-AOC-16EE-CO-56		TRC-AOC-16EE-CO-57		TRC-AOC-16EE-CO-58		TRC-AOC-16EE-CO-59		TRC-AOC-16EE-CO-60		TRC-AOC-17C-CO-01		TRC-AOC-17C-CO-02		TRC-AOC-17C-CO-03		TRC-AOC-17C-CO-03B		TRC-AOC-17F-CO-01		TRC-AOC-17F-CO-02		TRC-AOC-17F-CO-03		TRC-AOC-17F-CO-04	
					Lab Sample ID:	19A0916-17		19A0916-18		19A0916-19		19A0916-20		19A0917-01		19A0917-02		19A0917-03		19A0917-04		18J0861-01		18J0861-02		18J0861-03		18J0861-04		19A1224-13		19A1224-16		19A1224-19		19A1224-23	
					Sample Date:	01/17/2019		01/17/2019		01/17/2019		01/17/2019		01/17/2019		01/17/2019		01/17/2019		01/17/2019		10/17/2018		10/17/2018		10/17/2018		10/17/2018		01/24/2019		01/24/2019		01/24/2019		01/24/2019	
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**																						Field Dup							
PCB Aroclors																																	
	Aroclor-1016	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	0.47	U	0.47	U	0.49	U	3.8	U	2.0	U	0.41	U
	Aroclor-1221	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	0.47	U	0.47	U	0.49	U	3.8	U	2.0	U	0.41	U
	Aroclor-1232	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	0.47	U	0.47	U	0.49	U	3.8	U	2.0	U	0.41	U
	Aroclor-1242	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	0.47	U	0.47	U	0.49	U	3.8	U	2.0	U	0.41	U
	Aroclor-1248	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	0.47	U	0.47	U	0.49	U	3.8	U	2.0	U	0.41	U
	Aroclor-1254	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	**0.76**		0.47	U	0.49	U	3.8	U	2.0	U	0.41	U
	Aroclor-1260	mg/kg	~	~	**5.5**		**20**		**610**		**8,100**		**20**		**61**		**54**		**11**		**0.78**		**4.6**		**1.8**		**2**		**1.8**		**18**		**9.7**		**4.0**	
	Aroclor-1262	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	0.47	U	0.47	U	0.49	U	3.8	U	2.0	U	0.41	U
	Aroclor-1268	mg/kg	~	~	0.46	U	4.7	U	170	U	1,900	U	2.3	U	8.7	U	10	U	2.0	U	0.088	U	0.5	U	**0.65**		**0.81**		0.49	U	3.8	U	2.0	U	0.41	U
	PCBs, Total	mg/kg	1	50	**5.5**		**20**		**610**		**8,100**		**20**		**61**		**54**		**11**		**0.78**		**4.6**		**3.21**		**2.81**		**1.8**		**18**		**9.7**		**4.0**	

Notes:

mg/kg - milligrams per kilogram or parts per million (ppm).

~ - No listed criteria exists for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded green are above 1.0 mg/kg.

Values shown in bold and shaded orange are equal to or above 50 mg/kg.

PCBs - Polychlorinated Biphenyls.

All concrete samples were collected from the surface (0-0.5 inches) of the structure being sampled, unless otherwise noted.

[1.] Analytical results for porous media samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for porous media samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS - SOIL SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

							TRC-AOC-16EE																	
						Sample Location:	TRC-AOC-16EE-SO-01		TRC-AOC-16EE-SO-01		TRC-AOC-16EE-SO-02		TRC-AOC-16EE-SO-02		TRC-AOC-16EE-SO-02B		TRC-AOC-16EE-SO-03		TRC-AOC-16EE-SO-03		TRC-AOC-16EE-SO-03B		TRC-AOC-16EE-SO-04		TRC-AOC-16EE-SO-04	
						Sample Name:	(0-1)		(5-6)		(0-1)		(6-7)		(6-7)		(0-1)		(6-7)		(0-1)		(0-1)		(6-7)	
						Sample Depth:	0-1 ft		5-6 ft		0-1 ft		6-7 ft		6-7 ft		0-1 ft		6-7 ft		0-1 ft		0-1 ft		6-7 ft	
						Sample Date:	02/04/2019		02/04/2019		02/04/2019		02/04/2019		02/04/2019		02/04/2019		02/04/2019		02/04/2019		02/04/2019		02/04/2019	
Analysis	Analyte	Unit	EPA[1]	EPA[2]	GB PMC[3]	I/C DEC[4]									Field Dup						Field Dup					
PCBs																										
	Aroclor-1016	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1221	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1232	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1242	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1248	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1254	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1260	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1262	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Aroclor-1268	mg/kg	~	~	~	~	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U
	Total PCBs	mg/kg	1	50	~	10	0.083	U	0.092	U	0.080	U	0.088	U	0.090	U	0.087	U	0.086	U	0.083	U	0.083	U	0.096	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

1. Analytical results for soil samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

2. Analytical results for soil samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

3. GB PMC - Pollutant Mobility Criteria for GB Area, Connecticut Remediation Standard Regulations (RSRs), January 30, 1996, revised June 27, 2013.

4. I/C DEC - Industrial/Commercial Direct Exposure Criteria, CT RSRs, January 30, 1996, revised June 27, 2013.

~ - No listed standards exists for this analyte.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS - SOIL SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

							TRC-AOC-16EE																	
						Sample Location:	TRC-AOC-16EE-SO-05		TRC-AOC-16EE-SO-05		TRC-AOC-16EE-SO-06		TRC-AOC-16EE-SO-06		TRC-AOC-16EE-SO-07		TRC-AOC-16EE-SO-07		TRC-AOC-16EE-SO-08		TRC-AOC-16EE-SO-08		TRC-AOC-16EE-SO-08B	
						Sample Name:	(0-1)		(5-6)		(0-1)		(5-6)		(0-1)		(6-7)		(0-1)		(6-7)		(6-7)	
						Sample Depth:	0-1 ft		5-6 ft		0-1 ft		5-6 ft		0-1 ft		6-7 ft		0-1 ft		6-7 ft		6-7 ft	
						Sample Date:	02/04/2019		02/04/2019		02/04/2019		02/04/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019	
Analysis	Analyte	Unit	EPA[1]	EPA[2]	GB PMC[3]	I/C DEC[4]																	Field Dup	
PCBs																								
	Aroclor-1016	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Aroclor-1221	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Aroclor-1232	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Aroclor-1242	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Aroclor-1248	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Aroclor-1254	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Aroclor-1260	mg/kg	~	~	~	~	0.083	U	**120**		**3.3**		**240**		**0.25**		**0.12**		0.082	U	**16,000**		**17,000**	
	Aroclor-1262	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Aroclor-1268	mg/kg	~	~	~	~	0.083	U	35	U	0.84	U	180	U	0.084	U	0.090	U	0.082	U	2,400	U	2,300	U
	Total PCBs	mg/kg	1	50	~	10	0.083	U	**120**		**3.3**		**240**		**0.25**		**0.12**		0.082	U	**16,000**		**17,000**	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

1. Analytical results for soil samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

2. Analytical results for soil samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

3. GB PMC - Pollutant Mobility Criteria for GB Area, Connecticut Remediation Standard Regulations (RSRs), January 30, 1996, revised June 27, 2013.

