

**TABLE 4-1
PRESENTATION OF THE CONCEPTUAL SITE MODEL**

English Station
510 Grand Avenue
New Haven, Connecticut

Area of Concern (AOC)	Description / Operations	COCs (Known or Potential)	Evidence of Release?	Release Mechanisms (Known or Potential)	Media Affected or Potentially Affected	Fate and Transport
AOC-16S: 1st Floor Lube Oil Room	The Lube Oil Room is located on the first floor of English Station; specifically at the northern end of the building. As its name suggests, this room was utilized for the storage of various lubricating oils/petroleum products for use throughout the plant. There is little recorded about the history of this AOC, other than what was noted in an equipment decontamination plan prepared by Partner Engineering and Science, Inc. (Partner) of Rocky Hill, CT in 2015. The Partner report indicated that there were leaking drums and "aboveground oil tanks" located in the Lube Oil Room at the time the eastern portion of the plant was under containment in support of asbestos abatement that was taking place in 2011/2012. The report further indicates that the asbestos "bag-out" was conducted through this room and it was unclear as to whether there was additional disturbance to the drums or tanks containing oil as this bag-out occurred. On the date of a recent Site reconnaissance, there were no drums observed in this area, however, there were aboveground tanks observed, as well as smaller containers that appear to be portable totes.	PCBs, ETPH, VOCs, Metals	Yes	Primary: Direct spillage or leakage to the floor of the building from tanks, pumps and equipment associated with the storage and dispensing of oils; Secondary: Absorption into the concrete; migration over concrete and into nearby drains/drain systems or to the trenches in which cooling water piping is located; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Spills may have run into floor drains and entered the building's drainage system or, based on the presence of the sump that collects the floor drain liquids, may have run into the open cooling water discharge tunnel under the eastern side of the building.
AOC-17E: Drainage System Beneath Boiler 1-12 Area	A trench and floor drain system and associated piping is present beneath the majority of the Boiler 1-12 area. The trench and floor drains provide a potential migration pathway for spills and releases of contaminants associated with oil and chemical storage and mechanical systems present on the 1st Floor. The floor and trench drain network in this area is connected to a sump located along the eastern side of the building that ultimately discharges to the open tunnel for the cooling water discharge from the low-pressure boiler system (AOC-19A).	PCBs, ETPH, VOCs, SVOCs, Metals	Yes	Primary: Direct spillage or leakage to floor drains; migration of spills or releases related to AOC-16S, 16T, 16W, 16X, 16Y and 16Z over the floor and into floor/trench drains; Secondary: Leaks from below-slab piping into sub-slab material.	Non-porous building materials (drain piping); on-site sediment and liquids within the drainage system; inter-slab fill material.	Spills into the drainage structures may have infiltrated into the inter-slab fill materials via leaks in piping and drains. Impacts that may have infiltrated into the fill materials would likely be stopped by the building mat (reinforced concrete ~3 ft. thick).
AOC-18D: Overhead Door to 1st Floor Boiler Area	An overhead door is present along the northeastern side of English Station, providing direct access into the 1st floor of the Boiler 1-12 area. Former Site operations and past abatement/demolition activities may have caused spills or releases of contaminants in this area of the building.	PCBs, ETPH, VOCs, PAHs, Metals	Yes	Primary: Direct spillage or leakage to the floor of the building or to the surface immediately outside of the building; Secondary: Absorption into concrete and/or asphalt and infiltration to the underlying soils; Tracking: Tracking into, throughout and out of the building is a concern in this area.	Concrete, asphalt, soil, sediment and groundwater	Spills/releases to the surface may have been absorbed into the concrete floor of the building or into asphalt or concrete aprons outside of the building. Secondary releases resulting from potential infiltration through the concrete or asphalt to the subsurface may be entrapped in the soil pore spaces in the vadose zone. Impacts that may have infiltrated into the subsurface could migrate to the groundwater through the changes in the tide causing fluctuations in the water table.
AOC-19A: Cooling Water Intake, Distribution, and Discharge For The Low-Pressure Boiler Systems	A system of large tunnels and large-diameter piping (~36-inches) that withdrew water from the Mill River on the west side of English Station for use in the low-pressure boiler system, is present beneath the floor of the Turbine Hall. Cooling water for the low-pressure boiler system (Boilers 1-12) was withdrawn from the Mill River on the west side of the facility, through Screen Houses #1 and #2 (AOC-16C and AOC-16D) and directed into the west side of the Turbine Hall via two open tunnels. From the terminus of the tunnels, the cooling water was pumped through large diameter piping to the various condensers and equipment present on the first floor of the Turbine Hall. The cooling water was then discharged back into the Mill River on the eastern side of the Site.	PCBs, ETPH, VOCs, SVOCs, Metals	No	Primary: Direct spillage or leakage to the piping trenches; migration of spills or releases related to AOCs-16A and S, T, and W through Z over the floor and into the pipe trenches; Secondary: Absorption into accumulated sediments in the pipe trench; absorption into the concrete of the pipe trench; migration of contaminants with infiltrated water.	Porous (concrete) and non-porous media, sediment, surface water (accumulated rainwater from roof leaks and potentially river water); inter-slab fill material.	Spills into the pipe trench may have been absorbed into sediments and/or the porous media of the trench. Potential migration of contaminants into the inter-slab fill materials via leaks or breaches in the piping trench. Impacts that may have infiltrated into the fill materials would likely be stopped by the building mat (reinforced concrete ~3 ft. thick).
AOC-16T: Boiler Feed Pump Area	The Boiler Feed Pump Area is located just to the south of the Lube Oil Room and extends the remainder of the length of the Boiler 1-12 Hall, with a small portion extending to along the southern portion of the Boiler Hall to the eastern extent of English Station. The north/south-running portion of AOC 16-Tand formerly housed seven boiler feed pumps, two air compressors, a smoot oil pump, a bearing water return tank and ash grate oil pumps. Staining of the floor in the area of the ash grate oil pumps was observed during the Site reconnaissance. Most of the equipment formerly located in this area has been removed. Historical drawings do not indicate the former presence of equipment in the portion of AOC-16T that extends west to east along the southern portion of the Boiler 1-12 Hall.	PCBs, ETPH	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Leaks through cracks/breaches in the floor slab (if present) may have impacted the inter-slab fill material. Further migration of contaminants would likely be prevented by the substantial building mat located beneath the inter-slab fill material.