4. I/C DEC - Industrial/Commercial Direct Exposure Criteria, CT RSRs, January 30, 1996, revised June 27, 2013.

~ - No listed standards exists for this analyte.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS - SOIL SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

							TRC-AOC-16EE																	
						Sample Location:	TRC-AOC-16EE-SO-09		TRC-AOC-16EE-SO-09		TRC-AOC-16EE-SO-10		TRC-AOC-16EE-SO-10		TRC-AOC-16EE-SO-11		TRC-AOC-16EE-SO-11B		TRC-AOC-16EE-SO-11		TRC-AOC-16EE-SO-12		TRC-AOC-16EE-SO-12		TRC-AOC-16EE-SO-13	
						Sample Name:	(0-1)		(6-7)		(0-1)		(6-7)		(0-1)		(0-1)		(7-8)		(0-1)		(6-7)		(0-1)	
						Sample Depth:	0-1 ft		6-7 ft		0-1 ft		6-7 ft		0-1 ft		0-1 ft		7-8 ft		0-1 ft		6-7 ft		0-1 ft	
						Sample Date:	03/05/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019		03/05/2019	
Analysis	Analyte	Unit	EPA[1]	EPA[2]	GB PMC[3]	I/C DEC[4]												Field Dup								
PCBs																										
	Aroclor-1016	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Aroclor-1221	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Aroclor-1232	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Aroclor-1242	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Aroclor-1248	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Aroclor-1254	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Aroclor-1260	mg/kg	~	~	~	~	**0.58**		**2,800**		**2.1**		**0.44**		0.085	U	NA		**1,500**		**0.61**		**15**		**0.78**	
	Aroclor-1262	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Aroclor-1268	mg/kg	~	~	~	~	0.21	U	450	U	1.1	U	0.43	U	0.085	U	NA		120	U	0.43	U	4.8	U	0.44	U
	Total PCBs	mg/kg	1	50	~	10	**0.58**		**2,800**		**2.1**		**0.44**		0.085	U	NA		**1,500**		**0.61**		**15**		**0.78**	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

[1.] Analytical results for soil samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for soil samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

[3.] GB PMC - Pollutant Mobility Criteria for GB Area, Connecticut Remediation Standard Regulations (RSRs), January 30, 1996, revised June 27, 2013.

[4.] I/C DEC - Industrial/Commercial Direct Exposure Criteria, CT RSRs, January 30, 1996, revised June 27, 2013.

~ - No listed standards exists for this analyte.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS - SOIL SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

							TRC-AOC-16EE												TRC-AOC-16FF							
						Sample Location:	TRC-AOC-16EE-SO-13		TRC-AOC-16EE-SO-14		TRC-AOC-16EE-SO-14		TRC-AOC-16EE-SO-15		TRC-AOC-16EE-SO-15		TRC-AOC-16EE-SO-15		TRC-AOC-16FF-SO-01		TRC-AOC-16FF-SO-01		TRC-AOC-16FF-SO-02		TRC-AOC-16FF-SO-02	
						Sample Name:	(6-7)		(0-1)		(6-7)		(0-1)		(5-6)		(5-6) B		(0-1)		(5-6)		(0-1)		(5-6)	
						Sample Depth:	6-7 ft		0-1 ft		6-7 ft		0-1 ft		5-6 ft		5-6 ft		0-1 ft		5-6 ft		0-1 ft		5-6 ft	
						Sample Date:	03/05/2019		03/05/2019		03/05/2019		12/10/2020		12/10/2020		12/10/2020		12/10/2020		12/10/2020		12/10/2020		12/10/2020	
Analysis	Analyte	Unit	EPA[1]	EPA[2]	GB PMC[3]	I/C DEC[4]											Field Dup									
PCBs																										
	Aroclor-1016	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1221	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1232	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1242	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1248	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1254	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1260	mg/kg	~	~	~	~	**2.6**		**2.9**		**1,700**		**3.8**		**0.21**		**0.17**		0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1262	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Aroclor-1268	mg/kg	~	~	~	~	1.2	U	1.1	U	240	U	0.87	U	0.094	U	0.098	U	0.083	U	0.098	U	0.087	U	0.096	U
	Total PCBs	mg/kg	1	50	~	10	**2.6**		**2.9**		**1,700**		**3.8**		**0.21**		**0.17**		0.083	U	0.098	U	0.087	U	0.096	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

1. Analytical results for soil samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

2. Analytical results for soil samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

3. GB PMC - Pollutant Mobility Criteria for GB Area, Connecticut Remediation Standard Regulations (RSRs), January 30, 1996, revised June 27, 2013.

4. I/C DEC - Industrial/Commercial Direct Exposure Criteria, CT RSRs, January 30, 1996, revised June 27, 2013.

~ - No listed standards exists for this analyte.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS - SOIL SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

						Sample Location:	**TRC-AOC-16HH**				**TRC-AOC-16I**													
						Sample Name:	TRC-AOC-16HH-SO-01 (0-1)		TRC-AOC-16HH-SO-01 (5-6)		TRC-AOC-16I-SO-01(0-1)		TRC-AOC-16I-SO-01(5.5-6.5)		TRC-AOC-16I-SO-02(4-5)		TRC-AOC-16I-SO-02(7-8)		TRC-AOC-16I-SO-03(0-6)		TRC-AOC-16I-SO-04(0-1)		TRC-AOC-16I-SO-04(4-5)	
						Sample Depth:	0-1 ft		5-6 ft		0-1 ft		5.5-6.5 ft		4-5 ft		7-8 ft		0-6 ft		0-1 ft		4-5 ft	
						Sample Date:	12/10/2020		12/10/2020		11/19/2018		11/19/2018		11/19/2018		11/19/2018		11/19/2018		11/19/2018		11/19/2018	
Analysis	Analyte	Unit	**EPA[1]**	**EPA[2]**	**GB PMC[3]**	**I/C DEC[4]**																		
PCBs																								
	Aroclor-1016	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1221	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1232	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1242	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1248	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1254	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1260	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1262	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Aroclor-1268	mg/kg	~	~	~	~	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U
	Total PCBs	mg/kg	1	50	~	10	0.080	U	0.091	U	0.086	U	0.088	U	0.095	U	0.097	U	0.091	U	0.094	U	0.083	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

[1.] Analytical results for soil samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for soil samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

[3.] GB PMC - Pollutant Mobility Criteria for GB Area, Connecticut Remediation Standard Regulations (RSRs), January 30, 1996, revised June 27, 2013.

[4.] I/C DEC - Industrial/Commercial Direct Exposure Criteria, CT RSRs, January 30, 1996, revised June 27, 2013.

~ - No listed standards exists for this analyte.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS - SOIL SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

							Sample Location:	TRC-AOC-17F											
							Sample Name:	TRC-AOC-17F-SO-01 (0-1)		TRC-AOC-17F-SO-01 (5-6)		TRC-AOC-17F-SO-02 (0-1)		TRC-AOC-17F-SO-02 (5-6)		TRC-AOC-17F-SO-03 (0-1)		TRC-AOC-17F-SO-03 (5-6)	
							Sample Depth:	0-1 ft		5-6 ft		0-1 ft		5-6 ft		0-1 ft		5-6 ft	
							Sample Date:	12/08/2020		12/08/2020		12/10/2020		12/10/2020		12/10/2020		12/10/2020	
Analysis	Analyte	Unit	EPA[1]	EPA[2]	GB PMC[3]	I/C DEC[4]													
PCBs																			
	Aroclor-1016	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Aroclor-1221	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Aroclor-1232	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Aroclor-1242	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Aroclor-1248	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Aroclor-1254	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Aroclor-1260	mg/kg	~	~	~	~		0.086	U	0.087	U	**0.26**		**0.12**		0.087	U	0.096	U
	Aroclor-1262	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Aroclor-1268	mg/kg	~	~	~	~		0.086	U	0.087	U	0.090	U	0.094	U	0.087	U	0.096	U
	Total PCBs	mg/kg	1	50	~	10		0.086	U	0.087	U	**0.26**		**0.12**		0.087	U	0.096	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

[1.] Analytical results for soil samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for soil samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

[3.] GB PMC - Pollutant Mobility Criteria for GB Area, Connecticut Remediation Standard Regulations (RSRs), January 30, 1996, revised June 27, 2013.

[4.] I/C DEC - Industrial/Commercial Direct Exposure Criteria, CT RSRs, January 30, 1996, revised June 27, 2013.

~ - No listed standards exists for this analyte.

TABLE 4
SUMMARY OF ANALYTICAL RESULTS - SOIL SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

							Sample Location:	TRC-AOC-19B											
							Sample Name:	TRC-AOC-19B-SO-01 (0-1)		TRC-AOC-19B-SO-01 (5-6)		TRC-AOC-19B-SO-02 (0-1)		TRC-AOC-19B-SO-02 (6-7)		TRC-AOC-19B-SO-03 (0-1)		TRC-AOC-19B-SO-03 (5-6)	
							Sample Depth:	0-1 ft		5-6 ft		0-1 ft		6-7 ft		0-1 ft		5-6 ft	
							Sample Date:	12/09/2020		12/09/2020		12/08/2020		12/08/2020		12/08/2020		12/08/2020	
Analysis	Analyte	Unit	EPA[1]	EPA[2]	GB PMC[3]	I/C DEC[4]													
PCBs																			
	Aroclor-1016	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1221	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1232	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1242	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1248	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1254	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1260	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1262	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Aroclor-1268	mg/kg	~	~	~	~		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U
	Total PCBs	mg/kg	1	50	~	10		0.086	U	0.093	U	0.090	U	0.089	U	0.083	U	0.090	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

R - Rejected data point.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed criteria.

PCBs - Polychlorinated Biphenyls.

[1.] Analytical results for soil samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for soil samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

[3.] GB PMC - Pollutant Mobility Criteria for GB Area, Connecticut Remediation Standard Regulations (RSRs), January 30, 1996, revised June 27, 2013.

[4.] I/C DEC - Industrial/Commercial Direct Exposure Criteria, CT RSRs, January 30, 1996, revised June 27, 2013.

~ - No listed standards exists for this analyte.

TABLE 5
SUMMARY OF ANALYTICAL RESULTS - WATER
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

		AOC:		TRC-AOC-16E		TRC-AOC-16HH		TRC-AOC-17F																											
		Sample Name:		TRC-AOC-16E-SW-01		TRC-AOC-16HH-SW-01		TRC-AOC-17F-SW-01		TRC-AOC-17F-SW-01B		TRC-AOC-17F-SW-02		TRC-AOC-17F-SW-03		TRC-AOC-17F-SW-04		TRC-AOC-17F-SW-05		TRC-AOC-17F-SW-06		TRC-AOC-17F-SW-07		TRC-AOC-17F-SW-08		TRC-AOC-17F-SW-09		TRC-AOC-17F-SW-10		TRC-AOC-17F-SW-11		TRC-AOC-17F-SW-12		TRC-AOC-17F-SW-13	
		Lab Sample ID:		18L0338-11		19A1162-17		19A1162-07		19A1162-08		19A1162-11		19A1162-12		19A1162-13		19A1224-11		19A1224-14		19A1224-17		19A1224-21		19A1286-04		19A1286-10		19A1286-11		19A1286-14		19A1286-15	
		Sample Date:		12/06/2018		01/23/2019		01/23/2019		01/23/2019		01/23/2019		01/23/2019		01/23/2019		01/24/2019		01/24/2019		01/24/2019		01/24/2019		01/25/2019		01/25/2019		01/25/2019		01/25/2019		01/25/2019	
Analysis	**Analyte**	**Unit**	**EPA[1]**							Field Dup																									
PCB Aroclors																																			
	Aroclor-1016	ug/L	~	10	U	1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	0.79	U	7.8	U	7.8	U	0.78	U	0.20	U	0.20	U	100	U	8.3	U	4.0	U
	Aroclor-1221	ug/L	~	10	U	1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	0.79	U	7.8	U	7.8	U	0.78	U	0.20	U	0.20	U	100	U	8.3	U	4.0	U
	Aroclor-1232	ug/L	~	10	U	1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	0.79	U	7.8	U	7.8	U	0.78	U	0.20	U	0.20	U	100	U	8.3	U	4.0	U
	Aroclor-1242	ug/L	~	10	U	1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	0.79	U	7.8	U	7.8	U	0.78	U	0.20	U	0.20	U	100	U	8.3	U	4.0	U
	Aroclor-1248	ug/L	~	**52**		1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	0.79	U	7.8	U	7.8	U	0.78	U	0.20	U	0.20	U	100	U	8.3	U	4.0	U
	Aroclor-1254	ug/L	~	**96**		1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	**0.89**		7.8	U	7.8	U	0.78	U	**0.52**		0.20	U	100	U	**19**		**10**	
	Aroclor-1260	ug/L	~	10	U	**8.2**		0.20	U	0.20	U	**2.6**		0.20	U	**1.5**		**3.1**		**36**		**62**		**4.5**		**1.7**		**0.91**		**450**		**54**		**35**	
	Aroclor-1262	ug/L	~	10	U	1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	0.79	U	7.8	U	7.8	U	0.78	U	0.20	U	0.20	U	100	U	8.3	U	4.0	U
	Aroclor-1268	ug/L	~	10	U	1.0	U	0.20	U	0.20	U	0.39	U	0.20	U	0.20	U	**1.9**		7.8	U	7.8	U	0.78	U	0.20	U	0.20	U	100	U	8.3	U	4.0	U
	PCBs, Total	ug/L	0.5	**148**		**8.2**		0.20	U	0.20	U	**2.6**		0.20	U	**1.5**		**5.89**		**36**		**62**		**4.5**		**2.22**		**0.91**		**450**		**73**		**45**	

Notes:

ug/L - micrograms per liter or parts per billion (ppb).

mg/L - milligrams per liter or parts per million (ppm).

~ - No listed standards exists for this analyte.

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

ETPH - Extractable total potroleum hydrocarbon.

[1.] The criteria for PCBs in water is set forth in 40 CFR 761.61(a)(4)(iv) and 40 CFR 761.79(b)(1)(iii), which indicates the cleanup level for water contaminated with PCBs is ≤0.5 µg/L (ppb) without further conditions.

* With the exception of PCBs, this table shows only compounds that were reported to be present in surface water.