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Area of Concern (AOC)	Description / Operations	COCs (Known or Potential)	Evidence of Release?	Release Mechanisms (Known or Potential)	Media Affected or Potentially Affected	Fate and Transport
AOC-16U: Skip Hoists	Two Skip Hoists are located along the northern end of English Station. Each of the hoists is comprised of a large metal "basket" into which coal ash was loaded. When full, the basket would be raised to some elevation below the coal conveyor system, and the bucket would dump ash into the ash bunkers at the front (northern wall) of English Station. Coal ash would then be periodically dispensed from the ash bunkers for disposal. Observations made during the latest site reconnaissance indicate that both of the skip hoist recessed pits on the 1st floor of the building are filled with sediment and water. Note that the motors/cables that drive the hoists are located on the fifth level of the building (above Boilers 1-12) and within AOCs 16-DD and 16-EE.	PCBs, ETPH, PAHs	Yes	Primary: Direct spillage or leakage to the floor of the building and into the pits underlying the hoists; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Leaks through cracks/breaches in the floor slab (if present) may have impacted the inter-slab fill material. Further migration of contaminants would likely be prevented by the substantial building mat located beneath the inter-slab fill material.
AOC-16V: Former Temporary Oil Storage Area	This AOC is located in the north/central portion of the Boiler Hall, immediately north of the FD Fan Area. Based on the labeling of this area on historical drawings for the facility, it appears that oil for equipment was temporarily stored in this area; there was no documentation that provided additional details regarding operations or equipment housed within this AOC, however, significant staining of the floor was observed in this area during the recent Site reconnaissance.	PCBs, ETPH	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Leaks through cracks/breaches in the floor slab (if present) may have impacted the inter-slab fill material. Further migration of contaminants would likely be prevented by the substantial building mat located beneath the inter-slab fill material.
AOC-16W: Fuel Oil Pump Room	The Fuel Oil Pump Room is located in the southeastern portion of the Boiler Hall. Based on information contained in a Phase I report prepared by GEI Consultants, Inc. (GEI) in 1998, the boilers in English Station were fuel-oil-fired as opposed to coal-fired as of 1970. As such, it is likely that the equipment formerly located in this room was used to pump fuel oil to the boilers. Significant staining of the floor was observed in this AOC during recent Site reconnaissance.	PCBs, ETPH, PAHs	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Leaks through cracks/breaches in the floor slab (if present) may have impacted the inter-slab fill material. Further migration of contaminants would likely be prevented by the substantial building mat located beneath the inter-slab fill material.
AOC-16X: Forced Draft (FD) Fan Area	This AOC (located in the central portion of the Boiler Hall portion of the building) houses the six FD fans associated with Boilers 1-12. Significant staining of the floor was observed in this AOC during recent Site reconnaissance.	PCBs, ETPH	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Spills may have run into the intake tunnels. Leaks through cracks/breaches in the floor slab (if present) may have impacted the inter-slab fill material. Further migration of contaminants would likely be prevented by the substantial building mat located beneath the inter-slab fill material.
AOC-16Y: 1st Floor Boiler House	This AOC captures those areas of the first floor of the Boiler Hall that are not otherwise designated as AOCs. This AOC is currently largely devoid of equipment and it unclear as to what equipment, if any, had been housed within this AOC in the past. There were small areas of staining observed throughout various portions of this AOC during recent Site reconnaissance.	PCBs, ETPH	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Spills may have run into the intake tunnels. Leaks through cracks/breaches in the floor slab (if present) may have impacted the inter-slab fill material. Further migration of contaminants would likely be prevented by the substantial building mat located beneath the inter-slab fill material.
AOC-16Z: 1st Floor Storage Area	The 1st Floor Storage Area is located in the southeastern portion of the Boiler Hall, just to the north of the Fuel Oil Pump Room. No documentation was available for review to indicate what activities may have been conducted in this area. There were two small areas of oil staining noted on the floor of this AOC during Site reconnaissance.	PCBs, ETPH	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials, inter-slab fill materials	Spills to the surface may have been absorbed into the concrete floor. Spills may have run into the intake tunnels. Leaks through cracks/breaches in the floor slab (if present) may have impacted the inter-slab fill material. Further migration of contaminants would likely be prevented by the substantial building mat located beneath the inter-slab fill material.