TABLE 5
SUMMARY OF ANALYTICAL RESULTS - WATER
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

				AOC:	TRC-AOC-19B																			
				Sample Name:	TRC-AOC-19B-SW-01		TRC-AOC-19B-SW-01B		TRC-AOC-19B-SW-04		TRC-AOC-19B-SW-05		TRC-AOC-19B-SW-06		TRC-AOC-19B-SW-07		TRC-AOC-19B-SW-07B		TRC-AOC-19B-SW-08		TRC-AOC-19B-SW-09		TRC-AOC-19B-SW-10	
				Lab Sample ID:	18J0277-07		18J0277-08		19A0987-05		19A0987-08		19A1224-09		19A1367-24		19A1367-25		19B0229-02		19B0236-02		19B0229-06	
				Sample Date:	10/04/2018		10/04/2018		01/18/2019		01/18/2019		01/24/2019		01/28/2019		01/28/2019		02/06/2019		02/06/2019		02/06/2019	
Analysis	**Analyte**	**Unit**	**EPA[1]**				Field Dup										Field Dup							
PCB Aroclors																								
	Aroclor-1016	ug/L	~		2	U	0.2	U	20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	Aroclor-1221	ug/L	~		2	U	0.2	U	20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	Aroclor-1232	ug/L	~		2	U	0.2	U	20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	Aroclor-1242	ug/L	~		2	U	0.2	U	20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	Aroclor-1248	ug/L	~		**6.7**		**0.28**		20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	Aroclor-1254	ug/L	~		**9**		**0.38**		20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	Aroclor-1260	ug/L	~		**3.3**		0.2	U	**190**		**930**		**0.80**		0.20	U	0.20	U	**190**		**210**		**0.69**	
	Aroclor-1262	ug/L	~		2	U	0.2	U	20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	Aroclor-1268	ug/L	~		**2.1**		0.2	U	20	U	100	U	0.20	U	0.20	U	0.20	U	40	U	20	U	0.20	U
	PCBs, Total	ug/L	0.5		**21.1**		**0.66**		**190**		**930**		**0.80**		0.20	U	0.20	U	**190**		**210**		**0.69**	

Notes:

ug/L - micrograms per liter or parts per billion (ppb).

mg/L - milligrams per liter or parts per million (ppm).

~ - No listed standards exists for this analyte.

NA - Sample not analyzed for the listed analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

ETPH - Extractable total potroleum hydrocarbon.

[1.] The criteria for PCBs in water is set forth in 40 CFR 761.61(a)(4)(iv) and 40 CFR 761.79(b)(1)(iii), which indicates the cleanup level for water contaminated with PCBs is ≤0.5 µg/L (ppb) without further conditions.

* With the exception of PCBs, this table shows only compounds that were reported to be present in surface water.

TABLE 6
SUMMARY OF ANALYTICAL RESULTS - SOLIDS (SEDIMENT) SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

						AOC:	**TRC-AOC-16I**		**TRC-AOC-17C**								**TRC-AOC-17F**																			
						Sample Name:	TRC-AOC-16I-SED-01		TRC-AOC-17C-SED-01		TRC-AOC-17C-SED-02		TRC-AOC-17C-SED-03		TRC-AOC-17C-SED-03		TRC-AOC-17F-SED-01		TRC-AOC-17F-SED-10		TRC-AOC-17F-SED-02		TRC-AOC-17F-SED-03		TRC-AOC-17F-SED-04		TRC-AOC-17F-SED-05		TRC-AOC-17F-SED-06		TRC-AOC-17F-SED-07		TRC-AOC-17F-SED-08		TRC-AOC-17F-SED-09		TRC-AOC-17F-SED-10		TRC-AOC-17F-SED-10	
						Lab Sample ID:	18J0660-05		18J0660-01		18J0660-02		18J0660-03		18J0660-06		19A1162-09		19A1162-10		19A1162-14		19A1162-15		19A1224-12		19A1224-15		19A1224-18		19A1224-22		19A1286-05		19A1286-06		19A1286-07		19A1286-08	
						Sample Date:	10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		01/23/2019		01/23/2019		01/23/2019		01/23/2019		01/24/2019		01/24/2019		01/24/2019		01/24/2019		01/25/2019		01/25/2019		01/25/2019		01/25/2019	
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**	**EPA[3]**								Field Dup						Field Dup																		Field Dup	
PCB Aroclors																																						
	Aroclor-1016	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	0.86	U	0.18	U	0.17	U	0.76	U	31	U	0.57	U	5.6	U	5.8	U	4.6	U	3.2	U	6.6	U	12	U	0.13	U
	Aroclor-1221	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	0.86	U	0.18	U	0.17	U	0.76	U	31	U	0.57	U	5.6	U	5.8	U	4.6	U	3.2	U	6.6	U	12	U	0.13	U
	Aroclor-1232	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	0.86	U	0.18	U	0.17	U	0.76	U	31	U	0.57	U	5.6	U	5.8	U	4.6	U	3.2	U	6.6	U	12	U	0.13	U
	Aroclor-1242	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	0.86	U	0.18	U	0.17	U	0.76	U	31	U	0.57	U	5.6	U	5.8	U	4.6	U	3.2	U	6.6	U	12	U	0.13	U
	Aroclor-1248	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	0.86	U	0.18	U	0.17	U	0.76	U	31	U	0.57	U	5.6	U	5.8	U	**5.1**		3.2	U	6.6	U	12	U	0.13	U
	Aroclor-1254	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	0.86	U	0.18	U	0.17	U	0.76	U	31	U	**0.71**		**9.2**		**6.6**		**10**		**5.8**		**14**		12	U	**0.23**	
	Aroclor-1260	mg/kg	~	~	~	**27**		**11**		**19**		**7.4**		**4.5**		**0.25**		**0.65**		**3.4**		**270**		**2.6**		**30**		**24**		**26**		**16**		**36**		**72**		**0.82**	
	Aroclor-1262	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	0.86	U	0.18	U	0.17	U	0.76	U	31	U	0.57	U	5.6	U	5.8	U	4.6	U	3.2	U	6.6	U	12	U	0.13	U
	Aroclor-1268	mg/kg	~	~	~	3.8	U	1.1	U	2.3	U	1.1	U	**1.5**		0.18	U	0.17	U	0.76	U	31	U	0.57	U	5.6	U	5.8	U	4.6	U	**5.8**		**19**		12	U	0.13	U
	PCBs, Total	mg/kg	1	50	~	**27**		**11**		**19**		**7.4**		**6.0**		**0.25**		**0.65**		**3.4**		**270**		**3.31**		**39.2**		**30.6**		**41.1**		**27.6**		**69**		**72**		**1.05**	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

~ - No listed standards exists for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

ETPH - Extractable Total Petroleum Hydrocarbons.

[1.] Analytical results for sediment samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for sediment samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

[3.] The TCLP lead analytical results were compared to the regulatory level for hazardous waste set forth in §261.24.

* With the exception of PCBs, this table shows only compounds that were reported to be present in the sediment.

TABLE 6
SUMMARY OF ANALYTICAL RESULTS - SOLIDS (SEDIMENT) SAMPLES
Interior Investigation - Boiler #13 IRM
English Station
510 Grand Avenue
New Haven, Connecticut

						AOC:	TRC-AOC-17F				TRC-AOC-19B					
						Sample Name:	TRC-AOC-17F-SED-11	TRC-AOC-17F-SED-12	TRC-AOC-17F-SED-13	TRC-AOC-17F-SED-14	TRC-AOC-19B-SED-04	TRC-AOC-19B-SED-05	TRC-AOC-19B-SED-06	TRC-AOC-19B-SED-07	TRC-AOC-19B-SED-08	TRC-AOC-19B-SED-09
						Lab Sample ID:	19A1286-09	19A1286-12	19A1286-13	19A1286-16	19A0987-07	19A0987-10	19A1224-10	19A1367-26	19B0229-03	19B0236-03
						Sample Date:	01/25/2019	01/25/2019	01/25/2019	01/25/2019	01/18/2019	01/18/2019	01/24/2019	01/28/2019	02/06/2019	02/06/2019
Analysis	**Analyte**	**Unit**	**EPA[1]**	**EPA[2]**	**EPA[3]**											
PCB Aroclors																
	Aroclor-1016	mg/kg	~	~	~	0.63 U	140 U	4,500 U	160 U	0.32 U	6.3 U	0.14 U	0.41 U	13 U	3.8 U
	Aroclor-1221	mg/kg	~	~	~	0.63 U	140 U	4,500 U	160 U	0.32 U	6.3 U	0.14 U	0.41 U	13 U	3.8 U
	Aroclor-1232	mg/kg	~	~	~	0.63 U	140 U	4,500 U	160 U	0.32 U	6.3 U	0.14 U	0.41 U	13 U	3.8 U
	Aroclor-1242	mg/kg	~	~	~	0.63 U	140 U	4,500 U	160 U	0.32 U	6.3 U	0.14 U	0.41 U	13 U	3.8 U
	Aroclor-1248	mg/kg	~	~	~	0.63 U	140 U	4,500 U	160 U	0.32 U	6.3 U	0.14 U	0.41 U	13 U	3.8 U
	Aroclor-1254	mg/kg	~	~	~	0.63 U	140 U	4,500 U	160 U	0.32 U	6.3 U	**0.52**	0.41 U	13 U	3.8 U
	Aroclor-1260	mg/kg	~	~	~	**4.8**	**1,400**	**47,000**	**1,900**	**2.4**	**33**	**1.3**	0.41 U	**66**	**23**
	Aroclor-1262	mg/kg	~	~	~	0.63 U	140 U	4,500 U	160 U	0.32 U	6.3 U	0.14 U	0.41 U	13 U	3.8 U
	Aroclor-1268	mg/kg	~	~	~	**1.3**	140 U	4,500 U	160 U	0.32 U	6.3 U	0.14 U	0.41 U	**22**	3.8 U
	PCBs, Total	mg/kg	1	50	~	**6.1**	**1,400**	**47,000**	**1,900**	**2.4**	**33**	**1.82**	ND	**88**	**23**

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

~ - No listed standards exists for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

ETPH - Extractable Total Petroleum Hydrocarbons.

[1.] Analytical results for sediment samples were compared to the High Occupancy Standard set forth in 40 CFR 761.61(a)(4)(i)(A), which indicates the cleanup level for PCB Remediation Waste is 1.0 mg/kg (ppm) without further conditions.

[2.] Analytical results for sediment samples were also compared to the 50 ppm (mg/kg) threshold described at 40 CFR 761.3 as that concentration has implications for the handling and disposal of materials with PCB contamination at that level.

[3.] The TCLP lead analytical results were compared to the regulatory level for hazardous waste set forth in §261.24.

* With the exception of PCBs, this table shows only compounds that were reported to be present in the sediment.

APPENDIX A
PHOTOGRAPHS

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 1: Boiler #13 Area standing at southeast entrance looking west.

Photo 2: Boiler #13 area standing at southeast entrance looking northwest.

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 3: Looking west between Boiler # 13 Ash Hopper and former transformer containment.

Photo 4: Looking south at Boiler #13 former transformer containment.

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 5: Standing between former transformer containment and Boiler #13 Ash Hopper looking west. Condenser #7 area is in the background.

Photo 6: Standing at southwest end of Boiler #13 area looking east.

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 7: Standing at southwest corner of Boiler #13 area looking northeast.

Photo 8: Looking west at east side of former Condenser #7 housing, pit equipment and debris.

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 9: Southwest corner of Condenser #7 pit, equipment and debris.

Photo 10: Looking east at west side of Condenser #7 housing, pit and equipment.

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 11: Looking east at northwest corner of Condenser #7 housing, pit, pump and debris.

Photo 12: Standing at west side of Condenser #7 pit looking west toward Screen House #3 entrance. Steel plates cover the intake cooling water pipe trench.

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 13: Standing at Screen House #3 entrance looking east toward Condenser #7 housing. Steel plates cover the intake cooling water pipe trench.

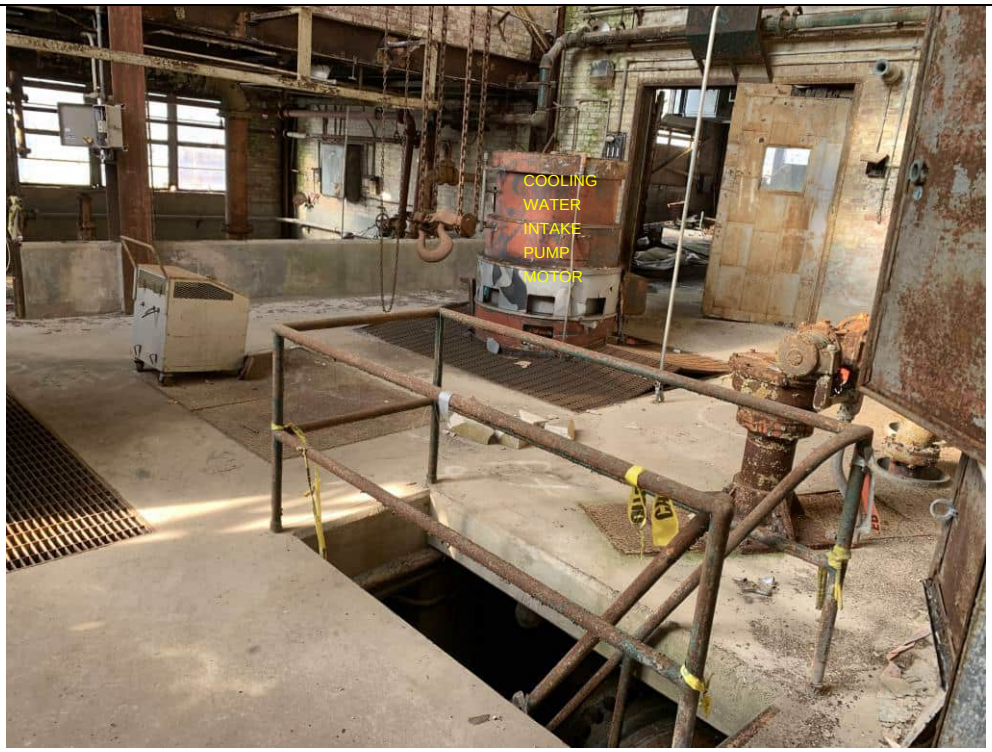

Photo 14: Standing at east entrance to Screen House #3 looking northwest. Stairway leads down into the sealed cooling water intake pump chamber.

English Station
Boiler #13 Interim Remedial Measure
Photographs

Photo 15: Standing on the roof at north end of the sealed intake cooling water pump chamber looking south.

Photo 16: Standing on the roof at northwest corner of the sealed intake cooling water pump chamber looking south.