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AOC-16AA: Boiler 1-12 Area (Levels 2-4)	This AOC encompasses the 2nd level of the Boiler Hall (a concrete floor on which the 12 low-pressure boilers sit) and the third and fourth levels above it. In addition to the 12 low-pressure boilers that are located in this area, there is also a boiler control room located on the 2nd level of the building (between Boilers 3 and 5). It should be noted that the third level of the Boiler Hall consists solely of steel grate cat walks that allowed for plant personnel to get in close proximity to key portions of the boilers for inspection and repair purposes. There are no areas of chemical storage on the third level, nor are there anticipated to be pieces of electrical equipment that may have housed PCB-oils (note also, that these boiler systems pre-date the use of PCBs). Based on the structural evaluation that was conducted ahead of the "make safe" efforts within English Station, the steel grates that are present within this third level of the Boiler Hall have been deemed unsafe. The fourth level of the Boiler Hall consists primarily of diamond-plate steel catwalks that allowed workers to access the upper-most portions of each of the boilers.	PCBs, ETPH, PAHs	Yes	Primary: Direct spillage or leakage to the floor of the building (2nd Level); Direct spillage or leakage to the steel grating and levels below given the open grating (3rd Level); Direct spillage or leakage to the steel diamond plate (4th Level); Secondary: Absorption into the concrete; migration over concrete floor (2nd Level); migration over the steel diamond plate (4th Level) Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials	Spills and releases associated with the likely operations in this area would impact building materials onto which the spills and releases occurred and would not have affected environmental media (i.e., soil, sediment, surface water or groundwater).
AOC-16BB: Coal Conveyor System	The coal conveyor system located within the Boiler 1-12 area consists of two rooms on or about the 5th level of the building and the two conveyor belts that run the length of the Boiler 1-12 House to the divider between Boilers 1-12 and 13/14. The two rooms at the northern end of the Boiler House house remnant pieces of equipment from the former coal conveyance system that brought coal into English Station from the storage area on Parcel A. Specifically, "Room 1" housed a hoist, conveyor belts and the associated motors. Only the two motors are still located in this room and the former opening for the conveyors that brought in coal from the storage area on Parcel A was observed to be completely walled off with concrete block. There is a second room ("Room 2") located directly below Room 1 and it houses a portion of the two conveyors that run the length of the Boiler House (these portions of the belts sit at a slightly lower elevation than the remainder of the belts exposed on the 5th level. The two motors that drive the conveyor belts that run the length of the Boiler House are located at the southern end of the belt system. There is a steel grate catwalk that runs between the two belts.	PCBs, ETPH, PAHs	Yes	Primary: Direct spillage or leakage to the floor of the building in the two rooms and in the area of the conveyor motors located at the southern end of the conveyor belts and direct spillage or leakage to the steel grating and levels below the open grating of the catwalk between the conveyor belts; Secondary: Absorption into the concrete; migration over concrete floor and potentially through the "trap door" to the room below; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials	Spills and releases associated with the likely operations in this area would impact building materials onto which the spills and releases occurred and would not have affected environmental media (i.e., soil, sediment, surface water or groundwater).
AOC-16CC: East Skip Hoist Mechanical Room	This AOC is located just to the south of the ash bunker on the northern side of the building and adjacent to the eastern-most coal conveyor belt. Based on historical drawings reviewed and observations made as part of the recent reconnaissance, this room houses the motor and cable associated with the skip hoist that shuttled ash from the first floor of the Boiler House to the ash bunker.	PCBs, ETPH	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials	Spills and releases associated with the likely operations in this area would impact building materials onto which the spills and releases occurred and would not have affected environmental media (i.e., soil, sediment, surface water or groundwater).
AOC-16DD: West Skip Hoist Mechanical Room	This AOC is located just to the south of the ash bunker on the northern side of the building and adjacent to the western-most coal conveyor belt. Based on historical drawings reviewed and observations made as part of the recent reconnaissance, this room houses the motor and cable associated with the skip hoist that shuttled ash from the first floor of the Boiler House to the ash bunker.	PCBs, ETPH	Yes	Primary: Direct spillage or leakage to the floor of the building; Secondary: Absorption into the concrete; migration over concrete floor; Tracking: Tracking through the area during the operation of the facility; tracking of contaminants associated with demolition activities.	Porous (concrete, brick, wood, etc.) and non-porous (metal, glass, etc.) building materials	Spills and releases associated with the likely operations in this area would impact building materials onto which the spills and releases occurred and would not have affected environmental media (i.e., soil, sediment, surface water or groundwater).

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16S	1st Floor Lube Oil Room	PCBs, ETPH, VOCs, Metals	The Lube Oil Room is located on the first floor of English Station; specifically at the northern end of the building. As its name suggests, this room was utilized for the storage of various lubricating oils/petroleum products for use throughout the plant. Little documentation is available about the history of this AOC, other than what was noted in an equipment decontamination plan prepared by Partner Engineering and Science, Inc. (Partner) of Rocky Hill, CT in 2015. The Partner report indicated that there were leaking drums and "aboveground oil tanks" located in the Lube Oil Room at the time the eastern portion of the plant was under containment in support of asbestos abatement that was taking place in 2011/2012. The report further indicates that the asbestos "bag-out" was conducted through this room and it was unclear as to whether there was additional disturbance to the drums or tanks containing oil as this bag-out occurred. On the date of a recent Site reconnaissance, there were no drums observed in this area, however, there were aboveground tanks observed, as well as smaller containers that appear to be portable totes. Extensive staining of the floor surface was also observed in this area. Up to 8 porous media samples will be collected from the floor of this area. Up to 6 samples of residual oils/fluids will be collected from the tanks and/or totes in this area, if such materials are present.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCs	SVOCs	METALS
Porous Media			8				
Hexane Wipe							
Sediment							
Surface Water							
Sub Slab Fill							
Other (Oil/Fluid)			6		6		6
TOTAL			14	0	6	0	6

NOTES:

- 1) Only porous media samples for PCBs are proposed for AOC-16S. Sediment and surface water in this area will be evaluated under AOC-17E.
- 2) Most of the samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.