APPENDIX B
BORING LOGS

BORING NUMBER: **TRC-AOC-16I-SO-01**
Page 1 of 1

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**8**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**11/19/18**
Client:	**United Illuminating**	Date Completed:	**11/19/18**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggie and Tony**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**11/19/2018**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		4.0	2.0		0'- 2' Brown and gray fine to medium SAND, little gravel (FILL), moist, no odor, no staining.
5	MAC		4.0	2.5		4'- 6.4' Gray fine to medium SAND (FILL), wet, petroleum-like odor, gray stained. 6.4'- 6.5' Black fine to medium SAND (FILL), wet, petroleum-like odor, black stained.
10						Refusal at 8.0 feet. Bottom of borehole at 8.0 feet.

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16I-SO-01(0-1) and TRC-AOC-16I-SO-01(5.5-6.5) were submitted under chain-of-custody protocol for select laboratory analyses. 9.5" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
\\WINDSOR-FP2\SHARED\HAZMAT\ENGLISH STATION 263951\INTERIOR ENVIRONMENTAL INVESTIGATION\SUB-SLAB DRILLING\ENGLISH STATION INTERIOR BORING LOGS.GPJ

BORING NUMBER: **TRC-AOC-16I-SO-02**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**8**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**11/19/18**
Client:	**United Illuminating**	Date Completed:	**11/19/18**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggie and Tony**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**11/19/2018**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MAC		4.0	0.0		0'- 4' No recovery.	
5	MAC		4.0	4.0		4'- 8' Brown fine to coarse SAND (FILL), wet, no odor, no staining.	
						Refusal at 8.0 feet. Bottom of borehole at 8.0 feet.	
10							

Notes: Soil samples TRC-AOC-16I-SO-02(4-5) and TRC-AOC-16I-SO-02(7-8) were submitted under chain-of-custody protocol for select laboratory analyses. 7" thick concrete floor slab over a 2" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16I-SO-03**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**6**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**3**
Project Number:	**263951**	Date Started:	**11/19/18**
Client:	**United Illuminating**	Date Completed:	**11/19/18**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggie and Tony**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**3' Split Spoon**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**11/19/2018**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	SS		3.0	0.5		0'- 0.5' Brown fine to medium SAND (FILL), dry, no odor, no staining.	
5	SS		3.0	1.0		4'- 5' Brown fine to medium SAND (FILL), dry, no odor, no staining.	
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil sample TRC-AOC-16I-SO-03(0-6) was submitted under chain-of-custody protocol for select laboratory analyses. 9" thick concrete floor slab over a 3" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
\\WINDSOR-FP2\SHARED\HAZMAT\ENGLISH STATION 263951\INTERIOR ENVIRONMENTAL INVESTIGATION\SUB-SLAB DRILLING\ENGLISH STATION INTERIOR BORING LOGS.GPJ

BORING NUMBER: **TRC-AOC-16I-SO-04**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**5**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**11/19/18**
Client:	**United Illuminating**	Date Completed:	**11/19/18**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggie and Tony**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**11/19/2018**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MAC		4.0	1.0		0'- 1' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
5	MAC		1.0	1.0		4'- 5' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
						Refusal at 5.0 feet. Bottom of borehole at 5.0 feet.	
10							

Notes: Soil samples TRC-AOC-16I-SO-04(0-1) and TRC-AOC-16I-SO-04(4-5) were submitted under chain-of-custody protocol for select laboratory analyses. 9" thick concrete floor slab over a 3" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-01**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**6**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**2/4/19**
Client:	**United Illuminating**	Date Completed:	**2/4/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Tom & Lavelle**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**2/4/2018**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm)
							10 20 30 40
	MAC		4.0	1.3		0'- 1.25' Brown fine to medium SAND, some coarse gravel (FILL), moist, no odor, no staining.	
5	MAC		2.0	1.5		4'- 5.5' Dark brown fine to coarse SAND, little gravel (FILL), wet, no odor, no staining.	
10						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	

Notes: Soil samples TRC-AOC-16EE-SO-01(0-1) and TRC-AOC-16EE-SO-01(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 6" thick concrete floor slab over a 3" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-02**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**6**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**2/4/19**
Client:	**United Illuminating**	Date Completed:	**2/4/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Tom & Lavelle**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**2/4/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm)
							10 20 30 40
	MAC		4.0	1.5		0'- 1.5' Brown fine to medium SAND, little silt (FILL), moist, no odor, no staining.	
5	MAC		2.0	2.0		4'- 6' Light brown fine to coarse SAND, little gravel (FILL), wet, no odor, no staining.	
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-16EE-SO-02(0-1) and TRC-AOC-16EE-SO-02(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 6" thick concrete floor slab over a 3" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
\\WINDSOR-FP2\SHARED\HAZMAT\ENGLISH STATION 263951\INTERIOR ENVIRONMENTAL INVESTIGATION\SUB-SLAB DRILLING\ENGLISH STATION INTERIOR BORING LOGS.GPJ

BORING NUMBER: **TRC-AOC-16EE-SO-03**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**2/4/19**
Client:	**United Illuminating**	Date Completed:	**2/4/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Tom & Lavelle**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**2/4/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm)
	MAC		4.0	2.3		0'- 2.3' Brown fine to medium SAND, little silt (FILL), moist, no odor, no staining	
5	MAC		3.0	3.0		4'- 7' Brown fine to medium SAND, little silt (FILL), wet, no odor, no staining	
10						Refusal at 7.0 feet. Bottom of borehole at 7.0 feet.	

Notes: Soil samples TRC-AOC-16EE-SO-03(0-1) and TRC-AOC-16EE-SO-03(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 7" thick concrete floor slab over a 2" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-04**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**2/4/19**
Client:	**United Illuminating**	Date Completed:	**2/4/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Tom & Lavelle**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**2/4/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MAC		4.0	2.0		0'- 2' Light brown fine to medium SAND (FILL), moist, no odor, no stianing.	
5	MAC		3.0	3.0		4'- 7' Light brown fine to medium SAND (FILL), wet, no odor, no stianing.	
10						Refusal at 7.0 feet. Bottom of borehole at 7.0 feet.	

Notes: Soil samples TRC-AOC-16EE-SO-04(0-1) and TRC-AOC-16EE-SO-04(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over a 2" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-05**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**6**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**2/4/19**
Client:	**United Illuminating**	Date Completed:	**2/4/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

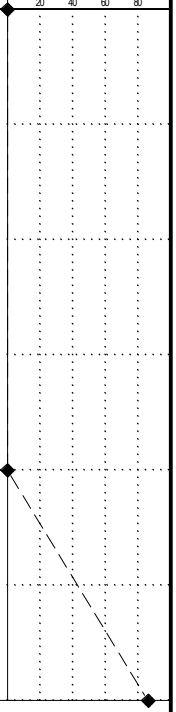
DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Tom & Lavelle**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**2/4/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		4.0	2.5		0'- 2.5' Brown fine to medium SAND, little silt (FILL), moist, no odor, no staining.
5	MAC		2.0	2.0		4'- 6' Brown fine to medium SAND, little silt (FILL), wet, strong solvent-like odor, no staining.
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.
10						

◆VOC SCREENING RESULTS (ppm)