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AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
17E	Drainage System Beneath Boiler 1-12 Area	PCBs, ETPH, VOCs, SVOCs, Metals	A trench and floor drain system and associated piping is present beneath the majority of the Boiler 1-12 area. The trench and floor drains provide a potential migration pathway for spills and releases of contaminants associated with oil and chemical storage and mechanical systems present on the 1st Floor. The floor and trench drain network in this area are connected to two sumps located along the eastern side of the building that ultimately discharge to the open tunnel for the cooling water discharge from the low-pressure boiler system (AOC-19A). Sediment samples will be collected from those drains found to be accessible and which contain enough sediment for sample collection. Based on the numbers of floor and trench drains shown on historical drawings for English Station, up to 43 sediment samples will be collected from the floor drain/trench drain systems in this area of the building. Where present, surface water observed within the drainage system will also be sampled. Up to 21 water samples will be collected from the drainage system. Additionally, up to 21 porous media samples will be collected from the bottom of the trench drains observed throughout this area of the building.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCs	METALS
Porous Media			21				
Hexane Wipe							
Sediment			43	25	25	25	25
Surface Water			21	21	21	21	21
Sub Slab Fill							
Other							
TOTAL			85	46	46	46	46

NOTES:

- 1) The actual number and location of floor drains sampled will be based on the presence (or absence) of sediment and fluids within the drains and their accessibility for sampling.

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AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
18D	Overhead Door to 1st Floor Boiler Area	PCBs, ETPH, VOCS, PAHs, Metals	An overhead door is present along the northeastern side of English Station, providing direct access into the 1st floor of the Boiler 1-12 area. Former Site operations and past abatement/demolition activities may have caused spills or releases of contaminants in this area of the building. Exterior surface and subsurface samples were collected in the vicinity of this AOC during previous investigations. Therefore, only the interior portion of this loading dock will be evaluated as part of this Scope of Study. 3 concrete samples are proposed in this area to evaluate the presence of contaminants related to surficial spills/releases.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	PAHs	METALS
Porous Media			3				
Hexane Wipe							
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			3	0	0	0	0

NOTES:

- 1) Only interior investigation of AOC-18D is proposed. Exterior areas around AOC-18D were investigated during previous environmental investigations.
- 2) As only porous media is being sampled, only PCB analysis is being performed. If sampling of porous media indicates a release has occurred as a result of operations conducted at AOC-18D, a plan to evaluate such release(s) will be submitted to CTDEEP for review.

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19A	Cooling Water Intake, Distribution, and Discharge for the Low-Pressure Boiler Systems	PCBs, ETPH, VOCs, SVOCs, Metals	Cooling water intake and distribution for the low-pressure boiler system (Boilers 1-12) is made up of a series of large tunnels and large-diameter piping (~36-inches) that withdrew water from the Mill River on the west side of English Station, and discharged it on the east side of English Station. Cooling water for the low-pressure boiler system (Boilers 1-12) was withdrawn from the Mill River on the west side of the facility, through Screen Houses #1 and #2 (AOC-16C and AOC-16D) and directed into the west side of the Turbine Hall via two open tunnels. From the terminus of the tunnels, the cooling water was pumped through large diameter piping to the various condensers and equipment present on the first floor of the Turbine Hall. This portion of the system was a closed loop, piped from the intake, through the equipment, and discharged into an open channel concrete tunnel on the east side of the Turbine Hall for discharge to the Mill River. The portion of the cooling water system on the east side of the building is an open tunnel that accepted the cooling water discharge from the condensers on the west side of the boiler 1-12 area, and discharges from the floor and trench drain systems within the boiler 1-12 area (AOC-17A and AOC-17E). Although access to the discharge tunnel is very limited on the eastern side of the building, up to 6 sediment and surface water samples will be collected (access permitting) from the cooling water discharge tunnel.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCs	SVOCs	METALS
Porous Media							
Hexane Wipe							
Sediment			6	6	6	6	6
Surface Water			6	6	6	6	6
Sub Slab Fill							
Other							
TOTAL			12	12	12	12	12

NOTES:

- 1) No sampling of the porous media that makes up the bottom of the discharge tunnel in this area is proposed at this time. Most, if not all, of the portion of the tunnel beneath the Boiler 1-12 area is inaccessible. That is, the floor slab of the building completely covers the tunnel. Should evidence of a release to the sediment and/or surface water be identified, a plan to evaluate such release(s) to the pipe trench will be submitted to CTDEEP for review.

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16T	Boiler Feed (BF) Pump Area	PCBs, ETPH	The Boiler Feed Pump Area is located just to the south of the Lube Oil Room and extends the remainder of the length of the Boiler 1-12 Hall, with a small portion extending to along the southern portion of the Boiler Hall to the eastern extent of English Station. The north/south-running portion of AOC-16T formerly housed seven boiler feed pumps, two air compressors, a smoot oil pump, a bearing water return tank and ash grate oil pumps. Staining of the floor in the area of the ash grate oil pumps was observed during the Site reconnaissance. Most of the equipment formerly located in this area has been removed. Historical drawings do not indicate the presence or former presence of equipment in the portion of AOC-16T that extends west to east along the southern portion of the Boiler 1-12 Hall. Localized staining was observed throughout this area around the supports for former pieces of equipment. To evaluate releases to the building floor from current and former equipment and to evaluate potential tracking of contaminants, up to 39 porous media samples will be collected from the floor of this area.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			39				
Hexane Wipe							
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			39	0	0	0	0

NOTES:

- 1) As only porous media and oily residues are being evaluated at this stage of investigation, PCBs are the only COC being analyzed.
- 2) Most of the samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.
- 3) Numerous floor drains are located throughout this area, however, sediment and surface water in this area will be evaluated under AOC-17E.

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16U	Skip Hoists	PCBs, ETPH, PAHs, Metals	Two Skip Hoists are located along the northern end of English Station. Each of the hoists is comprised of a large metal "basket" into which coal ash was loaded. When full, the basket would be raised to some elevation below the coal conveyor system, and the bucket would dump ash into the ash bunkers at the front (northern wall) of English Station. Coal ash would then be periodically dispensed from the ash bunkers for disposal. Observations made during the latest site reconnaissance indicate that both of the skip hoist recessed pits on the 1st floor of the building are filled with sediment and water. Note that the motors/cables that drive the hoists are located on the fifth level of the building (above Boilers 1-12) and within AOC-16CC and AOC-16DD.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	PAHs	METALS
Porous Media							
Hexane Wipe							
Sediment			2	2		2	2
Surface Water			2	2		2	2
Sub Slab Fill							
Other							
TOTAL			4	4	0	4	4

NOTES:

- 1) Spills and/releases related to the mechanical portions of the Skip Hoists will be addressed under AOC-16CC and AOC-16DD.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16V	Former Temporary Oil Storage Area	PCBs, ETPH	This AOC is located in the north/central portion of the Boiler Hall, immediately north of the FD Fan Area (AOC-16X). Based on the labelling of this area on historical drawings for the facility, it appears that oil for equipment was temporarily stored in this area; no documentation providing additional details regarding operations or equipment housed within this AOC was available for review, however, significant staining of the floor was observed in this area during recent Site reconnaissance. To evaluate spills and releases in this area and to evaluate tracking through this area, 8 porous media samples will be collected from the floor.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			8				
Hexane Wipe							
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			8	0	0	0	0

NOTES:

- 1) As only porous media is being evaluated at this stage of investigation, PCBs are the only COC being evaluated.
- 2) The samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.
- 3) Releases to the floor drain system in this area will be evaluated under AOC-17E.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16W	Fuel Oil Pump Room	PCBs, ETPH, PAHs	The Fuel Oil Pump Room is located in the southeastern portion of the Boiler Hall. Based on information contained in a Phase I report prepared by GEI Consultants, Inc. (GEI) in 1998, the boilers in English Station were fuel-oil-fired as opposed to coal-fired as of 1970. As such, it is likely that the equipment formerly located in this room was used to pump fuel oil to the boilers. Significant staining of the floor was observed in this AOC during recent Site reconnaissance. To evaluate impacts to the stained floor of the former fuel oil pump room, 12 porous media samples will be collected.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			12				
Hexane Wipe							
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			12	0	0	0	0

NOTES:

- 1) As only porous media is being evaluated at this stage of investigation, PCBs are the only COC being evaluated.
- 2) The samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.
- 3) Releases to the floor drain system in this area will be evaluated under AOC-17E.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16X	Forced Draft Fan (FD) Area	PCBs, ETPH	This AOC (located in the central portion of the 1st floor of the Boiler House) houses the six FD fans associated with Boilers 1-12. Significant staining of the floor was observed in this AOC during recent Site reconnaissance. Numerous floor drains were also observed in this area, in close proximity to each of the fan units. 1 wipe sample will be collected from each of the FD fan units, in areas where staining is observed. To evaluate spills and releases to the floor and and to evaluate tracking through this area, 40 porous media samples will be collected.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			40				
Hexane Wipe			7				
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			47	0	0	0	0