20 40 60 80



Notes: Soil samples TRC-AOC-16EE-SO-05(0-1) and TRC-AOC-16EE-SO-05(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 6" thick concrete floor slab over a 3" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-06**
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PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**6**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**2/4/19**
Client:	**United Illuminating**	Date Completed:	**2/4/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Tom & Lavelle**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 54LT**
Sampler:	**4' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**2/4/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm)
							70 140 210 280
	MAC		4.0	2.0		0'- 2' Brown fine to medium SAND, little silt (FILL), moist, no odor, no staining.	
5	MAC		2.0	2.0		4'- 6' Brown fine to medium SAND, little silt (FILL), wet, strong solvent-like odor, no staining.	
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-16EE-SO-06(0-1) and TRC-AOC-16EE-SO-06(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 7" thick concrete floor slab over a 2" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-07**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MAC		3.0	1.0		0'- 1' Light brown fine to medium SAND (FILL), moist, no odor, no staining.	
5	MAC		3.0	2.0		3'- 5' Light brown fine to medium SAND (FILL), moist, no odor, no staining.	
	MAC		1.0	1.0		6'- 7' Gray fine to medium SAND (FILL), moist, solvent-like odor, no staining.	
10						Refusal at 7.0 feet. Bottom of borehole at 7.0 feet.	

Notes: Soil samples TRC-AOC-16EE-SO-07(0-1) and TRC-AOC-16EE-SO-07(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-08**
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PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		3.0	2.2		0'- 2.2' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
	MAC		3.0	0.4		3'- 3.4' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
5	MAC		1.0	1.0		6'- 7' Dark brown fine to medium SAND (FILL), moist, solvent-like odor, sheen.
						Refusal at 7.0 feet. Bottom of borehole at 7.0 feet.
10						

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16EE-SO-08(0-1) and TRC-AOC-16EE-SO-08(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-09**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		3.0	2.0		0'- 2' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
	MAC		3.0	1.0		3'- 4' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
5	MAC		1.0	1.0		6'- 7' Dark brown fine to medium SAND (FILL), wet, solvent-like odor, sheen.
						Refusal at 7.0 feet.
						Bottom of borehole at 7.0 feet.
10						

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16EE-SO-09(0-1) and TRC-AOC-16EE-SO-09(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-10**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		3.0	1.3		0'- 1.4' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
						3'- 6' No recovery.
5	MAC		3.0	0.0		
	MAC		1.0	1.0		6'- 7' Dark brown fine to coarse SAND (FILL), wet, solvent-like odor, sheen.
						Refusal at 7.0 feet.
						Bottom of borehole at 7.0 feet.
10						

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16EE-SO-10(0-1) and TRC-AOC-16EE-SO-10(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-11**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**8**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		3.0	2.7		0'- 2.7' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
	MAC		3.0	2.8		3'- 5.8' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
5	MAC		2.0	2.0		6'- 8' Dark brown fine to coarse SAND (FILL), wet, mild solvent-like odor, no staining.
10						Refusal at 8.0 feet. Bottom of borehole at 8.0 feet.

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16EE-SO-11(0-1) and TRC-AOC-16EE-SO-11(7-8) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-12**

PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		3.0	1.1		0'- 1.1' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
	MAC		3.0	0.0		3'- 6' No recovery.
5	MAC		1.0	1.0		6'- 7' Dark brown fine to coarse SAND (FILL), wet, solvent-like odor, no staining.
						Refusal at 7.0 feet.
						Bottom of borehole at 7.0 feet.
10						

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16EE-SO-12(0-1) and TRC-AOC-16EE-SO-12(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-13**
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PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		3.0	0.8		0'- 0.8' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
	MAC		3.0	1.2		3'- 4.2' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
5	MAC		1.0	1.0		6'- 7' Brown fine to coarse SAND (FILL), moist, solvent-like odor, no staining.
						Refusal at 7.0 feet.
						Bottom of borehole at 7.0 feet.
10						

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16EE-SO-13(0-1) and TRC-AOC-16EE-SO-13(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 9" thick concrete floor slab over a 6" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-14**
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PROJECT INFORMATION		BORING INFORMATION	
Project Name:	**English Station**	Boring Depth (ft):	**7**
Project Location:	**510 Grand Ave, New Haven, CT**	Hole Diameter (in):	**2**
Project Number:	**263951**	Date Started:	**3/5/19**
Client:	**United Illuminating**	Date Completed:	**3/5/19**
TRC Eng./Geol:	**Matt Blumstein**	Coordinate System:	**Not Surveyed**
Checked By:	**Richard Gille**	North:	**Not Surveyed**
		East:	**Not Surveyed**
		Vertical Datum:	**Not Surveyed**
		Ground Elevation:	**Not Surveyed**
		Well Elevation (Top of Casing)	**Not Surveyed**

DRILLING INFORMATION	
Drilling Contractor:	**Glacier Drilling LLC**
Driller(s):	**Auggies and Sam**
Drilling Method:	**Direct-Push**
Equipment/Model:	**Geoprobe 420M**
Sampler:	**3' Macrocore**

GROUND WATER OBSERVATIONS			
MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
DATE	**3/5/2019**		
DEPTH (ft.bgs.)	**Not observed**		
REFERENCE	**Ground Surface**		
STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION
	MAC		3.0	1.3		0'- 1.3' Light brown fine to medium SAND (FILL), moist, no odor, no staining.
	MAC		3.0	1.6		3'- 4' Light brown fine to medium SAND (FILL), wet, no odor, no staining.
5	MAC		1.0	1.0		6'- 7' Brown fine to medium SAND (FILL), wet, solvent-like odor, no staining.
						Refusal at 7.0 feet. Bottom of borehole at 7.0 feet.
10						

◆VOC SCREENING RESULTS (ppm)

10 20 30 40

Notes: Soil samples TRC-AOC-16EE-SO-14(0-1) and TRC-AOC-16EE-SO-14(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 14" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES - TRC-STD US.GDT - 3/8/19
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BORING NUMBER: **TRC-AOC-16EE-SO-15**
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PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**6**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/10/20**	Date Completed:	**12/10/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/10/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	1.2		0 '- 1.2 ' Brown fine to medium SAND (FILL), moist, no odor, no staining.	
	MC	MC	3.0	3.0		3 '- 6 ' Dark brown fine to medium SAND (FILL), wet, mild organic odor, no staining.	
5							
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-16EE-SO-15(0-1) and TRC-AOC-16EE-SO-15(5-6) were submitted under chain-of-custody for select laboratory analyses. 9" thick concrete floor slab over a 3" void above fill.

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BORING NUMBER: **TRC-AOC-16FF-SO-01**

PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**6**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/10/20**	Date Completed:	**12/10/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/10/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	1.5		0 '- 1.5 ' Brown fine to medium SAND (FILL), moist, no odor, no staining.	
	MC	MC	3.0	1.9		3 '- 4.9 ' Brown fine to medium SAND (FILL), wet, no staining, mild solvent odor in the bottom 0.2-ft.	
5							
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-16FF-SO-01(0-1) and TRC-AOC-16FF-SO-01(5-6) were submitted under chain-of-custody for select laboratory analyses. 8" thick concrete floor slab over a 2" void above fill.