NOTES:

- 1) As only porous media and wipe samples are being collected at this stage of investigation, PCBs are the only COC being evaluated.
- 2) Most of the samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.
- 3) Releases to the floor drain system in this area will be evaluated under AOC-17E.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16Y	1st Floor Boiler House	PCBs, ETPH	This AOC captures those areas of the first floor of the Boiler Hall that are not otherwise designated as AOCs. This AOC is currently largely devoid of equipment and it is unclear as to what equipment, if any, had been housed within this AOC in the past. Localized areas of staining were observed throughout this area during recent Site reconnaissance. A network of trench drains is also present throughout much of this area. To evaluate stained areas of the floor and to tracking of contaminants through this area, 54 porous media samples will be collected.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			54				
Hexane Wipe							
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			54	0	0	0	0

NOTES:

- 1) As only porous media is being evaluated at this stage of investigation, PCBs are the only COC being evaluated.
- 2) Most of the samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.
- 3) Releases to the floor drain system in this area will be evaluated under AOC-17E.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16Z	1st Floor Storage Area	PCBs, ETPH	The 1st Floor Storage Area is located in the southeastern portion of the Boiler House, just to the north of the Fuel Oil Pump Room. No documentation was available for review to indicate what activities may have been conducted in this area. There were two small areas of oil staining noted on the floor of this AOC during Site reconnaissance. To evaluate stained areas of the floor and to tracking of contaminants through this area, 9 porous media samples will be collected.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			9				
Hexane Wipe							
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			9	0	0	0	0

NOTES:

- 1) As only porous media is being evaluated at this stage of investigation, PCBs are the only COC being evaluated.
- 2) Most of the samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.
- 3) Releases to the floor drain system in this area will be evaluated under AOC-17E.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
English Station
510 Grand Avenue
New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16AA	Boiler 1-12 Area (Levels 2-4)	PCBs, ETPH, PAHs	<p>This AOC encompasses the 2nd level of the Boiler House (a concrete floor on which the 12 low-pressure boilers sit) and the third and fourth levels above it. In addition to the 12 low-pressure boilers that are located in this area, there is also a boiler control room located on the 2nd level of the building (between Boilers 3 and 5). It should be noted that the third level of the Boiler Hall consists solely of steel grate cat walks that allowed for plant personnel to get in close proximity to key portions of the boilers for inspection and repair purposes. There are no areas of chemical storage on the third level, nor are there anticipated to be pieces of electrical equipment that may have housed PCB-oils (note also, that these boiler systems pre-date the use of PCBs). Based on the structural evaluation that was conducted ahead of the "make safe" efforts within English Station, the steel grates that are present within this third level of the Boiler Hall have been deemed unsafe. The fourth level of the Boiler Hall consists primarily of diamond-plate steel catwalks that allowed workers to access the upper-most portions of each of the boilers. To evaluate areas of staining and tracking of contaminants through the 2nd level of the Boiler 1-12 area, 46 porous media samples will be collected from the floor. To evaluate the presence of PCBs staining observed on boiler control systems on the 2nd level during site reconnaissance, 1 wipe sample will be collected from each boiler unit, where staining is observed (12 samples total). To evaluate potential releases and/or tracking of contaminants through the 4th level of the Boiler 1-12 area, 14 wipe samples will be collected from the diamond plate floor.</p>				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			46				
Hexane Wipe			26				
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			72	0	0	0	0

NOTES:

- 1) As only porous media and wipe samples are being collected at this stage of investigation, PCBs are the only COC being evaluated.
- 2) Most of the samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.

**TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE**
English Station
510 Grand Avenue
New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16BB	Coal Conveyor System	PCBs, ETPH, PAHs	<p>The coal conveyor system located within the Boiler 1-12 area consists of two rooms on or about the 5th level of the building and the two conveyor belts that run the length of the Boiler 1-12 House to the divider between Boilers 1-12 and 13/14. The two rooms at the northern end of the Boiler House house remnant pieces of equipment from the former coal conveyance system that brought coal into English Station from the storage area on Parcel A. Specifically, "Room 1" housed a hoist, conveyor belts and the associated motors. Only the two motors are still located in this room and the former opening for the conveyors that brought in coal from the storage area on Parcel A was observed to be completely walled off with concrete block. There is a second room ("Room 2") located directly below Room 1 and it houses a portion of the two conveyors that run the length of the Boiler House (these portions of the belts sit at a slightly lower elevation than the remainder of the belts exposed on the 5th level. The two motors that drive the conveyor belts that run the length of the Boiler House are located at the southern end of the belt system. There is a steel grate catwalk that runs between the two belts. Extensive staining of equipment and the floor around the southernmost coal conveyor motors was observed during Site reconnaissance. To evaluate the presence/absence of PCBs in the oils and greases associated with the southernmost motor room, 2 wipe samples will be collected from the motors and 3 porous media samples will be collected from the floor around the motors. To evaluate the presence/absence of PCBs in oils and greases used in the motors and equipment located in Rooms 1 and 2 of the northernmost coal conveyor motor area, 4 wipe samples will be collected from the equipment in these areas. To evaluate impacts to the concrete floor and potential tracking of contaminants, 4 porous media samples will be collected from Rooms 1 and 2 (8 samples total). To evaluate the presence/absence of PCBs in oils and greases associated with the coal conveyor system, 6 wipe samples will be collected from the belt and/or rollers along the length of the conveyor system.</p>				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCs	PAHs	METALS
Porous Media			11				
Hexane Wipe			12				
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			23	0	0	0	0

NOTES:

- 1) As only porous media and wipe samples are being collected at this stage of investigation, PCBs are the only COC being evaluated.
- 2) The samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16CC	East Skip Hoist Mechanical Room	PCBs, ETPH	This AOC is located just to the south of the ash bunker on the northern side of the building and adjacent to the eastern-most coal conveyor belt. Based on historical drawings reviewed and observations made as part of the recent reconnaissance, this room houses the motor and cable associated with the skip hoist that shuttled ash from the first floor of the Boiler House to the ash bunker. A single motor and cable spool are located in this area, roughly in the center of the room. A control panel, presumably for the hoist, is located in the northwestern corner of the room. Localized staining was observed around the motor and control panel during Site reconnaissance. To evaluate the presence of PCBs in oils/greases associated with equipment in this area, 1 wipe sample each will be collected from the cable motor and control panel in this room (2 samples total). To evaluate releases to the floor and tracking of contaminants through this area, 4 porous media samples will be collected.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			4				
Hexane Wipe			2				
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			6	0	0	0	0

NOTES:

- 1) As only porous media and wipe samples are being collected at this stage of investigation, PCBs are the only COC being evaluated.
- 2) The samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.

TABLE 5-1
PROPOSED INTERIOR INVESTIGATION SUMMARY AND RATIONALE
 English Station
 510 Grand Avenue
 New Haven, Connecticut

AOC ID	AOC LOCATION / DESCRIPTION	COCs	PROPOSED INVESTIGATION / RATIONALE				
16DD	Wets Skip Hoist Mechanical Room	PCBs, ETPH	This AOC is located just to the south of the ash bunker on the northern side of the building and adjacent to the westernmost coal conveyor belt. Based on historical drawings reviewed and observations made as part of the recent reconnaissance, this room houses the motor and cable associated with the skip hoist that shuttled ash from the first floor of the Boiler House to the ash bunker. A single motor and cable spool are located in this area, roughly in the center of the room. A control panel, presumably for the hoist, is located in the northwestern corner of the room. Localized staining was observed around the motor and control panel during Site reconnaissance. To evaluate the presence of PCBs in oils/greases associated with equipment in this area, 1 wipe sample each will be collected from the cable motor and control panel in this room (2 samples total). To evaluate releases to the floor and tracking of contaminants through this area, 4 porous media samples will be collected.				
SAMPLE LOCATION, TYPE(S) AND NUMBER			LABORATORY ANALYSES AND ESTIMATED SAMPLE QUANTITIES				
			PCBS	ETPH	VOCS	SVOCS	METALS
Porous Media			4				
Hexane Wipe			2				
Sediment							
Surface Water							
Sub Slab Fill							
Other							
TOTAL			6	0	0	0	0

NOTES:

- 1) As only porous media and wipe samples are being collected at this stage of investigation, PCBs are the only COC being evaluated.
- 2) The samples proposed are to be collected from floor surfaces. However, if evidence of a release of PCBs is observed at other locations (e.g., walls, equipment, non-porous surfaces) a plan to evaluate such releases will be submitted to CTDEEP for review.