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BORING NUMBER: **TRC-AOC-16FF-SO-02**

PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**6**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/10/20**	Date Completed:	**12/10/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/10/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	1.2		0 '- 1.2 ' Brown fine to medium SAND (FILL), moist, no odor, no staining.	
	MC	MC	3.0	3.0		3 '- 6 ' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
5							
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-16FF-SO-02(0-1) and TRC-AOC-16FF-SO-02(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 9" thick concrete floor slab over a 3" void above fill.

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BORING NUMBER: **TRC-AOC-16HH-SO-01**
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PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**6**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/10/20**	Date Completed:	**12/10/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/10/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	2.0		0 '- 2 ' Brown fine to medium SAND (FILL), moist, no odor, no staining, concrete layer at 1.5 to 1.6 -fbg.	
	MC	MC	3.0	3.0		3 '- 6 ' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
5							
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-16HH-SO-01(0-1) and TRC-AOC-16HH-SO-01(5-6) were submitted under chain-of-custody protocol for select laboratory analyses.

SOIL BORING/WELL COMPLETION WITH NOTES_2 - TRC_WINDSOR_STD.GDT - 1/7/21
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BORING NUMBER: **TRC-AOC-17F-SO-01**

PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**12**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/8/20**	Date Completed:	**12/8/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/8/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)
							10 20 30 40
	MC	MC	3.0	2.0		0 '- 2 ' Brown medium to fine SAND (FILL), moist, no odor, no staining.	
						3 '- 3.5 ' Brown medium to fine SAND (FILL), wet, no odor, no staining.	
5	MC	MC	3.0	2.2		3.5 '- 5.2 ' Dark brown fine to medium SAND (FILL), wet, black staining, mild petroleum odor.	
	MC	MC	3.0	0.5		6 '- 6.5 ' Dark brown fine to medium SAND (FILL), wet, no odor, no staining.	
10	MC	MC	3.0	1.3		9 '- 10.3 ' Dark brown fine to medium SAND (FILL), wet, no odor, no staining.	
						Bottom of hole at 12.0 feet.	

Notes: Soil samples TRC-AOC-17F-SO-01(0-1) and TRC-AOC-17F-SO-01(8-10) submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over a 2" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES_2 - TRC_WINDSOR_STD.GDT - 1/7/21
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BORING NUMBER: **TRC-AOC-17F-SO-02**
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PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**6**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/10/20**	Date Completed:	**12/10/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/10/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	2.2		0 '- 2.2 ' Brown fine to medium SAND (FILL), moist, strong solvent odor, no staining.	
	MC	MC	3.0	3.0		3 '- 6 ' Brown fine to medium SAND (FILL), moist, mild solvent odor, no staining.	
5							
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-17F-SO-02(0-1) and TRC-AOC-17F-SO-02(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 9" thick concrete floor slab over a 2" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES_2 - TRC_WINDSOR_STD.GDT - 1/7/21
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BORING NUMBER: **TRC-AOC-17F-SO-03**
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PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**6**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/10/20**	Date Completed:	**12/10/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/10/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	1.4		0 '- 1.4 ' Brown fine to medium SAND (FILL), trace fine gravel, moist, no odor, no staining.	
	MC	MC	3.0	3.0		3 '- 6 ' Dark brown fine to medium SAND (FILL), wet, no odor, no staining.	
5							
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil Samples TRC-AOC-17F-SO-03(0-1) and TRC-AOC-17F-SO-03(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over a 3" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES_2 - TRC_WINDSOR_STD.GDT - 1/7/21
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BORING NUMBER: **TRC-AOC-19B-SO-01**
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PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**6**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/9/20**	Date Completed:	**12/9/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/9/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm)
							10 20 30 40
	MC	MC	3.0	1.6		0 '- 1.6 ' Brown fine to medium SAND (FILL), moist, no odor, no staining.	
						3 '- 4 ' Gray medium to coarse GRAVEL (FILL), brick and concrete fragments, moist, no odor, no staining.	
	MC	MC	3.0	1.0			
5							
						Refusal at 6.0 feet. Bottom of borehole at 6.0 feet.	
10							

Notes: Soil samples TRC-AOC-19B-SO-01(0-1) and TRC-AOC-19B-SO-01(5-6) were submitted under chain-of-custody protocol for select laboratory analyses. 9" thick concrete floor slab over a 1" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES_2 - TRC_WINDSOR_STD.GDT - 1/7/21
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BORING NUMBER: **TRC-AOC-19B-SO-02**

PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**7**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/8/20**	Date Completed:	**12/8/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/8/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	1.2		0 '- 1.2 ' Brown fine to medium SAND (FILL), moist, no odor, no staining.	
	MC	MC	3.0	1.4		3 '- 4.4 ' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
5	MC	MC	1.0	1.0		6 '- 7 ' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
						Refusal at 7.0 feet. Bottom of borehole at 7.0 feet.	
10							

Notes: Soil samples TRC-AOC-19B-SO-02(0-1) and TRC-AOC-19B-SO-02(6-7) were submitted under chain-of-custody protocol for select laboratory analyses. 8" thick concrete floor slab over fill.

SOIL BORING/WELL COMPLETION WITH NOTES_2 - TRC_WINDSOR_STD.GDT - 1/7/21
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BORING NUMBER: **TRC-AOC-19B-SO-03**
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PROJECT INFORMATION		BORING INFORMATION			
Project Name:	**English Station**	Boring Depth:	**7**	Hole Diameter:	**2**
Project Location:	**510 Grand Ave, New Haven, CT**	Date Started:	**12/8/20**	Date Completed:	**12/8/20**
Project Number:	**263951**	Coordinate System:	**Not Surveyed**		
Client:	**United Illuminating**	North:	**Not Surveyed**	East:	**Not Surveyed**
Logged By:	**Matt Blumstein**	Vertical Datum:	**Not Surveyed**	Ground Elevation:	**Not Surveyed**
Checked By:	**Carl Stopper**				

DRILLING INFORMATION		GROUND WATER OBSERVATIONS			
Drilling Contractor:	**Glacier Drilling LLC**	MEASUREMENT	▽ At Time of Drilling	▼ At End of Drilling	▼ After Drilling
Driller(s):	**Tom & Sam**	DATE	**12/8/2020**		
Drilling Method:	**Direct-Push**	DEPTH (ft.bgs.)	**Not Observed**		
Equipment/Model:	**Geoprobe 420M**	REFERENCE	**Ground Surface**	**Ground Surface**	**Ground Surface**
Sampler:	**3' Macrocore**	STABILIZATION	**None**		

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	PENETRATION (FT.)	RECOVERY (FT.)	LITHOLOGY	MATERIAL DESCRIPTION	◆ VOC SCREENING RESULTS (ppm) 10 20 30 40
	MC	MC	3.0	1.2		0 '- 1.2 ' Brown fine to medium SAND (FILL), moist, no odor, no staining.	
	MC	MC	3.0	2.8		3 '- 5.8 ' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
5	MC	MC	1.0	1.0		6 '- 7 ' Brown fine to medium SAND (FILL), wet, no odor, no staining.	
						Refusal at 7.0 feet. Bottom of borehole at 7.0 feet.	
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Notes: Soil samples TRC-AOC-19B-SO-03(0-1) and TRC-AOC-19B-SO-03(5-6) were submitted under chain-of-custody for select laboratory analyses. 8" thick concrete floor slab over a 3" void above fill.

SOIL BORING/WELL COMPLETION WITH NOTES_2 - TRC_WINDSOR_STD.GDT - 1/7/21
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